TITLE PAGE

State the RFP subject, number, Vendor's name, business address, telephone number, fax number, name of contact person, e-mail address, and Vendor Signature and date

CRFP EHP1900000002
Electronic Vital Records System (EVRS)

For West Virginia Department of Health and Human Resources

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Technical Proposal

Vendor Information:

GCOM Software LLC – 24 Madison Ave Ext Albany NY 12203

Contact Person: Viren Alvekar, Managing Partner-

(T): 518-869-1671/ (F): 518-869-1673 / RFP@GCOMSOFT.COM

Authorized Signatory: Girish Bhatia, CEO

X _____ **Date:** 2/26/2019

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MANDATORY REQUIREMENTS

4.2.2.11	The solution must interface with the State and Territorial Exchange of Vital Events (STEVE).	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.

GCOM has implemented the State and Territorial Exchange of Vital Events (STEVE) for New York City DOHMH that generates all Birth, Death, Fetal Death, Birth-Infant Death, Death Roster and induced termination of pregnancy (ITOP) reporting) utilizing the IJE format between jurisdictions.

GCOM VRMS architecture supports various type of interfaces to internal and external systems. The high-level VRMS System Interfaces are implemented using two methods, one real-time data exchanges using Web services: Web Services provide the real-time interface between two systems. Second, extracts data using SSIS packages and shared with other systems.

Here is the high-level interface diagram from current VRMS implementation that includes STEVE and EVVE:

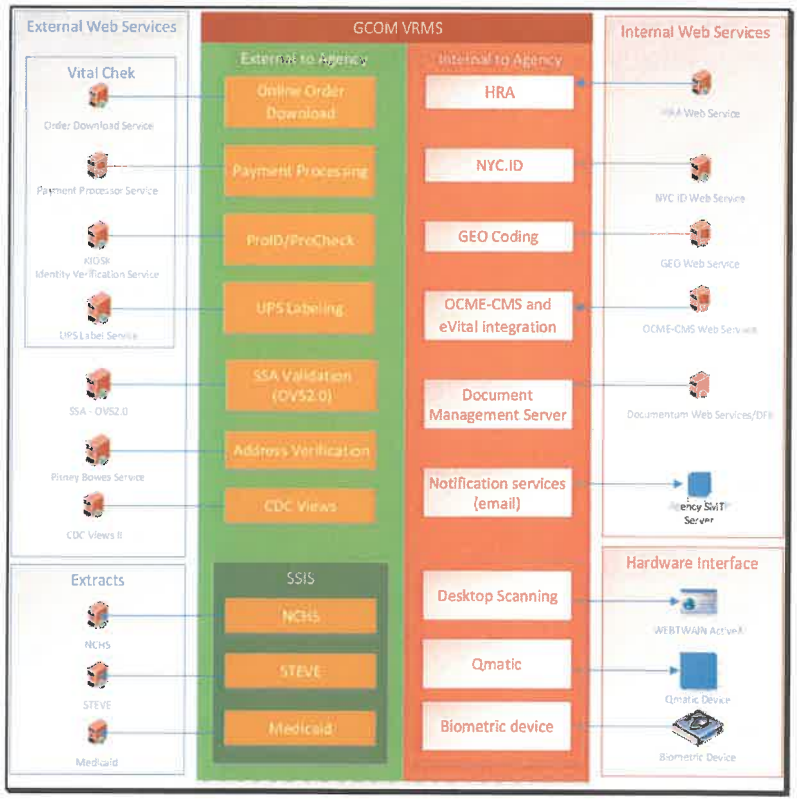


Figure 1: Sample High-Level Interface Diagram

4.2.2.12	The solution must interface with Electronic Verification of Vital Events (EVVE)	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.

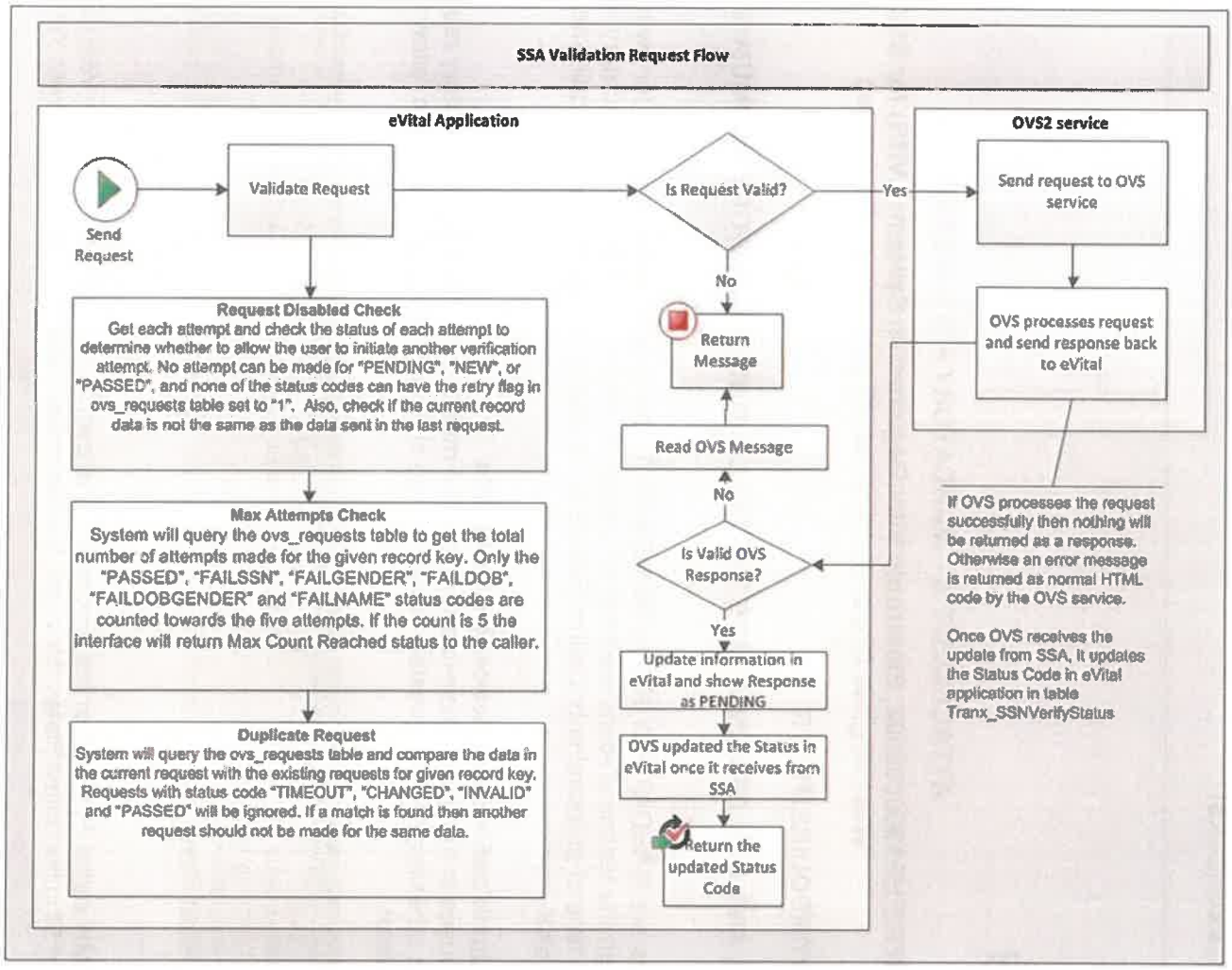
GCOM VRMS successfully interface with EVVE for validating vital birth and death records. GCOM VRMS has services that respond to the queries to quickly, reliably, and securely verify and certify birth and death information.

4.2.2.13	The solution must interface with VitalChek certificate ordering	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.

GCOM VRMS successfully interface with VitalChek - VPS Vitals Integration Web Service to download and process the agency orders placed by customers into VitalChek's customer-facing web application (https://www.vitalchek.com). The system will download the orders that are marked as "Visible to Business unit". Additionally, GCOM VRMS has used VitalChek for identification verification service as well as UPS label printing.

4.2.2.14	The solution must interface with On-line Verification System (OVS)	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.

GCOM VRMS implemented the interface for On-line Verification of Social Security Numbers (OVS2) to validate the SSN on death event registration page. Following diagram depicts the implementation of the NYC DOHMH SSA OVS2 request flow.



Attachment B

ATTACHMENT B – MANDATORY REQUIREMENTS

RFP EHP1900000002, Electronic Vital Registration System (EVRS) for State of West Virginia Department of Health and Human Resources

SECTION 1: MANDATORY REQUIREMENTS

UNLESS YOU POSSESS, AND CAN DEMONSTRATE THE FOLLOWING MANDATORY MINIMUM QUALIFICATIONS, SUBMIT AN OFFER.

The following specifications are MANDATORY REQUIREMENTS. To be considered responsive for award, the Respondent must be able to demonstrate through the technical response each of the requirements stated below. Mandatory requirements must be met and demonstratable at the time of proposal submission. Failure to meet any of the mandatory requirements listed below will result in disqualification of the proposal.

Mandatory Project and Qualification/Experience Requirements
Please indicate your responses in the table below in support of the meeting the minimum mandatory requirements. Do not provide ANY additional information other than that requested in the column entitled "Evidence". Failure to follow this instruction may result in disqualification of the proposal.

Item #	Requirements	Yes/No[1]	Evidence/Confirmation
4.2.2.1	The vendor must have successfully implemented a web EBRS that is currently in production in at least 2 states within the US, or 2 countries,	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – Jan 2020 (In Progress)

[1] The New York City DOHMH eVital System serves a population of over 8.5 million citizens. New York City is an independent vital registration jurisdiction, one of 57 in the United States (50 states, five territories, District of Columbia, and New York City).

	or 2 Canadian provinces within the last 5 years.		
4.2.2.2	The vendor must have successfully implemented a web EDRS that is currently in production in at least 2 states within the US, or 2 countries, or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.3	The vendor must have successfully implemented a web Fetal Death Registry that is currently in production in at least 2 states within the US, or 2 countries or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.4	The vendor must have successfully implemented a web ITOP that is currently in production in at least 2 states within the US, or 2 countries or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.5	The vendor must have successfully implemented a Point of Sale system that is currently in production in at least 2 states within the US, or 2 countries or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.6	Items 1-5, at a minimum, must be fully web based and must have an integrated database.	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.7	All functions within the system must be appropriately adaptive (mobile ready) to function properly on a desk top; tablet and a mobile device.	Yes	GCOM VRMS is built using the responsive web design, which is platform and device-size independent. GCOM VRMS is accessible from a variety of mobile devices including the iOS and Android platforms. GCOM VRMS Certify native App is available for all users who are in certifier role to certify the cases on Android as well as on Apple store. Certifier users includes Doctors, Funeral Directors,

			Medical Examiner etc. Main objective was to give the secure access to certifier users while they are way from the desktop. Here is the link for App Store: Apple: https://itunes.apple.com/us/app/nyc-evital-certify/id1188786801?mt=8 Google Play: https://play.google.com/store/apps/details?id=gov.nyc.health.evitalcertify&hl=en Refer to Section D3-5. Technical Question 5 for more details.
4.2.2.8	The vendor must have successfully migrated historical images from multiple sources and linked them with the appropriate event records in at least 2 states within the US, or 2 countries or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.9	The vendor must have successfully migrated vital records data from multiple sources and linked them into the Electronic Vital Registration System (EVRS) in at least 2 states within the US, or 2 countries or 2 Canadian provinces within the last 5 years.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Commonwealth of Pennsylvania DOH – April 2021 (In Progress)
4.2.2.10	The system must have and maintain all the National Center for Health Statistics (NCHS) edits.	Yes	
4.2.2.11	The solution must interface with the State and Territorial Exchange of Vital Events (STEVE).	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.
4.2.2.12	The solution must interface with Electronic Verification of Vital Events (EVVE)	Yes	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) For more details refer to MANDATORY REQUIREMENTS Narrative.

<table>
<tr><td>4.2.2.13</td><td>The solution must interface with VitalChek certificate ordering</td><td>Yes</td><td>New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4)
For more details refer to MANDATORY REQUIREMENTS Narrative.</td></tr>
<tr><td>4.2.2.14</td><td>The solution must interface with On-line Verification System (OVS)</td><td>Yes</td><td>New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4)
For more details refer to MANDATORY REQUIREMENTS Narrative.</td></tr>
<tr><td>4.2.2.15</td><td>The solution must work in Safari, Chrome, Internet Explorer (IE)</td><td>Yes</td><td>GCOM confirms the solution works in Internet Explorer (IE), Chrome, and Safari.
GCOM's Vital Records Management System (VRMS) is a web-based system, which supports the following client web browsers if operating system supports these browsers GCOM VRMS will continue to perform as expected.
Table 1: Supported web Browsers
<table>
<tr><th>ID</th><th>Browser</th><th>Lowest Supported Version</th><th>Current Version</th></tr>
<tr><td>1</td><td>Internet Explorer</td><td>Internet Explorer v10 and above</td><td>IE 11 and Edge 18</td></tr>
<tr><td>2</td><td>Chrome</td><td>Chrome v56 and above</td><td>Chrome 72.0</td></tr>
<tr><td>3</td><td>Safari</td><td>Safari v10 and above</td><td>Safari v12</td></tr>
<tr><td>4</td><td>Firefox</td><td>Firefox v57 and above</td><td>Firefox v65</td></tr>
<tr><td>5</td><td>Opera</td><td>Firefox v45 and above</td><td>Firefox v57</td></tr>
</table></td></tr>
<tr><td>4.2.2.16</td><td>The vendor shall provide to the State, simultaneous with its initial installation, and any subsequent enhancements, upgrades, fixes, etc., software tools (including, but not limited to compilers, editors, etc) that would be required to maintain or enhance the vendor hosted customized software.</td><td>Yes</td><td>GCOM confirms to provide to the State, simultaneous with its initial installation, and any subsequent enhancements, upgrades, fixes, etc., software tools (including, but not limited to compilers, editors, etc.) that would be required to maintain or enhance the vendor hosted customized software.

GCOM VRMS source code can be released to WV DHHR if so desired, this offers flexibility of taking Operations and Maintenance In-house; additionally, allows state to make urgent modifications without waiting for product release cycles.</td></tr>
<tr><td>4.2.2.17</td><td>Escrow for Source Code; In the event the vendor at any point during the continued</td><td>Yes</td><td>GCOM confirms to escrow for Source Code with no expense to the State.</td></tr>
</table>

	installation and operation of the software herein acquired discontinues the conduct of business or for any reason fails to continue to support the software, the state shall be provided a copy of the source code for said software within thirty day sat no expense to the State.		
4.2.2.18	The vendor shall provide a list of at least three (3) clients for whom the vendor has provided products and/or services that are the same or similar to those products and/or services requested in this RFP. References provided will be contacted during evaluation of the vendor submitted RFP.	No	New York City DOHMH – Oct 15, 2018 (GCOM Exhibit 4) Please refer to C1-5. References and C1-9. Experience Service Vital Records Clients for details.
4.2.2.19	The vendor shall adhere to specified security controls as well as state and federal regulations identified in Attachment I.	Yes	GCOM confirms to controls as well as state and federal regulations identified in Attachment I.
4.2.2.20	The vendor shall agree to Software as a Service Addendum as described in Attachment J.	Yes	GCOM confirms to controls as well as state and federal regulations identified in Attachment J.
4.2.2.21	The vendor shall use the response templates provided in section 5.3 for their proposal.	Yes	GCOM confirms to use the response templates provided in section 5.3 for proposal.
4.3.2.1	The Vendor Project Manager must have a minimum of 2 years experience managing a vital records project.	Yes	GCOM confirms that Project Manager has minimum of 2 years' experience managing a vital records project.
4.3.2.2	All key project staff must be identified for each event module (EDRS, EBRS, EFDS, ITOP, POS and data	Yes	GCOM confirms that all key project staff must be identified for each event module (EDRS, EBRS, EFDS, ITOP, POS and data conversion) and has a minimum of 2 years of configuring the event for other jurisdiction. If key personnel are replaced the replacement must have a comparable skill and experience level.

	conversion) and must have a minimum of 2 years of configuring the event for other states within the US or Canadian Provinces or other countries. If key personnel are replaced the replacement must have a comparable skill and experience level.		

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BUSINESS PROPOSAL (ATTACHMENT C)

Section 1

Instructions: Please include responses to the questions in the shaded fields of this attachment and reference and attachments provided.

C1-1. General

Please introduce or summarize any information the Respondent deems relevant or important to the State's successful acquisition of the products and/or services requested in this RFP.

GCOM Software LLC (GCOM), is pleased to have the opportunity to provide information to the Commonwealth of West Virginia's Department of Health and Human Resources on this exciting and transformative Electronic Vital Records System (EVRS) Project.

GCOM has extensive experience with the replacement of the Vital Records Management System from VitalChek DAVE system to GCOM VRMS mission-critical systems in the Vital Record domain. Over the past nine years, GCOM has been serving the needs of the New York City Department of Health and Vital Records Services. This experience has led to a deep understanding of the complexity associated with implementing a major system like the Vital Records Management system.

GCOM has applied the domain knowledge acquired from the above engagements to create GCOM VRMS. GCOM VRMS is built from ground up using GCOM's core product Form Engine; it is a suite of business and technical services to provide a near custom fit from a COTS product. GCOM VRMS meets 93% of the DHHR needs out of the box or with configuration. Please see the details in Section 4: Functional Response.

GCOM's Vital Records Management Solution (VRMS) is a next-generation Electronic Vital Event Reporting, Issuance and Records Management System that we have delivered to the NYC Department of Health and Mental Hygiene. NYC VRMS is a fully integrated solution written in Microsoft.NET technology stack and Service Oriented Architecture (SOA) for tracking and managing the processes associated with registering all vital events, as well as data compilation, analysis, and dissemination, letting you focus

GCOM FACTS

- *GCOM is a growing system integrator and product development company with $75 million revenue in 2017.*
- *GCOM was named one of the Business Review's "Fastest Growing IT Company in the NYS Capital Region" for the past 5 years.*
- *GCOM has workflow and business process reengineering experience on many successful projects, but none more than our experience on VRMS, which is very closely aligned to the needs called out for on this WV EVRS RFP.*
- *GCOM has a ten-years track record of successful projects and happy clients*

delivering outstanding customer service. We are currently engaged with Commonwealth of Pennsylvania for similar implementation, which will estimate EBRS to go live in Jan 2020.

Table 2: Stats about PA and NYC Vital Records VRMS projects

Vital Records	PA	NYC
Scope		
Live Birth	✓	✓
Death	✓	✓
Fetal Deaths	✓	✓
ITOP	✓	✓
Order Processing	✓	✓
Amendments	✓	✓
Kiosk	✓	✓
Medical Examiners	✓	✓
Size		
Vital Events Records	Approx. 23 Mil	Approx. 19 Mil
Live Birth (Annual)	139,000	125,000
Death (Annual)	132,000	63,000
Fetal Deaths (Annual)	1,500	14,000
ITOP (Annual)	29,000	14,000
County coroner offices & ME	67	1
Medical Facility	130	100
Funeral Homes	1,600	1,200
Local Registrar	180	N/A
Current Users	15,000	18,000
Consumer Products	1.6 Mil	1.2 Mil

VRMS is HIPAA-compliant, and has security features such as access control, encryption, and secure data transmission and non-repudiation mechanisms using electronic authentication devices. The VRMS solution includes the following modules and features for Vital Events Reporting and Registration:

Modules	Features
✓ Birth/Death/Fetal Death/ITOP	✓ User Customizable Forms
✓ Acknowledgment of Paternity (AOP)	✓ Configurable Business validation rules
✓ Amendments/Corrections	✓ Document management system
✓ Order Processing & Issuance	✓ Address Verification
✓ Customer Order Intake at Kiosk	✓ Geo-Coding
✓ Online Ordering processing	✓ CDC View
✓ Financial Reconciliation &	✓ User Notification
✓ Accounting Reports	✓ SSA OVS
✓ Reports, Extracts, and Jobs	✓ ID Verification
✓ System Administration	✓ Role based access & User administration
✓ Security & Auditing	✓ Workflow/Queue Management

Key benefits GCOM offers to meet the WV DHHR requirements:

- GCOM hosts the Web-based responsive design solution to streamline the process of reporting, registering, and managing all vital events records such as Birth, Death, ITOP and Fetal Death.
- Our GCOM VRMS COTS product is developed using service-oriented architecture. It is highly configurable and scalable.
- Our GCOM VRMS is accessible by external entities such as Medical Facilities, Funeral Homes, Medical Examiners/Corners' office.
- GCOM VRMS Solution is reliable and secure.
- We are Proposing the same GCOM VRMS implementation team that was instrumental in delivering the similar size and scope project for NYC Vital Records.
- GCOM has experience in replacing VitalChek DAVE system with GCOM VRMS with successful data migration.
- GCOM has extensive experience as a System Integrator, where our team has implemented enterprise level critical systems. GCOM VRMS product has all technological foundational blocks that GCOM has gained working as system integrator
- GCOM is bringing pre-configured product to WV DHHR for requirement fit-gap analysis. GCOM believes that previews/demos will speed up requirement gathering process and most of the configuration should be done while requirement gathering by using easy to configure capability of GCOM VRMS product.
- GCOM development is on-shore at its office in Albany, NY

- GCOM VRMS source code can be released to DHHR if so desired by DHHR, this offers flexibility of taking Operations and Maintenance In-house; additionally, allows DHHR to make urgent modifications without waiting for product release cycles.
- GCOM product source code branching policies, allows GCOM to maintain the separate code base for each of our client that enables seamless upgrades.
- We listen to our customer feedback and make enhancements to the GCOM VRMS on regular cycles.
- GCOM offers a storefront application that is streamlined. Additionally, it is aligned with internal order of management module.
- GCOM is proposing hosting of primary site and disaster recovery site in the Azure Government cloud which meets all the WV DHHR compliance requirements.

GCOM understands that WV DHHR will ultimately be selecting not only a Product, but also a partner that is committed to the successful implementation of the project. The GCOM Vital Records Practice includes domain experts, project managers, technical experts, and business analysts dedicated to the delivery of mission-critical VRMS solutions.

In summary, we believe we have demonstrated, in this response, that we have the right web-based COTS solution to be delivered using the right approach with a high-performance team that can offer the best value. We are looking forward to presenting our product, our team and our approach to WV DHHR.

C1-2. Respondent's Company Structure

Please include in this section the following:

- *Identify the legal form of the Respondent's business organization*
- *Identify the state in which formed (accompanied by certificate of authority)*
- *Identify the types of business ventures in which the organization is involved*
- *Provide a chart of the organization. If the organization includes more than one (1) product division, the division responsible for the development and marketing of the requested products and/or services in the US must be described in more detail that other components of the organization.*

Please end your responses below and indicate if any attachments are included.

GCOM Software LLC (formerly GCOM Software, Inc.), a NYS LLC, was founded in 2005 by CEO, Girish Bhatia and Managing Partners, Riyaz Ladkhan and Abid Bargeer. Our first contract was an enterprise system modernization with the New York State Department of Public Safety. We started in a staffing capacity, but quickly got *promoted* to technical leadership roles within the modernization program, reporting to the NYS DPS CIO – the program's sponsor. Based on services quality and results delivered for NYS DPS, we added 14 out of 16 NYS executive agencies, over our first few years of operations delivering case management, enterprise data integration, system integration and business intelligence solution and services.

In 2008, GCOM won a Master Services Agreement with the New York City Information Technology and Telecommunication Services Agency. We continued to demonstrate our ability to recruit and place highly skilled technical resources for New York City and today we are the Number 1 ITCS Vendor placing 143 out of 398 positions over the last 12 months. In 2014, GCOM won a Master Service Agreement with NYS ITCS for system integration services. Since winning a spot for the NYS System Integration contract, GCOM has won 13 of the last 18 Tier 1 system integration services contracts.

In services our New York State and New York City clients, GCOM built significant public sector domain knowledge in the areas of public safety, regulatory management and health and human services. Our domain knowledge coupled with our technical solution expertise offered the marketplace a very competitive value proposition; allowing GCOM to offer our services to public sector clients in the Commonwealth of Massachusetts, State of Florida, State of Maryland, and the State of Texas. In addition to serving an expanding client base across the nation, GCOM performance and reputation resulted in industry leading software vendors like Microsoft, Oracle, Infor, Accela and Salesforce investing in strategic marketing and capabilities relationships to enable us to deliver value to public sector client faster and with less risk.

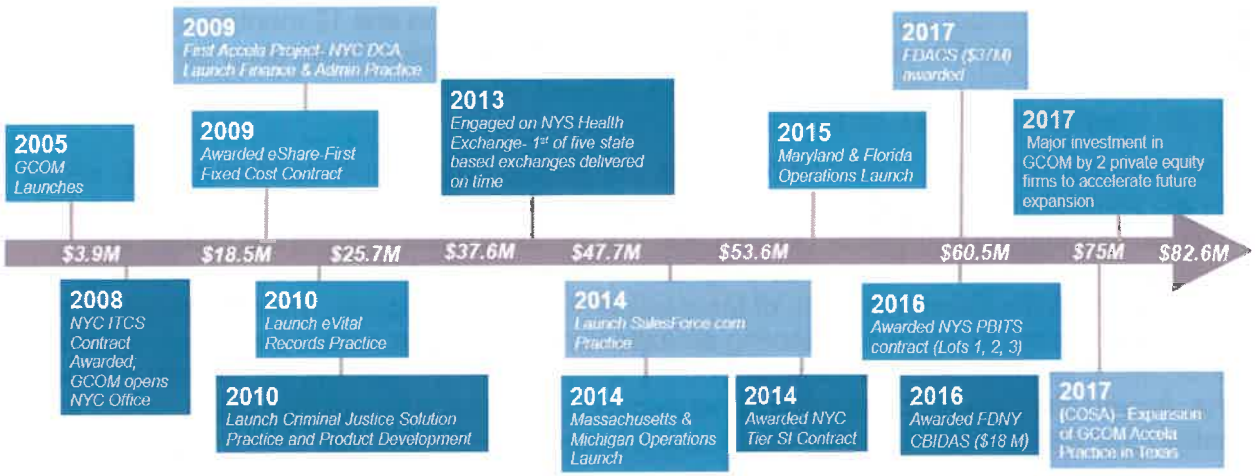
As GCOM's track record of successful engagements grew, our clients began selecting GCOM to deliver larger and more complex enterprise engagements. Today, we are trusted by our client to deliver their most strategic technology projects. Recent examples of enterprise projects include:

- Vital Record Management Systems for New York City ($8 million, 2 years)
- Computerized Criminal History System for the State of Florida ($12 million, 3 years)
- Customer Service System for the Florida Department of Agriculture ($38 million, 4 years)
- Fire Department New York Central Building Information System ($22 million, 3 years)
- City of San Antonio BuildSA Enterprise Permitting and Licensing System ($5 million, 1 year)

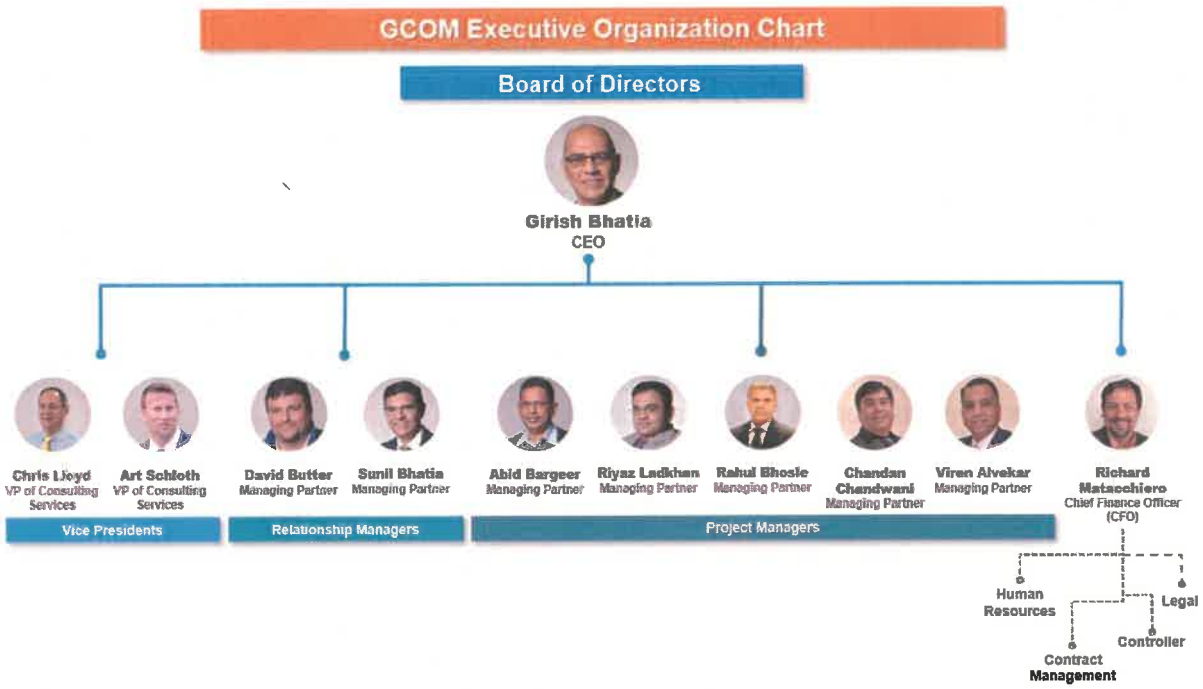
GCOM consistent growth and client results have not only been recognized by clients and the professionals who choose to work with GCOM, but also by private investment firms with an interest in helping GCOM offer its services to an expanding client base. In 2017, private equity firms, SageWind Capital and the Bagnols Family Investments partnered GCOM's management team to write the next chapters in GCOM's journey.

The timeline below summaries GCOM expansion across solutions, service lines and capabilities since our founding in 2005. Additionally, the chart shows our services growth year over year.

An Overview of Our Journey



GCOM is organized to deliver solutions via either project based or staffing based engagements,



providing our clients with flexible and economically mechanisms to engage GCOM. When you engage GCOM in either a project or a staff augmentation role, you receive a team member or an entire team that is equipped with both the technical and business domain knowledge needed to deliver the services and solutions you require. As illustrated below, GCOM services offerings and capabilities are matrixed into our executive management team.

This matrixed organizational structure ensures executive oversight in each GCOM engagement and expedites the right resources, with the right technical and business domain capabilities being assigned to each engagement. This organizational structure has enabled GCOM to continuously to deliver solutions, to win repeat customer engagements, to systematically expand our client base, to expand our solution offerings and capabilities, and to grow geometrically each year.

C1-3. Company Financial Information

This section should include the Respondent's financial statements including 1) an income statement and 2) balance sheet for each of the two (2) most recently completed fiscal years.

The Financial statements should demonstrate the Respondent's financial stability. If the financial statements being provided by the respondent are those of a parent or holding company, additional financial information should be provided for the entity/organization directly responding to this RFP.

GCOM is a privately held LLC, that is run in a fiscally conservative manner. By way of background, GCOM, formerly known as GCOM Software, Inc., underwent a change of control transaction on November 14, 2017. GCOM Software, Inc. merged into GCOM Software MS LLC, and following such merger changed its name to GCOM Software LLC. GCOM Software LLC is the successor in interest to GCOM Software, Inc. and assumed all immigration rights and liabilities of GCOM Software, Inc., including Labor Condition Application (LCA) obligations. Further, GCOM Software LLC retains the federal tax identification number of GCOM Software, Inc.

Some of the large projects undertaken by GCOM in the past are 'Enterprise System Modernization' for NYS Division of Criminal Justice Services, NYS Health Benefit Exchange in partnership with CSRA (one of the few success stories in the nation for implementing the Affordable Care Act project) and NYC-DHHRMH eLicensing project.

We have a very strong balance sheet (our audited financial statements from 2015, 2016 and 2017 are attached as **GCOM Exhibit 5 Audited Financial Statements**; our working capital is in excess of 20 million, in addition we carry a large line of credit. Apart from our very strong balance sheet, GCOM has zero debt and a substantial line of credit with TD Bank to undertake large deliverable based projects.

Our consistent growth is shown in the graph below:

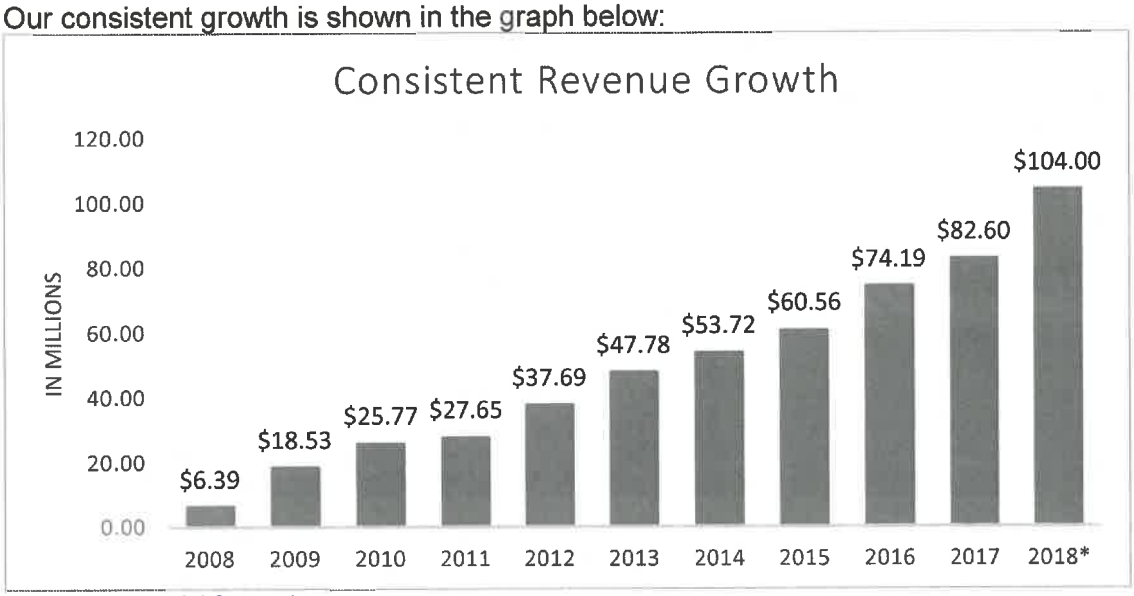


Figure 5: Financial Strength

In summary, GCOM has the financial capacity and economic strength to perform the contract requirements.

C1-4. Integrity of Company Structure and Financial Reporting

This section should include a statement indicating that the CEO and/or CFO has taken personal responsibility for the thoroughness and correctness of any/all financial information supplied with this proposal.

The areas of interest to the State in considering corporate responsibility include the following items: separation of audit functions from corporate boards and board members, if any, the manner in which the organization assures board integrity, the separation of audit functions, and consulting services.

Please enter your response below and indicate if any attachments are included.

Please see Exhibit 6 attached as certification of Integrity of Company Structure and Financial Reporting.

C1-5. References

The state requires that the Respondent must have served three (3) clients, two (2) of which must be from the states, countries or Canadian provinces lists in the vendor's response to the Mandatory Requirements for whom the Respondent has provided products and/or services that are the same or similar to those products and/or services requested in this RFP. Any state government for which the respondent has provided these products and services should be included.

Reference 1

Legal Name of Company or Governmental Entity	NYC Department of Health & Mental Hygiene
Company Mailing Address	Gotham Center - 42-09 28th Street
Company City, State, Zip	Long Island City, New York 11101
Company Website Address	https://www1.nyc.gov/site/doh/index.page
Contact Person Name/Title	Namrata Kumar, Assistant Commissioner; Division of Informatics & Information Technology
Company Telephone Number	(347) 396-2269
Company Fax Number	
Contact E-mail	nkumar@health.nyc.gov
Industry of Company	Government Entity
Description of the products or services	System Integration services for eVital Project (Electronic Birth & Death Registration System). Please refer case study given at C1-9.1.

Reference 2	
Legal Name of Company or Governmental Entity	Florida Department of Law Enforcement
Company Mailing Address	2331 Phillips Road
Company City, State, Zip	Tallahassee, FL 32308
Company Website Address	http://www.fdle.state.fl.us/
Contact Person Name/Title	Renee Strickland, Bureau Chief / Project Manager
Company Telephone Number	(850) 410-8195
Company Fax Number	
Contact E-mail	ReneeStrickland@fdle.state.fl.us
Industry of Company	State government
Description of the products or services	System Integration for Computerized Criminal History Modernization. Please refer case study given at C1-9.3.

Reference 3	
Legal Name of Company or Governmental Entity	NYC Department of Health and Mental Hygiene
Company Mailing Address	250 Broadway, 26th Floor
Company City, State, Zip	New York, NY 10007
Company Website Address	https://www1.nyc.gov/site/doh/index.page
Contact Person Name/Title	Paul R. Cackler, CIO NYC: Mayor's Office of Housing Recovery
Company Telephone Number	(212) 615-8070
Company Fax Number	
Contact E-mail	pcackler@recovery.nyc.gov
Industry of Company	Government Entity
Description of the products or services	System Integration Services for eShare Project (Electronic System for HIV/AIDs Reporting & Evaluation). Please refer case study given at C1-9.2.

C1-6. Registration to do Business – Secretary of State

If awarded the contract, the Respondent will be required to be registered, and be in good standing with the Secretary of State. The registration requirement is applicable to all limited liability partnerships, limited partnerships, corporations and S-corporations, nonprofit corporations and limited liability companies. The respondent should indicate the status of registration, if applicable, in this section of the proposal.

GCOM is currently in the process of registering with the Secretary of State and will comply with this requirement.

C1-7. General Information Section

Each Respondent should enter its company's general information including contact information.

Business Information	
Legal Name of Company	GCOM Software LLC
Contact Name	Riyaz Ladkhan
Contact Title	Managing Partner

Contact E-mail Address	RFP@gcomsoft.com
Company Mailing Address	24 Madison Ave Extension
Company City, State, Zip	Albany NY 12203
Company telephone number	518-869-1671
Company fax number	
Company Website Address	http://www.gcomsoft.com/
Number of Employees (company)	550
Years of Experience	13
Number of US Offices	4
Year WV Office Established (if applicable)	NA
Parent Company (if applicable)	NA
Revenues ($MM, previous year)	$104.00 Million
Revenues ($MM, 2 years prior)	$82.60 Million
% of Revenue from West Virginia customers	NA

C1-8. Experience Serving State Governments

Please provide a brief description of your company's experience in serving state governments and/or quasi-government accounts.

GCOM's track record of sourcing and delivering IT consultants that have met our clients requirements and have consistently delivered results for clients, is a hallmark of the investment GCOM has made in, 1) mature and repeatable recruiting, staffing and management methodologies and tools highly tailored to client's unique staffing requirements, 2) cultivating an environment where GCOM consultants can perform to their highest potential, and 3) maintaining a robust candidate roster both on the company's internal bench and the company's extended pre-qualified candidate pool.

We also believe that our consistent success with repeat clients is a direct reflection on how we conduct business. Our clients trust our work and the quality resources that we provide. Below we have listed some clients of ours that we have performed multiple contracts for:

Table 2: Some of GCOM's successful projects

Client	Project/Contract

NYC Department of Health and Mental Hygiene	Multiple resource selections through ITCS 2, 3 and 4 Staffing Contracts eVital – Electronic Vial Event Reporting, Issuance and Records Management System (Through GSA Contract) Health Data Virtualization & Visualization (Through NYC SI Contract) eShare – Electronic System for HIV/AIDS Reporting & Evaluation RMS – Revenue Management System (Through NYC SI Contract)
NYC Department of Sanitation	Multiple resource selections through ITCS 2, 3 and 4 Staffing Contracts Med System Patient Dashboard (Through NYC SI Contract) Support of the Legacy Applications (Through PBITS Contract)
NYC Department of Citywide Administrative Services	Multiple resource selections through ITCS 2, 3 and 4 Staffing Contracts CRM Integration with Civil Service Examination System (Through NYC SI Contract)
NYC Fire Department	Multiple resource selections through ITCS 2, 3 and 4 Staffing Contracts Delivery and Implementation of Phase III of the Coordinated Building Inspection Data Analysis ("CBIDAS") Program and New System for the Bureau of Revenue Management (Through GSA Contract)

Each project referenced in the chart above is summarized in the table below:

Customer	Project Name	Project Summary
NYS Division of Criminal Justice Services (DCJS)	General	DCJS required resources across various skill categories for their system modernization projects ranging from Java/J2EE architects, J2EE technical leads, IBM Portal developers, Forte, Message Broker and Enterprise Service Bus, IBM Process Server, single sign with OFT directory services, Portal security etc. GCOM has always met their needs in a timely fashion with highly skilled professionals. The quality & responsiveness of GCOM has made us the number one supplier of IT staffing to DCJS. GCOM has provided over 100 resources over past 8 years and at any time 25+ GCOM employees are working at DCJS developing and maintaining the mission critical public safety projects.
NYS Division of Criminal Justice Services (DCJS)	Integrated Justice Portal	The Integrate Justice Architecture Board (IJAB) consists of Division of Criminal Justice Agency (DCJS), New York State Police (NYSP), Dept. of Corrections (DOCS), Department of Parole and Homeland Security. GCOM worked as part of the IJAT team whose responsibility was to define the application architecture for criminal justice agencies based on IBM suite of tools e.g. WebSphere Application Server, Portal Server, and Message Broker etc. GCOM designed and developed Enterprise Architecture based on Service Oriented Architecture (SOA). GCOM staff implemented single sign on with help of NYSOFT (Office for Technology). GCOM, based on user interviews and system studies, designed an architecture which is secure, reliable, and maintainable. As part of this initiative, GCOM defined different technology templates for capturing various aspects (requirements, performance tests, test plans, knowledge transfer plan etc.) of the system. GCOM implemented

		common infrastructure services and reusable components based on new framework.
NYS Division of Criminal Justice Services (DCJS)	Sex Offender Management System (SOMS)	DCJS tracks and collects information from all persons convicted of Sexual Offenses residing in NYS to operate New York's Sex Offender Registry (NSOR). This information is then made available to Law Enforcement Agencies (LEA), in addition to selective information to public and NYS business for employment verification. GCOM created a web based centralized system to operate NSOR; this application was developed using WebSphere Portal and Java/JEE. The NSOR is fully integrated with IJPortal (Integrated Justice Portal); IJPortal was also designed, developed, and implemented by GCOM.
NYS Division of Criminal Justice Services (DCJS)	DNA Management System	GCOM was tasked with conversion of DNA system from Forte to Java; GCOM reverse engineered the requirements from Forte Code and redesigned DNA system. The DNA system maintains comprehensive DNA database for persons convicted of felony or serious misdemeanor charges. System keeps track of all DNA samples collected, analyzed & reported to FBI database. DNA samples collected from crime scenes are run against DNA database to aid in identifying perpetrators.
NYS Division of Criminal Justice Services (DCJS)	Enterprise Auditing and Search	GCOM designed and developed common auditing platform for all enterprise applications in the public safety cluster (Criminal Justice, State Police, Local PD's, Correction, Parole, etc.). This application enables investigators to see all changes for a specific person's records (or all actions performed by a user) using a common interface across all applications. The application supports structured & unstructured search.
NYS Division of Criminal Justice Services (DCJS)	Computerized Criminal History (CCH)	GCOM designed and developed Computerized Criminal History for the State of NY. The application keeps track of criminal cycle for each person (Arrest, Arraignment, Court Case, Probation, Correction, Parole), the information is released to various law enforcement officials based on the authorization and purpose code of the request.
NYS Division of Criminal Justice Services (DCJS)	Wanted Missing Unidentified System	GCOM was tasked with conversion of WMU system from Forte to Java; GCOM reverse engineered the requirements from Forte Code and redesigned WMU system. The system provides complete information about the person stopped for routine traffic violations. Single query from authorized law enforcement officer provides criminal history information, mug shots, search New York State's Wanted, Missing and Unidentified Persons data files, request out-of-state criminal history information, obtain timely crime trend data for counties outside of New York City, access the New York State Crime Mapping System, make inquiries into the New York State Sex Offender Registry, the State's Missing Children Clearinghouse. The system also synchronizes records across external agencies like NCIC (National Crime Information Center), NLETS (National Law Enforcement Telecommunications System).
NYS Division of Criminal Justice Services (DCJS)	Forte to JAVA Conversion (F2J)	The project involved migration existing criminal justice domain applications from Forte to new Java/JEE based platform. GCOM was also tasked with business process reengineering with the help of NYS DCJS business domain experts. The GCOM team, working with NYS DCJS technical team, designed, developed and tested 10+ applications. GCOM was also responsible for performing non-functional testing such as performance testing, failure, failover testing. GCOM developed message switches to communicate with external agencies such NLETS, FBI.

NYC Department of Health and Mental Hygiene (DHHRMH)	Budget Management System	GCOM built this system to improve functionality, reliability and transparency of Agency PS (Personal Services) and OTPS (Other Than Personal Services) budgets through the implementation of the following key features: support for a 5-year financial plan, flexible budget-modification workflow (including division staff), fiscal-year classifications applied to all budget-modifications, unified budget data model allowing budget-modifications between PS and OTPS resources, grouping of budget-modifications by initiative, classification of budget resource eligibility for PEG reduction, features to streamline the roll-out of budgets for new fiscal years, features to support quarterly PEG/new needs exercises (including division workflow), and the ability to support capital budget administration and accounting. System was built using Microsoft Technologies.
NYC Department of Health and Mental Hygiene (DHHRMH)	Data Center Migration	NYC initiated data center consolidation to reduce cost of IT Operations. It was decided to migrate all applications hosted within agency to a centralized Data Center hosted at DoITT. GCOM provided Project Management, Network Engineers, SAN experts, Security experts to migrate all applications, which were hosted in DHHRMH data center to DOIIT data center. Many applications needed remediation (Security Accreditation) to meet the stringent security guidelines imposed by DoITT. GCOM team used AppScan to detect security vulnerabilities and fixed software issues to make application compliant with DoITT security policies.
NYC Department of Health and Mental Hygiene (DHHRMH)	DMZ Security	Worked with DHHRMH's security team to plan design, and implement storage and security solutions as a part of application and datacenter re-location
NYC Department of Health and Mental Hygiene (DHHRMH)	Enterprise Licensing and Permitting (ELP)	The objective of the ELP Project was to improve DHHRMH's multiagency License processing process, and make opening and operating businesses in NYC simpler, faster, and accessible online by enabling Online application of licenses, permits, etc. The additional benefit was transparency for business customers regarding the application status. GCOM team implemented ELP using Accela an industry leading Licensing and Permitting solution. A seven-person team from GCOM managed all aspects of the project from Requirements Analysis, Design, Configuration, Scripting, and Customization. GCOM was also responsible for data conversion, implementation plan and post go-live support.
NYC Department of Health and Mental Hygiene (DHHRMH)	Healthcare Facilities Directory (HFD)	The goal of this project was to create an authoritative healthcare facility directory for the division to be used as a central resource for planning as well as during emergency response efforts. In addition, OEPR (Office of Emergency Preparedness and Response) expected that this authoritative Healthcare Facility Directory would be used by the Agency as a data source for other emergency and non-emergency purposes. The directory was envisioned to paint a comprehensive picture of each city hospital (Service offered, Geographies Served, Funding sources etc). GCOM implemented the system using Salesforce; the highlights of solution included a self-serve portal for Facilities (Hospitals) to register and report their data; workflow automation to forward data submitted by facilities to DHHRMH reviewers. Comprehensive analytics were developed to geospatially identify underserved and overserved geographies. VisualForce and Visual Workflow were used extensively to create easy to use portal for DHHRMH and Facilities in NYC.

NYC Department of Health and Mental Hygiene (DHHRMH)	Partner Management Network - PMN	The Partner Management Network project was developed to create a centralized solution for managing external partner relationships. Any entity with which DHHRMH conducts business (through grants or City Tax Levy CTL) is considered a Partner (e.g. Schools, CBOs, healthcare providers, government agencies, insurance plans, and hospitals). GCOM team used Salesforce to develop a highly configurable platform for partner management. Key features of the PMN included: • Partner Data Definition and Integration • Communication and Outreach • Connecting Partners - peer to peer relationship • Interagency Coordination • Community Organization/ Volunteer Management • Evaluation • Analysis
NYC Department of Health and Mental Hygiene (DHHRMH)	eSHARE - Electronic System for HIV/AIDS Reporting & Evaluation	The Bureau of HIV/AIDS Prevention and Control (BHIV) operates a number of grant funded programs to address HIV and AIDS prevention, care, treatment and housing needs within New York City. GCOM worked with DHHRMH to create a centralized database system that provided a better way to manage HIV related public health priorities, a case management system to ensure effective service delivery, data extraction/reporting, etc.
NYC Department of Health and Mental Hygiene (DHHRMH)	Administrative Tribunal Automation System (ATAS)	This project is intended to automate the current DHHRMH Tribunal process which involves paper, manual process and business needs built around main frame system
NYC Department of Health and Mental Hygiene (DHHRMH)	Restaurant Inspection and Grading System	Restaurant Inspection and Grading System was a mayor initiated project to grade New York City restaurants based on the sanitary conditions to help the common public in choosing better (Grade A) restaurants and thus contribute in reducing food borne illness. This is a robust application helping agency staff to streamline the inspection process and increase their efficiency by creating work assignment to 250 inspectors through a button click (auto route) and transfer the inspection results to a public facing website.
NYC Department of Health and Mental Hygiene (DHHRMH)	Enterprise Licensing and Permitting (ELP)	The objective of the ELP Project was to improve DHHRMH's multiagency License processing process, and make opening and operating businesses in NYC simpler, faster, and accessible online by enabling Online application of licenses, permits, etc. This also increased transparency for business customers regarding their application status.
NYC Department of Information Technology & Telecommunication (DOITT)	IT Staffing	GCOM has been provided the City of New York staff augmentation services since 2008 under their IT Consulting Services (ITCS) contract. GCOM has done over $62 Million in contracts with the agency, and placed more than 200 resources in past three years.

NYS Department of Health (DHHR)	NYPORTS-Adverse Medical Event Reporting & Root Cause Analysis	The New York Patient Occurrence Reporting and Tracking System or NYPORTS is an electronic form processing system that will fulfill the requirements for incident reporting as defined in Section 2805-l of the Public Health Law. The purpose of NYPORTS is to provide an easy, user friendly system to facilitate the reporting of the information to the Department of Health and, at the same time, build a database which can be used by a facility for quality improvement activities. GCOM developed a .net based secure web application that can be used by all hospitals in NYS.
NYS Department of Health (DHHR)	UAS-NY	The Uniform Assessment System is a statewide implementation to bring managed long term care under one umbrella. UASNY comprises a comprehensive assessment tool which serves more than 600 providers and nearly 300,000 consumers now. The data captured as a part of assessments is in line with InterRAI specifications and the application includes a framework that implements the InterRAI algorithms and generates all the outcomes. The overall goal of the UAS-NY is to utilize a comprehensive assessment system within eight Medicaid home and community-based long-term care services and programs. A team of seven GCOM professionals designed, developed, and implemented this Application. Solution was developed using Java/JEE technologies and is fully web based application. Other key aspect of this application is offline component. Healthcare worker can complete entire assessment in the field without internet connection; the data is selectively merged when connectivity is restored.
NYS Department of Health (DHHR)	Uniform Assessment Tool	Goal of the project was to optimize cost and quality of care for NYS citizens on Medicaid for Long Term Care. The key focus of the project was to ensure appropriate services were provided based on the objective assessments. GCOM designed and developed a solution using InterRAI algorithm to determine 'Needs' based on the 'Objective Assessments' of the recipient. The system provides complete case management for people on Long Term Care; it creates service plans from assessments in a consistent manner based on the InterRAI algorithm.
NYC Department of Sanitation (DSNY)	SMART Project	DSNY's enterprise-wide transformation project, SMART (Sanitation Management, Analysis and Resource Tracking). GCOM provided personnel for all SDLC disciplines (Project Manager, Tech lead, Developers, Testers). The key technologies used were PeopleSoft along with Java/JEE for interfacing with other DSNY applications and inter agency communications using DoITT DataShare Enterprise Service Bus.
NYC Housing Preservation Department (HPD)	HPD Info	Housing Preservation and Development oversees all residential properties in NYC for meeting minimum standards of Heating, Cooling, Hot water and other public safety issues. GCOM developed comprehensive complaint intake and inspection system using .Net technologies. GCOM personnel were responsible for project management, development and testing the application. Key tasks were: Complaint Intake System Laptop based mobile System for use by inspectors in the field Data synchronization between laptop and HPDInfo enterprise application
NYS Office of General Services (OGS)	Pronto	The Purchase Requisition and On Line Tracking of Orders (PRONTO) system is a workflow application operating on a statewide Intranet employing Microsoft's Transaction Server. GCOM was responsible from requirements gathering thru implementation of this system.

NYS Office of General Services (OGS)	Project Sunlight	The project fulfills the vision of the NYS Governor for transparency in government. All meetings between State government officials, lobbyists, vendors or other interested parties must be recorded and available to NYS citizens via public web site. Using the high level requirements provided to GCOM, we performed requirements discovery, analysis, design, development and implementation of Project Sunlight.
NYS Office of General Services (OGS)	Hourly Based IT Services (HBITS)	GCOM has been provided resources to NYS agencies through the NYS Hourly Based IT Services contract since its inception in 2012. We have placed resources across every domain and technology, including development, networking, business analysis, technical architecture, testing, tech writing, etc.
NYS Prosecutors Training Institute (NYPTI)	PCMS	GCOM re-engineered the Prosecutors Case Management System (PCMS) that serves as a comprehensive information system for prosecutors, including functions such as case tracking, document production, brief banking, calendaring, messaging, system administration and other functions. The software was written in .Net and used responsive web design to enable usage in the field by the prosecutors. It has been designed as multi-tenant application and used by 40 NYS counties. The success of this application has led to active inquiries from other States for adopting PCMS to their requirements and we are negotiating with State of Missouri to implement PCMS.
NYS Prosecutors Training Institute (NYPTI)	Prosecutors Encyclopedia	GCOM designed and developed The Prosecutors' Encyclopedia (PE), this is a web-based Brief Bank (a nationwide data warehouse application for District Attorneys). System allows automated update of case laws from RSS feeds, ftp upload etc. Enables rich media content management. Software development was done in PHP using the MediaWiki as base software.
NYS Department of Environmental Conservation	DECALS 2.0	DECALS –DEC 2.0 was delivered using Scrum framework/methodology to modernize DEC 1.0. A key goal of this initiative was to improve usability. Key technology/tools used are HTML5, CSS, Bootstrap, and Oracle Policy Automation (OWV). The combined team was established to include all stakeholders (GCOM as an SI vendor, Accela as the COTS representative, and DEC employees to provide functional knowledge). The application processes all fishing and hunting licenses to NYS residents.

C1-9. Experience serving Vital Records Clients

Please describe your company's experience in serving vital records customers of a similar size to the State with similar scope. Please provide specific clients and detailed examples.

GCOM has extensive experience serving similar clients, including:

- New York City Department of Health and Mental Hygiene (NYC DOHMH)
- New York State Department of Health (NYS DOH)
- CSRA / NYS DOH

A brief overview of some of the projects/services we have provided these customers is below:

Table 3: Similar Client Projects

Customer Name	Brief Overview
New York City Department of Health and Mental Hygiene (NYC DOHMH)	The eVital system is a critical to the operation and functioning of mandated Agency programs and processes. DOHMH aims to align technology solutions with the DOHMH mission by prioritizing resource use and deploying innovations that facilitate the agency's day-to-day activities and enhance staff productivity and efficiency. Our goal was to provide users with a reliable, stable, and safe computing environment. DIITT's principal goal was to provide and continue to enhance the technology infrastructure and computer applications that are in place to support the present and future business requirements of all organizations within the Agency. This infrastructure has enabled DOHMH to maximize and improve its ability to deliver timely, quality services to DOHMH/DIITT clients and to the public within New York City, as well as obtain administrative benefits
	Revenue Management System: DOHMH had a need for an effective, efficient and flexible revenue management system that provides quicker services along with decreasing resource levels to replace an ineffective system that required the use of numerous applications and many workarounds. GCOM provides a new RC management module to the RMS system.
	The Overtime Tracking system is a new financial control system designed to centralize and manage all overtime request processing and authorization. The objective is to create a centralized system that will request, approve and monitor overtime initiatives at the NYC Department of Health and Mental Hygiene.
	Healthcare Facility Directory: The goal of this project was to create an authoritative healthcare facility directory for the division to be used as a central resource for planning as well as during emergency response efforts. In addition, OEPR (Office of Emergency Preparedness and Response) expected that this authoritative Healthcare Facility Directory would be used by the Agency as a data source for other emergency and non-emergency purposes. The directory was envisioned to paint a comprehensive picture of each city hospital (Service offered, Geographies Served, Funding sources etc.). GCOM implemented the system using Salesforce; the highlights of solution included a self-serve portal for Facilities (Hospitals) to register and report their data; workflow automation to forward data submitted by facilities to DOHMH reviewers. Comprehensive analytics were developed to geospatially identify underserved and overserved geographies. VisualForce and Visual Workflow were used extensively to create easy to use portal for DOHMH and Facilities in NYC.
	eShare: GCOM created a centralized database system that provides: Managed BHIV public health priorities (centralized de-duplicated data from all service providers for all clients) Case management system to ensure effective service delivery (enrollment, clinical services, outcomes, discharge events for each client) Data extraction and reporting to meet federal funding compliance Data collection for contract management and oversight by BHIV and the Master Contractor engaged by BHIV for contract administration Interfaces for data upload by Service Providers
New York State Department of Health (NYS DOH)	Early Intervention Program: IPRO performs comprehensive quality improvement monitoring reviews of services provided by individuals and agencies, as well as municipality administration and oversight of these services. GCOM developed a system that enables health care workers from IPRO to conduct field audits to ensure at-risk kids are getting the services they need and measure health outcomes; report deficiencies in the care

	coordination and ask the health care providers to develop CAP (Corrective Action Plans) if applicable. The system was developed using .Net framework, key features include: Configurable data entry forms Comprehensive scheduling based on Department of Health (DOH) specified algorithm Offline mode to enable use in the field Data synchronization with enterprise data Correction Action Plans Management reports, review reports.
CSRA / NYS DOH	New York State of Health Marketplace: New York as an early innovator decided to build a state-based exchange called New York State of Health (NYSoH). NYSoH is an online health exchange where eligible individuals and small business employees will shop to obtain health insurance. A full spectrum of health insurance plans tailored to the specific needs of exchange applicants are offered. These plans range from the Insurance Affordability Programs (IAPs), which include the Medicaid Managed Care (MMC), Essential Plan (EP), Children's Health Insurance Program (CHIP) plans, Advanced Premium Tax Credit (APTC), and the Qualified Health Plans (QHP). GCOM has almost 50 resources working on this project, in partnership with CSRA. NYS was one of the few states in the county to successfully launch their exchange. This is a large-scale Java/JEE application with both custom and COTS components, comprehensive documents management solution, and extensive real-time interfaces to IRS, NYS Tax and Finance, and other external sources to determine eligibility criteria.

Please find detailed case studies below for 3 Referenced projects.

C1-9.1 NYC Dept. of Health and Mental Hygiene(DHHRMH): eVital

C1-9.1.1 Client Challenge

New York City, unlike any other US city, is an independent vital records jurisdiction. This means that it maintains its own vital event certificates and reports it data directly to the National Center for Health Statistics and the Social Security Administration. The New York City Department of Health and Mental Hygiene (DHHRMH) was seeking a contractor to design, develop and implement next generation Electronic Vital Event Reporting, Issuance and Records Management System (eVital), an Electronic Document Management System. The eVital system is critical for the reporting, registration, processing and analysis of all vital events (births, deaths, and spontaneous and induced terminations of pregnancy) in New York City. The system also issues certified copies of birth and death certificates as well as newborn registrations.

The New York City Department of Health and Mental Hygiene was seeking a contractor to design, develop and implement next generation Electronic Vital Event Reporting, Issuance and Records Management System (eVital). The eVital system is critical to the operation and functioning of mandated Agency programs and processes. DHHRMH aimed to align technology solutions with the DHHRMH mission by prioritizing resource use and deploying innovations that facilitate the agency's day-to-day activities and enhance staff productivity and efficiency.

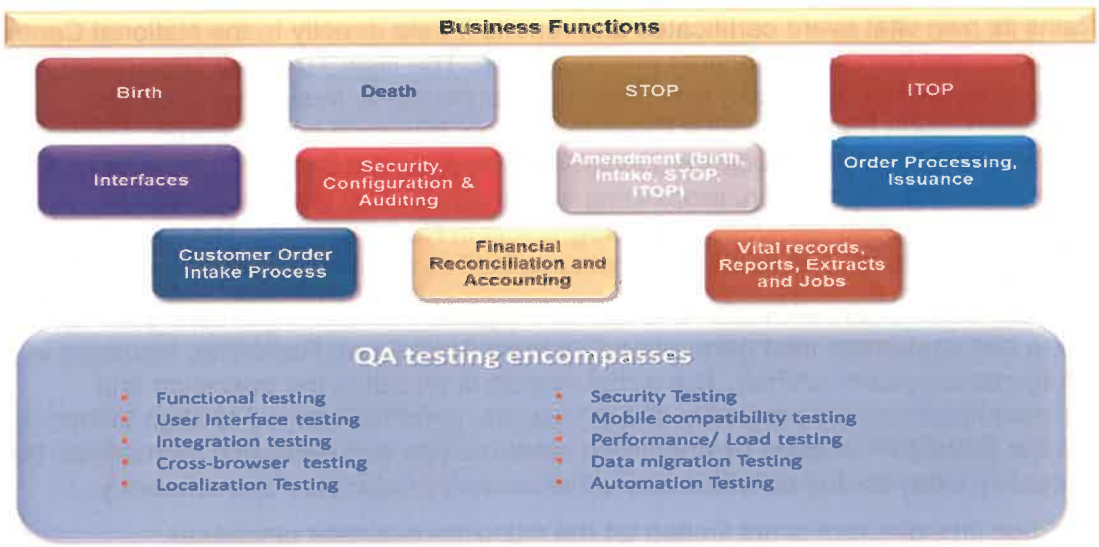
The eVital solution includes (but is not limited to) the following business processes:

- Vital Event Reporting and Registration for: Birth, Death, Induced Termination of Pregnancy (ITOP), Spontaneous Termination of Pregnancy (STOP), Acknowledgement of Paternity (AOP).
- Vital Records Amendments/Corrections Management including Scan Application Package to create a case, electronic submissions from institutions, case workflow with rules, record updates.
- Order Management and Issuance: Process workflows to support business process for window operations, Queue Management for Windows operations, issuance and certificate printing.
- Customer Order Intake: Online ordering, walk-in Kiosk/Mobile ordering and Credit card/money order/eft payments.
- Financial Reconciliation and accounting reports
- Vital records, Reports, Extracts and jobs also Vital statistics related features such as state and federal mandated extracts/data exchange, nosology and statistical reporting, and inter, intra agency reports and electronic verifications.
- Document Management, interfaces, system administration, security and auditing
- Data Migration from DAVE EVERS and FoxPro to eVital. Birth and Death records since 1910 close to 19 Million records.

C1-9.1.2 The Solution

With this project, GCOM was tasked with designing, developing and implementing the new system while maintaining all of the current functionality and having little to no impact on functions or users of the existing system.

Our goal was to provide users with a reliable, stable, and safe computing environment. Another project goal was to provide and continue to enhance the technology infrastructure and computer



applications that are in place to support the present and future business requirements of all organizations within the Agency. GCOM's responsibilities in designing, developing and implementing the new eVital system include:

- Develop and provide a detailed written project Work Plan for the entire e-Vital solution with details on proposed timelines for each phase.
- GCOM was responsible for project management in coordination with DHHRMH project manager. This includes project administration (maintenance of the project plan, schedule, etc.), weekly status reporting, management of issues and risks.
- GCOM was responsible to determine how the target application functions, as well as how it fits into the various program processes it must interact with.
- Design: GCOM was responsible to define how the application will be constructed.
- Development: GCOM was responsible to build eVital application as defined in the Design phase, employing the approved environment, tools and standards.

- Prototyping was leveraged to enable a rapid proof of design, and to promote the highest level of efficiency in development phase
- Testing: Verified the accuracy, stability, and technical quality of the eVital application. The eVital application was tested against the acceptance criteria established during the Design Stage, as well as against industry standard guidelines for stability, performance, scalability, and security.
- Conducted Quality Assurance in parallel with Development in an iterative fashion, so that as issues were identified by the testing team, they could be corrected by development, re-tested, and closed out before moving to the next phase.
- The Implementation Planning phase focused on rollout preparedness. During this phase, GCOM developed a deployment plan, including necessary operational procedures to implement or back out the new application.
- GCOM also created user documentation for end user orientation. DHHRMH and GCOM worked jointly to assure resource availability for recovery and ongoing operations for a limited time after production.
- Documenting and detailing system migration strategies, risk assessment, staffing needs/workload management.

- Planning for document conversion (outdated electronic to new system/media).

C1-9.1.3 Final Results:

This infrastructure has enabled DHHRMH to maximize and improve its ability to deliver timely, quality services to DHHRMH/DIITT clients and to the public within New York City, as well as obtain administrative benefits.

C1-9.1.4 Quick Facts:

Customer Name	NYC DHHRMH
Project Name	eVital
Start and end dates of project	April 2014 to October 2018
Contract Value	$ 8,273,125
# of Staff	20
Target Audience	Internal DHHRMH Users: 300 External Users: 19000+ (Medical Facilities, Funeral Homes, Medical Examiners, Birthing Centers)
Contractor's role in the project	Prime Contractor, System Integrator

C1-9.2 NYC Department of Health and Mental Hygiene (DHHRMH) eSHARE project

C1-9.2.1 Client Challenge:

The Bureau of HIV/AIDS Prevention and Control (BHIV) operates a number of grant-funded programs to address HIV and AIDS prevention, care, treatment, and housing needs within New York City. The grant funding for these programs originates from the Health Resources and Services Administration (HRSA), Centers for Disease Control and Prevention (CDC), Housing and Urban Development (HUD), and from the NYC City Tax Levy (CTL). This funding is then

contracted to over 200 community providers across New York City to carry out specific HIV/AIDS services on behalf of the agency.

In order to meet grant reporting requirements and effectively manage agency public health priorities, a wide range of data is collected from the community providers. Exact data reporting requirements often differ greatly by funding source, but frequently collected data include process data, outcome data, and client-level demographic and clinical data. In addition, a multitude of data is needed for contract management and contract oversight by the agency and the Master Contractor engaged by agency for contract administration.

GCOM created a centralized database system which provides:

- Managed BHIV public health priorities (centralized de-duplicated data from all service providers for all clients).
- Case management system to ensure effective service delivery (enrollment, clinical services, outcomes, and discharge events for each client).
- Data extraction and reporting to meet federal funding compliance.
- Data collection for contract management and oversight by BHIV and the Master Contractor engaged by BHIV for contract administration.
- Interfaces for data upload by Service Providers.

C1-9.2.2 The Solution:

GCOM deployed 'Web Form Generator -WFG, a tool within the 'GCOM Accelerator suite', as a key part of our solution. WFG allows for dynamic configuration of web enabled data entry forms. The use of WFG for this project is a specific example of how GCOM was able to leverage its

own existing Intellectual Property for the direct benefit of the City. The project was able to be deployed faster and the City did not have to pay for a foundational tool GCOM had already built and was able to leverage.

Our solution allowed DHHRMH's BHIV users to design and visualize forms, and render them on a browser via our Forms Designer. This interactive way to collect the requirements while visualizing the form was a critical success with the system's users. GCOM also added the ability of business users to change Help Text, Tool Tips, and modify validation rules on the fly. By enabling these capabilities, many changes can be made to the system without expensive and time-consuming coding.

C1-9.2.3 Final Results

The Proposed Layered Architectural Model which not only satisfied the current needs of DHHRMH but also met DHHRMH's future enterprise-level long-term requirements. Key features of the system include:

- Application is flexible, web based and utilizes Microsoft SQL database.
- Application has been written in a modern, widely used language.
- Framework and application architecture used to develop the application follow industry accepted design patterns. This reduces the effort required to maintain the developed code.
- Application is secure and uses agency Single Sign on (SSO) using agency Portal for external users, and Web Seal Junction for internal users.
- Communication between browser and IIS Server is through HTTPS using 128-bit encryption.
- Application has thorough reporting features in the form of data extract and canned reports.

C1-9.2.4 Quick Facts:

Customer Name	NYC Department of Health and Mental Hygiene (DHHRMH)
Project Name	eSHARE
Start and end dates of project	January 2009 to January 2014 (60 Months)
Contract Value	$6.3 Million
# of Staff	20+
Target Audience	Hospitals and Service Providers, Public Health Service, and Agency Users 1,800+ Users
Contractor's role in the project	Prime Contractor, System Integrator

C1-9.3 Florida Department of Law Enforcement (FDLE): Computerized Criminal History (CCH) Modernization

C1-9.3.1 Client Challenge:

Florida's Computerized Criminal History (CCH) was implemented 40 years ago. The significantly outdated processes and technology result in excessive development time and maintenance of the system. Over the years, FDLE had patched code and stretched the system to do things it was never intended to perform. The technology stack of existing CCH is limited, and it is difficult to provide the services and scalability required of criminal justice information systems.

The CCH system is a central part of the Florida criminal justice information system, and it supports a large portion of the information services. Every part of the criminal justice community relies on criminal history, police, investigations, determining bond, prosecution, sentencing and corrections classification. The CCH system is tied to other critical systems, like the Biometric Identification System (BIS) and the Florida Crime Information Center (FCIC) and is necessary for them to function fully.

In addition to the age of the system, Criminal Justice Information Services (CJIS) staff assigned to use the CCH system are required to perform most of their business processes, or workflow, manually. The manual, paper-based processes used today are no longer practical considering the higher number of CCH records compared to 30-40 years ago.

C1-9.3.2 The Solution:

GCOM was awarded the contract in August 2015 to modernize the CCH system leveraging our state-of-the-art product CRRMS (Criminal Record Repository Management System), perform business process improvements, and automate current manual processes. The goal of this award was to implement a modernized CCH system that will improve the services available, quality of information, integrity of the data and continue to respect the privacy of individuals; in effect making Florida safer for citizens, visitors and public safety officials.

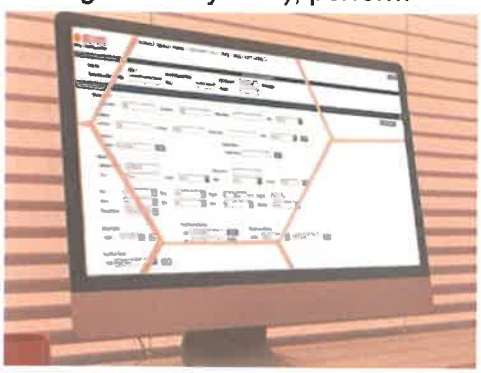


Figure 2 Snapshot of live CRRMS screen

CRRMS is state-of-the-art, all-encompassing enterprise Computerized Criminal History Record Management System. CRRMS is built on cross cutting technology to handle sequence of events in Criminal Justice Systems. Moreover, it can be configured and customized to fulfill the specific requirements of any Law Enforcement Agency.

CRRMS is equipped to handle the entire Criminal Cycle including Fingerprint services, Arrest processing, Disposition, Correction, Parole, Probation, Applicant Processing, Inquiry and Rap Sheet processing. With advanced InBox, Workflow and Notification services, CRRMS insures your agency never misses any key updates. All these modules on top of a robust Auditing and Reporting system ensure that accountability is not compromised at any level of service.

The implementation of CRRMS was divided into two phases; key reasons were to realize benefits of new system sooner and divide project into multi-part to mitigate risk of big-bang approach.

Phase one involved setting up the environment, establishing enterprise and application architecture, installing base CRRMS software and implementing 12 key workflows (business processes). Release one was 13 months in duration (9/1/15 thru 9/30/2016). The key functionality provided in release one included:

- Technical Services:
  - Establish Governance Model for enterprise applications
  - Implement Enterprise Architecture
  - Conceptual & Physical Model for Service Oriented Architecture (SOA) enabled applications
  - Security Model (Authentication and Authorization)
  - Framework for Common Services (technical & business), UI (user interface) standards
  - Application/Data Messaging Architecture & Messaging Services
  - Creation of a Reference Application as a proof-of-concept
  - Capacity Planning
  - High Availability and Disaster Recovery design and implementation
- Functional Services: Business Process Re-engineering to implement 12 key business processes:
  - Name change
  - Agency Correction
  - Review Challenge
  - Disposition
  - Finger Print Verification
  - Compromise Identity
  - Cases

- Seal & Expunge – Pre-certification and Appeal
- Seal & Expunge – Court Order
- FEB – Appeals
- FEB – Conditional non-approvals
- FEB – Out of State

Phase-2 of the project is balance of implementation for CCH encompassing all criminal events.

- Arrest
- Notice to Appear
- Failure to Appear
- Court Dispositions (Arraignment, interim disposition, final disposition)
- Corrections (admissions and discharge)
- Parole
- Probation

C1-9.3.3 Quick Facts:

Customer Name	FL Department of Law Enforcement (FDLE)
Project Name	Computerized Criminal History (CCH) Modernization
Start and end dates of project	October 2015 to June 2023 (which includes 5 years warranty support)
Contract Value	10.8 Million
# of Staff	18
Target Audience	Criminal Justice Information Services (CJIS) staff
Contractor's role in the project	GCOM's goal on this project is to implement a modernized CCH system that will improve the services available, quality of information, integrity of the data and continue to respect the privacy of individuals; in effect making Florida safer for citizens, visitors and public safety officials.

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TECHNICAL PROPOSAL ATTACHMENT D

Instructions: The Technical Proposal should address all topics below. Failure to provide responses to all required fields may result in the proposal being eliminated from consideration. Please provide responses in the shaded fields of this attachment. Additional pages may be added as necessary but should be referenced in the response field.

Technical Proposal Attachment D is comprised of the following subsections:

- Section 2: Milestone Questions
- Section 3: Technical Questions
- Section 4: Functional Response
- Section 5: Preliminary MS Project Plan
- Section 6: Proposed Project Team

Section 2: Milestone Questions

D2-1. Question 1: Planning and Administration (Milestone 1)

The Scope of Work provides an overview of the purpose of Milestone 1 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

Since 2005, GCOM has delivered business and technical solutions on time and within budget for public sector clients. GEM project management brings mature, provide and practical planning, executing and controlling methods to GCOM projects that result in GCOM team building solid work plans and the predictability working the work plan with our clients. Our success is built on our commitment to high quality products implemented with mature delivery methods and reusable accelerators.

Our project management processes, tools, and templates provide a consistent, efficient, and effective approach for managing and executing successful projects. GCOM's Project Management Plan allows for and manages, change thereby building flexibility and efficiency into the process.

- Identify scope and validate system requirements
- Approve Communication Plans, Risk Management, and Change Control processes
- Use agreed-to plans and processes to manage changes in requirements, staff assignments, risks, and issues or problems as they are identified
- Escalate risks and issues as needed for timely resolution
- Provide a clear escalation path and active oversight participation

D2-1.1 GEM Project Management Guiding Principles

All firms bring project management methods and tools, and while GCOM is proud of our own, we continuously distinguish our approach from others by our business-focused approach.

An accountable and experienced project manager: GCOM's project manager, Bhushan Patil brings the lessons learned from numerous statewide system implementations. GCOM has found this provides a deeper understanding of the risks and objectives of the programs and promotes stronger collaboration across the stakeholders of our enterprise system implementations. GCOM's experience shows the business focus promotes stronger commitment to prioritization and delivers more value from the program investment.

- Joint Kick-off Meeting and Detailed Project Management:
- Stakeholder analysis that is maintained over the project lifecycle:
- Collaborative and transparent project status and RAID item management
- Meeting management processes that respect stakeholder and project team time

- Quality, effective and timely communications

D2-1.2 Project Management Plan

The Project Management Plan (PMP) is the overall guiding document for the project. Project team members and stakeholders use it to obtain information on how the project is managed. It covers the relevant process groups as outlined in PMBOK®. Our approach to developing the project plan is a series of project plan working sessions, where our joint team collaborate on PMI industry leading project management best practices. Our PMP also incorporates roles and responsibilities, templates and tools, and designates project management system of records for each process group. The PMP will cover the following project management process areas presented in the table below:

Table 7: GEM Project Management Process Areas

GEM Project Management Process Areas	Descriptions
Integration Management	Integration Management defines and coordinates the various project processes and activities to deliver a comprehensive, integrated solution.
Scope Management	Scope Management enables the project to focus on the scope of work required to successfully complete the project and validates change control procedures and tools are in place to manage changes, enhancements, and additions once the scope is signed off.
Time Management	Time Management helps achieve on time project delivery by defining a feasible, detailed project schedule, and then performing the proper monitor and control activities to effectively manage the project schedule.
Cost Management	Cost Management contains activities related to budgeting and controlling costs, so the project can be completed within the approved budget.
Quality Management	Quality Management defines the tasks to plan and monitor project quality, control, and confirm work products, and assess project processes and standards.
Human Resource Management	HR Management supports the acquisition of the appropriate talent needed to perform the work, and also provides the on boarding programs and training needed to get new project team members acclimated and productive as quickly as possible.
Communications Management	Communications Management involves the tasks to effectively collect, produce, distribute, and archive key project information, and manage stakeholder expectations.
Action Item, Issue and Decision Management	GCOM project management approach includes centralizing action items, issues and decision management across work streams using our JIRA Application Life Cycle Management Tool. Our approach also includes an escalation path and dashboards that provide real time visibility into pending work items that are aging.
Risk Management	Risk Management assists project management in identifying and mitigating project risks. Risk management includes minimizing the effect of potentially adverse events through proper risk identification, quantification and analysis, response strategies, and monitor and control activities. Risk management is an iterative process occurring throughout the project life cycle, and enables the project team to anticipate, prevent, and/or mitigate potential problems.
Procurement Management	Planning, administering, and managing all project work performed by subcontractors and third-party hardware and software vendors.

GCOM has developed a series of templates to provide a starting point in the development process of the PMP (refer to our Exhibit 3_SDLC Templates document).

D2-2. Question 2: Confirmation of Business and System Requirements (Milestone 2)

The Scope of Work provides an overview of the purpose of Milestone 2 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

During this phase, GCOM will focus on gathering detailed requirements at each step or process level. GCOM will extensively utilize and leverage documentation and knowledge from state business team and SMEs to gain granular details for the system being built. GCOM will then convert the information provided, Exhibits, information obtained during onsite meetings and additional documentation into detailed requirements documentation.

- GCOM's Business Analyst (BA) and GCOM will use the plans and artifacts created in the earlier phase to document detailed requirement of the project as well as demo of the out of the box configuration.
- Requirement discussion sessions/ working sessions with a defined agenda will be set up ahead of time. This will help state business analysis and subject matter expert to come prepared for the sessions. GCOM will collaborate and work with state stakeholders (e.g. IT team, Subject Matter Expertise etc.) to analyze, understand and document the requirements.
- Information will then be elicited using variety of different methods and techniques e.g. Brainstorming, Interviews, Document Analysis, Focus Groups, Interface Analysis, Observation, Prototyping, Requirements Workshops, Survey/Questionnaire.
- Gaps, redundancies and deficiencies in the current To-Be business process will be identified and documented. The most critical source of gaps that should be considered is stakeholder concerns that have not been addressed in prior analysis architectural work. Formal Gap analysis techniques e.g. drawing a matrix with all the Architecture Building Blocks (ABBs) of the Baseline Architecture on the vertical axis, and all the ABBs of the To-Be Architecture on the horizontal axis will be applied. The basic premise is to highlight a shortfall between the Baseline Architecture and the To-Be; that is, items that have been deliberately omitted, accidentally left out, or not yet defined.
- The Requirement Traceability Matrix will be created during the To-Be phase when new requirements are being firmed up. This will serve as one of the key components of the final output.
- All requirements will be documented and loaded into the TFS system. The TFS system will also be used for testing, defect management and release management.
- The deliverables from this phase will be Envisioned Solution Description and Roadmap Document, Target Environment Description document, Final Detailed Requirements

(e.g. Use Cases, Functional and Non-Functional Requirements, Field analysis, detailed data requirements, Data conversion/migration requirements).

The following table provides additional information on the approach and the contents of each deliverable developed during the business requirement analysis and solution development activity.

D2-2.1 Envisioned Solution Description

We conduct stakeholder holder analysis and requirement analysis throughout the business process analysis activities via stakeholder meetings, joint requirements and design session, and document reviews. Inputs and learning from these activities and meetings inform and refine our proposed business and technical solution. A common vision of each of the functional modules and key function points will be collaborated on and document. Key decisions and options discussed are document and logged in the project record. Any solution gaps (if any) are noted and tracked as a project issue until resolved.

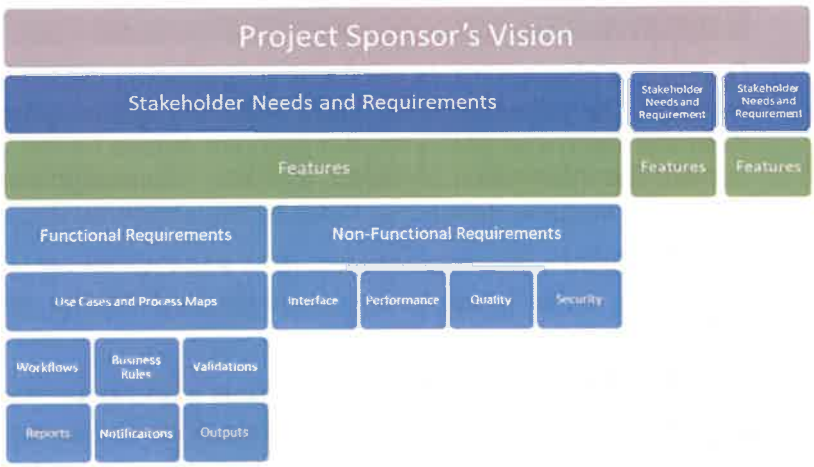


Figure 3: Envisioned Solution Description

As part of our analysis, we identify impact to how the new system and business processes will impact the workforce, both business and technical staff. Application impacts are identified, logged and fed to the training team so that training materials can develop curriculum and job aides to address workforce transition gaps.

As part of this analysis, learnings are used to update the business case and environmental impacts of the project. We also identify key business realization benefits and success factors and documented. A framework for measuring business realization benefits is provided with the envisioned solution description deliverable.

D2-2.2 Target Environment Description

Once the entire system is known at a high-level, the business team will analyze each system's independent processes and sub-processes to obtain additional details. With the help of stakeholders and subject-matter experts, GCOM will create the process maps for the sub-processes using BPMN 2.0 notations. In some cases, if the process maps already exist but are not in these notations, they will be re-worked to align with the standard BPMN 2.0 notations.

Once the sub-processes are detailed, the business team will identify the processes that are:

- Redundant: do not add any value
- Rule-based: can be automated
- Time consuming: can be optimized

- May work in parallel: can be streamlined
  - Based on the above, GCOM will work towards prioritizing requirements. GCOM will focus on prioritizing the tasks and activities that add the most value to the end-to-end system or take up the most time.
  - Finally, the prioritized processes will be re-engineered to create a TO-BE state that is more effective and efficient, all while achieving the desired outcomes.

The target environment description document will people, process, technology, and business impacts of the new system and provide a report addressing the following components:

- Target Process Design;
- Workflow Conceptual Design;
- Regulatory Impact Plan;
- Technology Solution Description

D2-2.3 Functional Specifications

The Functional Specifications document will include the data, workflow, business rules, notices and alerts, and reporting requirements for each record family grouping across core system functional (application, renewal, amendments, inspection, enforcement, hearings, etc.). The functional specification will also include screen mock ups and screen flows.

The functional specification sections will be mapped to system requirements stored in TFS.

Should any gaps in the solution be identified in the solution phase, our functional specification will document the gaps and propose a solution strategy to fulfill the business requirements. As the solution by GCOM is a custom developed solution built on modular, loosely coupled services; we are expecting gaps to be minimal.

D2-2.4 Traceability

GCOM maintains and enhances the Requirement Traceability Matrix (RTM) throughout each phase of the SDLC. We maintain the RTM in the state's TFS. Our traceability model follows industry standards and relates work items such as requirement, components, use cases, test cases and defects. Open work items linked to a requirement indicate the requirement is not completed. results in the ability to track requirement completion status and open work items from requirement to defect. Our traceability model is described and illustrated below:

1. Accepted requirements will be divided in multiple components
2. Components will further be divided and detailed in multiple use cases
3. Each use case will have multiple test cases mapped against it
4. While executing testing; defects will be raised against a test case.

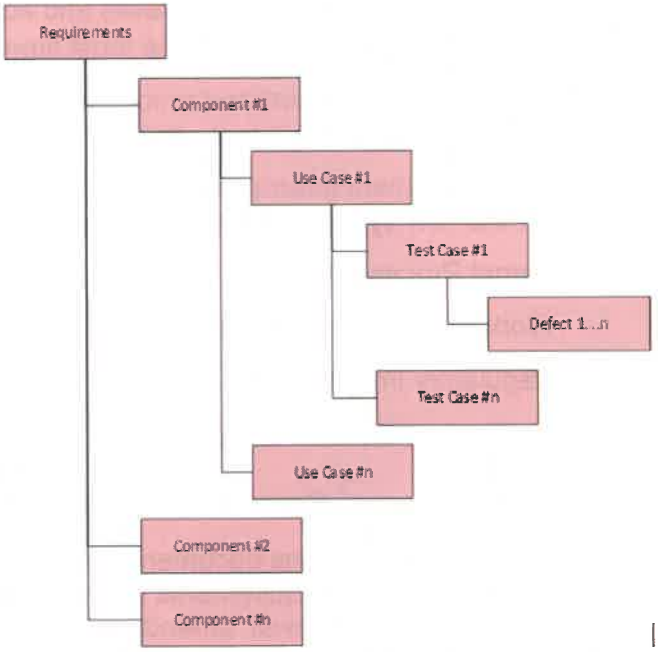


Figure 4: Traceability model for custom systems.

With the above model a logged defect can be mapped to the component respective components, use cases, test cases and defects will be mapped to each other.

D2-3. Question 3: Implementation of Hosted Environment (Milestone 3)

The Scope of Work provides an overview of the purpose of Milestone 3 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

GCOM will setup & configure the solution and interfaces to meet the requirements as documented in the finalized detailed requirements. GCOM has proposed to implement the configuration and interfaces in the following environments:

Table 3: Environments for configuration and interfaces

Environment	Purpose	Web Server(s)	App Server(s)	Database
Development	GCOM Development	1	1	VRMS DB, Audit DB & Report DB

QA Testing	GCOM functional testing and regression testing	1	1	VRMS DB, Audit DB & Report DB
UAT/TRAINING	MI DHHS user acceptance testing	2	2	VRMS DB, Audit DB & Report DB
Production	Final production environment for all users	2	2	VRMS DB, Audit DB & Report DB

The following table lists the hardware recommended by GCOM: Web, Application and Database Server (DEV/QA/ TRAINING/Production)

Table 4: Proposed Hardware Configuration for each environment

	Environment	Server Type	Hardware Set	Minimum Configuration
1	**DEV Environment** 1 Web server 1 app server 1 DB server, 1 Integration Server, 1 Reporting Server	PowerEdge M630 for VRTX	Intel® Xeon® E5-2603 v4 1.7GHz,15M Cache,6.4GT/s QPI,6C/6T (85W) Max Mem 1866MHz	Pentium based blade server(s) with HT 24 core, 64 GB RAM, 500GB HDD
2	**QA Environment** 1 Web server 1 app server 1 DB server, 1 Integration Server, 1 Reporting Server	PowerEdge M630 for VRTX	Intel® Xeon® E5-2603 v4 1.7GHz,15M Cache,6.4GT/s QPI,6C/6T (85W) Max Mem 1866MHz	Pentium based blade server(s) with HT 24 core, 64 GB RAM, 500GB HDD
3	**Training Environment including high availability** 2 Web server 2 app servers 2 DB servers, 2 Integration Server, 2 Reporting Server	PowerEdge M630 for VRTX	Intel® Xeon® E5-2603 v4 1.7GHz,15M Cache,6.4GT/s QPI,6C/6T (85W) Max Mem 1866MHz	Pentium based blade server(s) with HT 16 core, 64 GB RAM, 500GB HDD
4	**Production Environment including high availability** 4 Web servers, 4 app servers, 2 Integration Servers, 2 Reporting Servers 2 DB servers	PowerEdge M630 for VRTX	Intel® Xeon® E5-2603 v4 1.7GHz,15M Cache,6.4GT/s QPI,6C/6T (85W) Max Mem 1866MHz	Pentium based blade server(s) with HT 32 core, 128 GB RAM, 500GB HDD

D2-3.1 State System Access

The GCOM implementation team will need access to State servers, we have two options to setup the accessibility.

Option 1: Assign individual workstations to GCOM team members which will access necessary State servers using workstation. Provide remote access to individual workstation via reliable VPN which has 24/7 support.

Option 2: Do not assign individual workstation to GCOM team members. Provide remote access to individual State Servers via reliable VPN which has 24/7 support.

Servers/Services will include:

1. Development, QA, Training, and Productions
2. Any Interface location/servers
3. Access to State web services that State wants VRMS to consume, such as address verification service.

D2-3.2 Support of the original environment

GCOM is committed to supporting the original environment throughout the term of the contract. However, it may be beneficial to keep MI DHHS VRMS close to the latest VRMS product version to gain benefits from new features and fixes for new security vulnerabilities.

D2-3.3 Communication of Roadmap Changes

Team GCOM will prepare an annual report project deliverable and also provide a product service roadmap which would highlight the solution and how it will adapt to both federal and jurisdictional requirements.

In additional to outlining all the tasks that were completed during that contract year, the report will also list the planned release cycles of the product over the next 2 to 5 years and would include the development of any new functionality along with their associated target release dates.

The Annual Report will be defined during the initiation phase and will be delivered to MI DHHS prior to end of the contract year.

D2-3.4 Potential Plug-ins

The VRMS system framework uses ASP.NET MVC design pattern, which separate the different aspects of the application (input logic, business logic, and UI logic). VRMS depends on third party products and/or tools to perform specific tasks; we see that some of these are owned by the State. Please remember VRMS is a complete solution for all Vital Records events such as Birth, Death, STOP and ITOP, therefore 3rd party plug-in may be required if the State decides to use the functionality. The following table is a list of 3rd party plug-in options:

Table 5: 3rd party plug-in options for VRMS

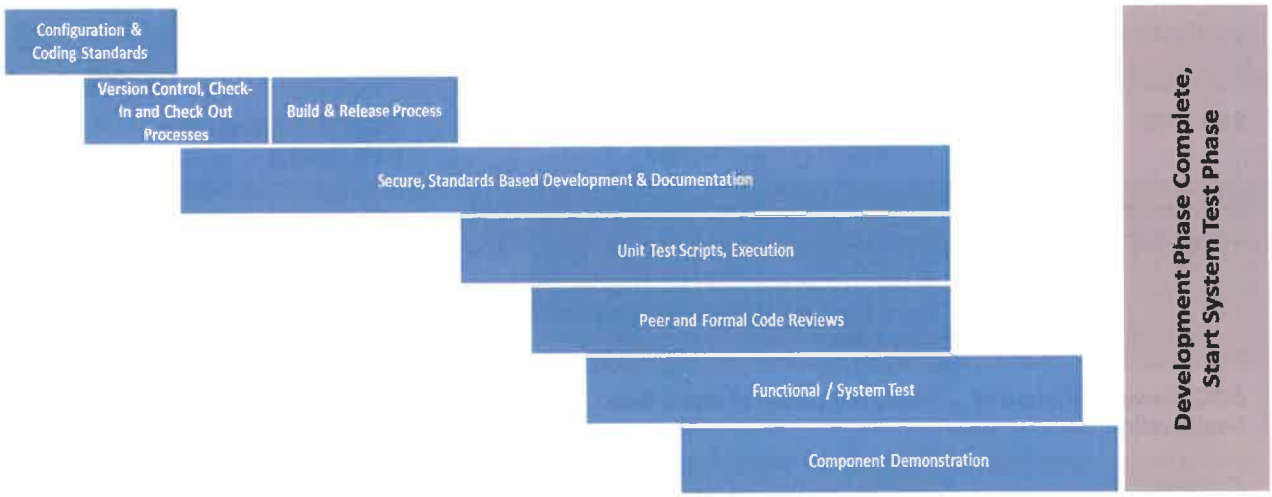
Third Party Control/Service	Purpose	License
HP Quality Center 12.5	Development/ documentation, script and test case creation, testing to include Unit, System and User Acceptance Testing (UAT),	Leverage State License

Third Party Control/Service	Purpose	License
	Regression Test, Traceability Matrix/Report, defect logging and version control	
Pitney Bowes Finalist	Address verification throughout the system to improve the data quality and reduce the number of returned mail.	Leverage State License
HP Load Runner	Performance testing	Leverage State License
Payment Solution	Process any payment that will be process in VRMS	Client needs to provide
ProCheck Pro ID for ID verification	This service used to verify the identity of the customer submitting the order at Kiosk or online.	Client needs to provide, if wants to use the feature.
SSA OVS	Social Security Administrator Online verification of the decedent	Client needs to provide authorization
Documentum Integration	Store any supporting documents and certificates **Note**: VRMS is flexible to integrate with any of the Document Management System that State may have.	TBD
CDC Views for Cause of Death validation	Verify the Cause of Death data	Redistributable
ID management integration	User authentication for online order requests.	Integrated with MiLogin.
ComponentSpace SAML component for SAML Authentication	Integrate ID management	Client needs to provide
Twilio Messaging	Send out text messaging to Customers or users such as Funeral Homes on case status	Client needs to provide
ABCPDF for PDF generation	To generate PDF	Client needs to provide
Telerik controls for Overlay designs	To allow users to put overlay on various types of the documents.	Client needs to provide
DynamSoft WebTwain	Scanning and viewing scanned documents in web browser	Client needs to provide

D2-4. Question 4: Design and Configuration of Proposed Solution (Milestone 4)

The Scope of Work provides an overview of the purpose of Milestone 4 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

Since our founding in 2005, GCOM has delivered over one hundred million of lines of code for hundreds of systems and thousands of components for scores of clients. Components delivered include software services components, portal components, SOAP and Restful API web service adapters, interfaces, conversion programs, and report code. GCOM's development process is illustrated in the figure below:



Our secure coding methodology is described below.

D2-4.1 Configuration & Coding Standards

We are assuming that the final product will be built using custom, configuration, Shared services and third party open source components. We understand that workflow automation is key component of this application. We will work with application SMEs to review the workflows. We will design the workflow based on standard BPMN (Business Process Model and Notation) notation which will help authorized users to manage workflows easily without going through whole development process.

GCOM will use MS .Net as well as database standard coding practices to customize the application. Our User Interface is designed based on the different UI design patterns such as List View, Dashboard, Search etc. which provides better user experience. GCOM developers have designed plugins which helps in terms of enforcing coding practices as well as code promotions.

D2-4.2 Version Control, Check-In and Check Out Processes

GCOM will use WV DHHR toolset for version control as well as Continuous Integration (CI) process. GCOM has experience with Subversion, MS TFS tools for managing code and other artifacts. GCOM will use WV DHHR Document Management repository like SharePoint to manage the project deliverables.

GCOM uses daily check in practices which helps in building the code many times a day and go through CI process. This practice helps us identifying lack of code coverage (unit tests) if any, coding compliance and syntactical issues if any. GCOM has script library which helps in terms of code build and promotions to different environment. GCOM is proposing following tools for code build and promotions.

D2-4.3 Secure, Standards Based Development & Documentation

GCOM follows the following coding standards and design principals in delivering software components:

- Separation of presentation, application, business rules, and data persistence code
- We follow secure coding design practices
- Unit test cases are authored for each component
- Each component is unit tested prior to being deployed to the test environment
- Coding and configuration standards are documented and audited on a routine basis by GCOM development work stream leads
- We use a normalized data model and data standards for easier, more consistent reporting
- We provide configurable common component for forms and workflows
- We use WV DHHR shared services technologies for integration services, business rules, reports and dashboards
- We facilitate monthly code reviews
- Define Storage and security requirements for the solution database(s) in compliance with the NYS security standards.
- SSDLC (Secure System Development Life Cycle), will be utilized throughout this project. Information security is a business requirement to be considered throughout the System Development Life Cycle (SDLC). The SSDLC will define security requirements that must be considered and addressed throughout the entire SDLC.

D2-4.4 Build & Release Process

As described earlier, GCOM has standard build and promotion process which utilizes open source tools. GCOM will work with WV DHHR to identify these tools and use it for WV DHHR Back-office. Our build and release process allows developers to work on multiple code streams

and release multiple streams to the different environments. We are assuming GCOM will be releasing artifacts to following environments:

- Development
- Test
- Staging
- Production

The developer team creates a release plan when code is reviewed and unit tested and ready for deployment into the test environment (Development server). GCOM has developed a release management plan which provides information about deployable units, dependencies, environment changes, etc.

D2-4.5 Unit Test Case Scripts, Execution

GCOM strongly believes in test driven development practice. GCOM CAMS framework consists of unit tests which will be configured as part of CI. For new custom development, GCOM will build unit tests based on Java code. GCOM has built Junit Test based testing framework which allows developers to configure data for various scenarios.

As a part of development process, the technical lead is assigned responsibility to implement and unit test use cases. The technical lead assigns coding assignments to developers and also forwards them the UML design, and assigns coding assignments to developers. The developer proceeds with the coding tasks by first developing unit tests.

D2-4.6 Peer and Formal Code Reviews

As part of development, the developer is also responsible for running nUnit. nUnit scans Source code and looks for the potential problems (e.g. possible bugs, dead code, duplicate code etc.). GCOM has customized nUnit (i.e. rule sets) so that it can find problems which are most important. Once code is developed and unit tested, it is peer reviewed for quality check.

The GCOM project team consists of senior and junior developers. Junior developers always work in a team environment and they are assigned work which includes unit testing, writing build scripts and utility classes. Once they are comfortable and understand the project architecture, they are given tasks such as enhancing existing code and fixing defects. We have found that code walkthrough presents a very good opportunity for mentoring as programmer is learning from real production code rather than best practice document and hypothetical situation.

GCOM will work WV DHHR to perform design and code reviews and the code will be promoted once it is accepted by WV DHHR. The frequency of code review and overall process will be discussed with WV DHHR at the beginning of the project.

D2-4.7 Functional / System Test

Quality Assurance is emphasized throughout the GCOM Project Management methodology, which we use to direct all project efforts, and to ensure that quality assurance is a primary objective of all aspects of the project.

The Quality Assurance Plan (see Exhibit 3_SDLC Templates, GCOM PM 04_Project Management Plan Template, Quality Plan section) describes the processes by which GCOM will ensure quality. It includes the practices and processes to control, assure and improve quality. The purpose of the Quality Assurance Plan is to document the quality objective for various project stages.

The Quality Assurance Plan also details how these objectives will be achieved. It includes:

- Quality activities, such as tests, reviews, inspections, and audits are conducted during various project stages
- Standards and procedures are followed for various lifecycle activities, including system design, software development, documentation, and testing
- Detailed reviews, including peer reviews conducted based on outputs of various lifecycle phases to ensure quality processes and products
- Identify strategies for planning and executing software-testing activities
- Strategy for identification of configurable items, control of change requests, status monitoring and control of the configurable items (source programs, object programs, software library modules, documentation) at various stages of project execution and the corresponding responsibilities
- Procedures for reporting any problems encountered during project execution
- Listing of responsibilities for rectifying problems
- Escalation procedures for unresolved problems
- Responsibilities and procedures for maintaining quality records

D2-4.8 Component Demonstrations

This will allow GCOM to demonstrate the existing components to WV DHHR business users and build the new systems based on that. GCOM will closely work with WV DHHR and WV DHHR teams to schedule the component demonstration after code is moved to QA environment. This practice will allow GCOM to get the product feedback early on and address any issues/concerns.

As part of overall system development process, GCOM will be the design and development strategy that adheres to the technical and functional design developed as per agreed upon scope. GCOM will perform the following tasks as part of overall system development.

- Provide prototype/usability demonstrations throughout the development lifecycle. The number and timing of the releases for these demonstrations will be agreed to and scheduled during the development of the master project schedule.
- Minimize down time when implementing any portion of the system in production environment.
- Configuration Management: - Recommend and implement a method for configuration management of new license / permit types and workflows based upon best practices.

Interface to internal and external systems including the administrative interfaces. GCOM will determine the interface architectural solution and make design recommendations on the interfaces and develop the interfaces and end point connections.

D2-5. Question 5: Data Conversion and Migration (Milestone 5)

The Scope of Work provides an overview of the purpose of Milestone 5 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

GCOM has extensive experience planning, designing and executing data migration on numerous system integration projects. Our experience includes data migration from source systems platforms such as mainframes, flat files, Microsoft Access, DB2, Sybase, MySQL, SQL Server, Oracle, and Accela Civic Platform. We have migrated data sets ranging in size from megabytes to terabytes, with table counts ranged from 20 tables to 1000+ tables.

GCOM data migration methodology is illustrated in the diagram below.

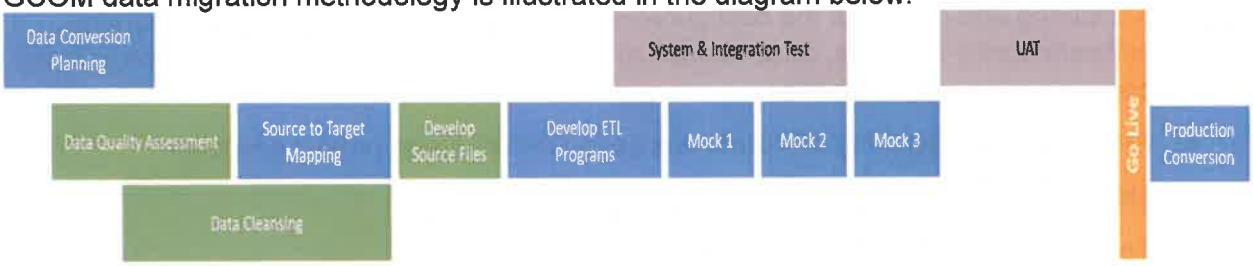


Figure 55: Data Migration Methodology

During the requirements phase, GCOM works with client data migration leads and business owners to develop a conversion plan. The conversion plan elaborates the conversion scope, roles and responsibilities, processes and tools, conversion mock and testing plan, and the entry and exit criteria for the production conversion. As part of the conversion plan, requirements for a data conversion environment are assessed and design. GCOM then works with the infrastructure team to standup the conversion environment.

On most engagements, the client team performs a data quality assessment of legacy data. The assessment profiles key data elements should as contacts, address, and other account attributes. Instances of duplicate data are found using a variety of data analysis and client data quality tools such as Informatica Power Center and IBM Data Stage. Results of the data quality assessment are reviewed with client technical and business team members. Data quality opportunities are identified and prioritized. A combination of database actions and manual interventions are used to improve legacy data quality. These can include options such as de-duplicating contacts, enriching legacy address data, and/or completing case records.

Once the data conversion plan is approved and the new system data model is in an advanced design stage, the GCOM and client conversion team will conduct joint application design sessions to begin the source to target data mapping process. Data mapping activities include:

- Mapping of old to new fields (transformation)

- Eliminate implicit fields
- Determine data pattern for cleansing
- Establish single reference for each record/field (in case of multiple values for a same element across different tables, which table/field value is the master)
- Develop conversion process business rules.

Once the source to target mapping is complete, the client team begins developing data extracts for legacy data in the mutually agreed file formats or a transient conversion schema. In the case of document conversions, the client team begins developing document metadata tables which will be used to associated existing documents with converted target system records.

In parallel, GCOM develops extract, transform and load programs (ETLs) that will migrate data from the staged source data location to the new system. The ETLs program include transformation rules, apply business rules that break ties to arrive at correct information, handle exceptions, and generate exception reports. Our conversion programs optimize data loads to minimize downtime during the production cutover. Our conversion programs often require development of temporary data stores used to combine, cleanse and transform the data. Unit testing of each program will take place during this process. The unit level jobs and programs that are created and tested will be combined into job flows that are tested as integrated components.

Three mock data conversions are preformed to test the data migration ETL programs and procedures. During this activity the team will complete testing of the migration routines from beginning to end and correct any defects found in the mock data conversion. Client team members are asked to jointly validate the mock conversions. Joint testing helps to verify that the migrated data is compliant with the designed mapping and transformation logic. A variety of reports and metrics are used to help validate conversions; these include row count reports, transaction type reports, and various data summary and count reports. Mock conversions are validated in the data conversion environment. Conversion defect identified are analyzed and referred to either the development team for mitigation in the conversion program or the client business team for manual data cleansing based. Low volume conversion errors and those errors that cannot be addressed through automation are addressed through manual data cleansing. The data conversion environment can be either a database instance or the full system, pending on the status of the new system development at the time of the mock conversion. In most cases, user acceptance testing and performance testing is performed with converted data.

After the mock conversions and user acceptance testing is complete, the client provides a formal acceptance of the data conversion process. This must proceed the go/no-go production release decision. During the implementation activity the team will perform the final production conversion, resolve any discrepancies, allow client team to perform a final validation and move the migrated data to the production environment. It is likely that the System Retirement Policies will dictate that the legacy systems be retired at this time.

Data migration is always one of the most critical tasks, therefore, GCOM makes sure to plans it carefully. GCOM data conversion methodology helps to reduce data conversion risks. The table below outlines the common data conversion risk and mitigations:

Table 13: Common Data Conversion risk and mitigations

Data Risk pitfalls	Risk Strategy
Failing to engage the lines of business and business users at the outset	GCOM work plan includes Client team during analysis, design and migration activities including approval before starting actual migration work.
Absence of data governance policies and organizational structure	GCOM will work with Client team to define governance structure to identify who has rights to create, approve, edit, or remove data from the system
Poor data quality in a legacy system	As part of Analysis, GCOM will be doing "as-is assessment" before design and development of data-migration job
Neglecting to validate and redefine business rules	GCOM will work with the Client Analysis team to make sure that the business rules of the new system matches with the legacy data and define appropriate conversion logic to meet the business rules.
Failure to validate and test the data-migration process	GCOM has allocated resources data testing, validation, and migration cycles to the project timeline

D2-6. Question 6: User Acceptance Testing (UAT) (Milestone 6)

The Scope of Work provides an overview of the purpose of Milestone 6 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

GCOM's focus on involving proven testing processes and strategies that are scalable through effective process governance which enables our clients to achieve competitive advantage. Our vast experience in testing is always based on best practices engaged in the project life cycle. We believe in rectifying the bugs from the root cause of their occurrences. This has helped us in the prevention of bugs in the early stages of the testing cycle. Our commitment to our clients is an excellent testing team of high caliber in manual and automated testing. Our testing teams are experts in identifying opportunities to apply technology solutions that provide clients with a customizable framework and an integrated testing strategy which goes in hand with the development lifecycle. We always strive to improve application quality and facilitate our clients with an edge to establish a distinct competitive advantage in the market.

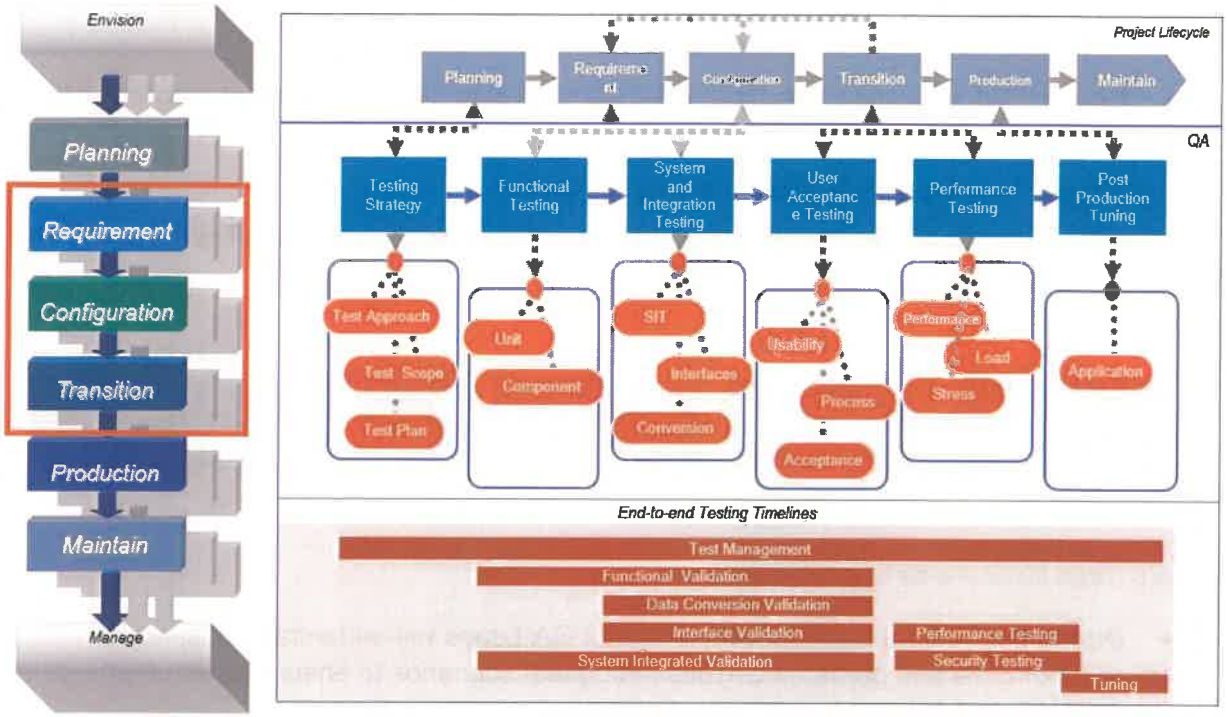


Figure 5: GCOM's Test Methodology vs Project Lifecycle

Our renowned test delivery model, coupled with our specialized resources, enable the project to completely leverage the expertise and infrastructure while reducing their time-to-market and effective alignment with overall project delivery.

D2-6.1 Testing Plan and Design Response

For each stage, the detailed Test Plan will address all steps required to prepare for the execution of each test phase. This will include, but is not limited to:

- Ensure the test phase has been setup with all the prerequisites fulfilled
- Ensure that all requirements for that release are tied to test cases / scenarios that have been created, approved, and entered.
- Ensure Test Schedule is formalized
- Ensure all test data have been readied and are available where and when needed.
- Ensure all necessary software has been loaded into the proper environment.
- Ensure that Smoke (Sanity) Testing of the environment to be used for the testing has been successfully completed
- Ensure that all personnel required to be involved in the testing have been properly communicated to and are aware of their roles, responsibilities, and the dates and times they are needed

- If any additional personnel need to be involved with the testing, ensure that the necessary resources and personnel have been reserved
- Ensure that agreement has been reached regarding all necessary test reporting and communication
- Ensure Test Design is formalized and confirmed

Test design is the act of creating and writing test cases for testing software. The following are the tasks that define the test design process:

Figure 6: Tasks that define the test design process

- During the Test Design Process, GCOM's QA Leads will understand business requirements and prepares corresponding test scenarios to ensure all requirements are covered.
- GCOM QA will prepare test cases for each test scenario. The QA will map each test case to the requirements in a QA Tool. (The traceability matrix can be generated through this tool to ensure requirements are covered)
- The test cases are reviewed by a peer QA and the review comments are incorporated to complete the Test Cases.

D2-6.2 Testing Types & Levels aligned with Project Lifecycle Response

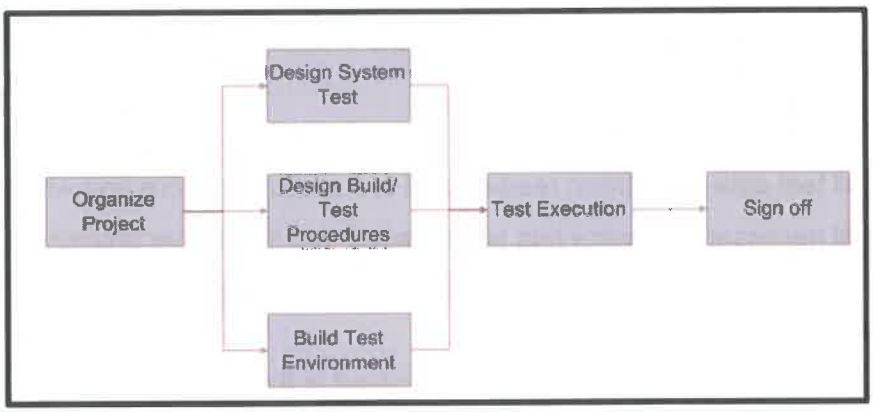


Figure 7: Test Process Flow

This section outlines the test strategy for various types of testing which will be applied on this engagement.

D2-6.2.1 System Integration Test

The goals of system testing are to detect faults that can only be exposed by testing the entire integrated system or some major part of it. System test focuses on business requirements, functions, security, performance and reliability.

The criteria that determine when testing can begin and when testing is complete include the following:

D2-6.2.2 User Acceptance Testing

A user Acceptance Plan will be developed and delivered that discusses how User Acceptance Testing (UAT) will be conducted upon successful completion of the System Testing cycles. DHHS's Business and IT users will be responsible for preparing and executing the UAT test scripts with the GCOM Team providing necessary support. Upon completion of UAT, GCOM will provide a UAT Test Summary Report.

D2-6.2.3 Performance Testing

System's performance requirements are measured and / or tested against specified service objectives (response time, report generation time, etc.)

D2-6.3 Incident / Defect Tracking and Resolution Response

An incident is an unexpected or unexplained result. A defect is an incident that identifies a true problem in a system component that must be corrected. While defects are most often associated with software components, defects can be identified in any part of the solution, such as designs, documentation, test scripts, environment configuration, data set-up, or business processes. When incidents occur because of requirements misunderstandings, they can result in a change request. These must be handled using the documented change request process described above.

Incident and defect management facilitates the process of actively tracking incidents from early identification and confirmation that they are defects to final resolution. Incident reports are produced to provide management with insight into problem areas and highlight areas for potential improvement.

D2-6.3.1 Defect Tracking/Defect Reporting Process

During testing, the testing team may encounter behavior that goes against a specified or implied design requirement in the application. When this happens, the defects will be documented in defect management tool as follows:

Defect Reporting Format:

- Keep track of what version of the application the defect is found
- Determine if defect has already been reported by other testers

- Indicate the steps to reproduce the Defect – write enough details for others looking at the Defect to be able to duplicate it

Actual results

Expected results – how the product should behave based on the specified or implied requirements.

The following table defines the impact levels to be used when entering Defects.

Table 6: Defect impact levels

Impact	Definitions
1 – Critical **2 - High**	Critical defect that prevents testers from testing the feature area, sub-area or functionality of the system. These defects must be fixed immediately before further testing can resume.
2 – Medium	This is a defect that users would experience such as: data corruption, calculation errors, incorrect data, unhandled exceptions and system crash on common user scenarios, significant QA risk, and major UI defects. These defects do not prevent test execution but must be resolved before migrating code to the User Acceptance Testing environment.
3 – Low	Defects that do not prevent users from using any of the system features/functionality.

D2-7. Question 7: Training (Milestone 7)

The Scope of Work provides an overview of the purpose of Milestone 7 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

Training is a process, not an event. GCOM begins implementing the training approach before the DHHR project team gathers for training. GCOM works with DHHR throughout the different project phases to implement training strategies and activities. Our goal is to ensure that the DHHR trainers and system administrators obtain the necessary knowledge, tools and skills they can use to train the end-users to do their day-to-day activities.

Training, which equips users with the necessary skills and knowledge to adapt to the new technology, is a significant factor in the success of any initiative and one which positions the DHHR for long-term success with the new EVRS. Our integrated training approach includes a variety of training delivery methods and materials which are aligned with the specific needs of the DHHR user groups.

In this section, we provide an overview of GCOM's training methods and approach to satisfy the RFP requirements for training for Train-The-Trainer (TTT) and System admins. System admins are included for when the product becomes available to the public. In addition to the TTT

classes, GCOM will also conduct a System Administrator (SA) class to provide the DHHR System Administrators end-user training.

Here is the summary of sessions for each phase:

Phase 1 Training Sessions for Stakeholders:	
EDRS External Stakeholders: **- Funeral Homes** **- Medical Examiners** **- Medical Certifiers**	• 5 Sessions - 4 hrs. each Session • Remote Live Web Based Training
County Staff	• 10 sessions - 4 hrs. each session • Remote Live Web Based Training
State Staff	• 10 sessions 4 hrs. each session • In Person at State facility

Phase 2 Training for Stakeholders:	
EBRS External Stakeholders:	• 5 Sessions - 4 hrs. each Session • Remote Live Web Based Training
Fetal Death Stakeholders: **- Hospitals** **- Funeral Homes** **- Medical Examiners** **- Medical Certifiers**	• 5 Sessions - 4 hrs. each Session • Remote Live Web Based Training
County Staff	• 10 sessions - 4 hrs. each session • In Person at State facility
State Staff	• 10 sessions 4 hrs. each session • In Person at State facility

D2-7.1 Training Approach for Response

Our approach and methodology for training maps to several phases of the GCOM Execution Methodology. The objective is to provide training to DHHR selected Trainers so that they can in turn train the DHHR EVRS end-users. TTT training will be conducted in each phase as requested in RFP. GCOM will leverage existing training materials from our product and tailor it once the Testing phase is completed. This is to ensure that the application and user interfaces are solid enough to begin capturing screen shots, error messages and help instructions. This sets the foundation in preparing the classes. GCOM will develop and conduct a train-the-trainer program providing basic user training for DHHR to train end-users.

In collaboration with DHHR, GCOM will prepare a training plan which will include the training calendar schedule for both the TTT and SA classes. The training calendar will be distributed to DHHR at least 30 days prior to the commencement of the training sessions. The Training

sessions will cover three areas: Business and Application Overview, Technical Overview and Maintenance Information Session.

Business and Application Overview: This session will cover the following topics:

- Overview of the system from a business perspective; business requirements, key business events
- Functional description of the system
- Decomposition of the system into lower level units, with an overview for each functional unit
- Classification of the functional units into online and batch components
- Overview of the interfaces with other systems

Technical Overview: This session will cover the following topics:

- Explanation of System Architecture & Reference Application
- Explanation of critical batch jobs/transactions
- Understanding of screens and primary business functions being performed
- Explanation of databases & database objects

Maintenance Information Session: This session will cover the following topics:

- Discussion of common problems encountered
- Description of common fixes made
- Statistics on problems (average count by severity/month), backlog (number of problems/ enhancements pending)
- Performance requirements and guidelines
- Discussion of problem areas within the application
- Detailed user consultation procedures
- Discussion of procedures adopted to document problems
- Reporting requirements to the IS management
- Tools used
- Programming standards and guidelines

The WV DHHR team will use the information gained from these sessions to move on to the next step towards self-sufficiency. GCOM will conduct the TTT sessions of 40 hrs. onsite for approximately DHHR resources and provide them with the knowledge, tools, aids and skills needed to train DHHR end-users. On demand WBT and eLearning modules will be available to the trainers to provide reinforcement of what they learned and to refine some of the skills, tools and techniques they learned during the onsite training sessions. In addition to the TTT sessions, GCOM will provide an end-user System Administrator training to approximately DHHR

resources that will have system administrator capabilities across the EVRS. This training is planned to take place onsite.

Training materials will be prepared and updated accordingly with system changes to ensure that the material represent exactly what the user will experience when using the EVRS.

D2-7.2 Deliverables

GCOM will develop the following deliverables as part of the training phase for the EVRS.

Deliverable	Description	Target audience
Training Plan	To provide a plan detailing the physical deliverable formats, timeline and calendar for the Train-The-Trainer (TTT) and System Administrator (SA) training.	DHHR Project Manager DHHR Stakeholders
MS7-A, D & G Comprehensive Training Packet	Training materials will be prepared and updated accordingly with system changes to ensure that the material represent exactly what the user will experience when using the EVRS. Materials such as workbooks, exercises and examples, handouts, Web-Based-Training (WBT) and eLearning modules.	DHHR Project Manager DHHR Stakeholders DHHR Trainers DHHR System Admin
MS7-B, C, E, F, H & I Onsite TTT sessions	Per the calendar developed as part of the Training Plan, GCOM will conduct one week of training for each event scoped in each phase. These Train-The-Trainer sessions will provide the DHHR selected trainers the skills, tools and material for them to conduct end-user training.	DHHR Project Manager DHHR Stakeholders DHHR Trainers DHHR System Admin

D2-8. Question 8: Documentation (Milestone 8)

The Scope of Work provides an overview of the purpose of Milestone 8 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone.

GCOM will provide user manuals, operating manuals, technical manuals and any other instructions, specifications, documents or materials, in any form or media requested by the State, that describe the functionality, installation, testing, operation, use, maintenance, support, technical or other components, features or requirements of the Software. This addresses the varying needs of the Department's end-users, external users, train-the-trainer users, system administrator users, customer service/help desk/user support specialists, and technical support. Additionally, training is developed and delivered in formats facilitating student knowledge and comprehension, with the end result being a confident and go-live ready audience.

D2-7.2 Deliverables

GCOM will develop the following deliverables for the EVRS.

Deliverable	Description	Target audience

MS8-A, B, C & D User and Technical Documentation	A formal deliverable that will be available online and the capability of printing hard copies from the material. The User Guide will detail the use and functionality of the EVRS solution.	DHHR Project Manager DHHR Stakeholders DHHR Trainers DHHR System Admin

D2-9. Question 9: Parallel Pilot (Milestone 9)

The Scope of Work provides an overview of the purpose of Milestone 9 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone

A pilot release is primarily a risk mitigation strategy. It involves deployment of the e-Vital system to a subset of representative users. The primary purpose of a pilot is to ascertain that system works as designed in a production environment. It is also relatively easy to fix issues when controlled sets of users are exercising the system. Due to the smaller volume of transactions, manual verification of transactions is a manageable task during the pilot phase.

The pilot participants provide feedback about how well the design and features are working. The release management team uses this feedback to resolve issues that arise or to create a contingency plan. Ultimately, the pilot leads to a decision to proceed with a full deployment or to slow down and resolve the problems.

Following diagram depicts the GCOM's Pilot implementation approach:

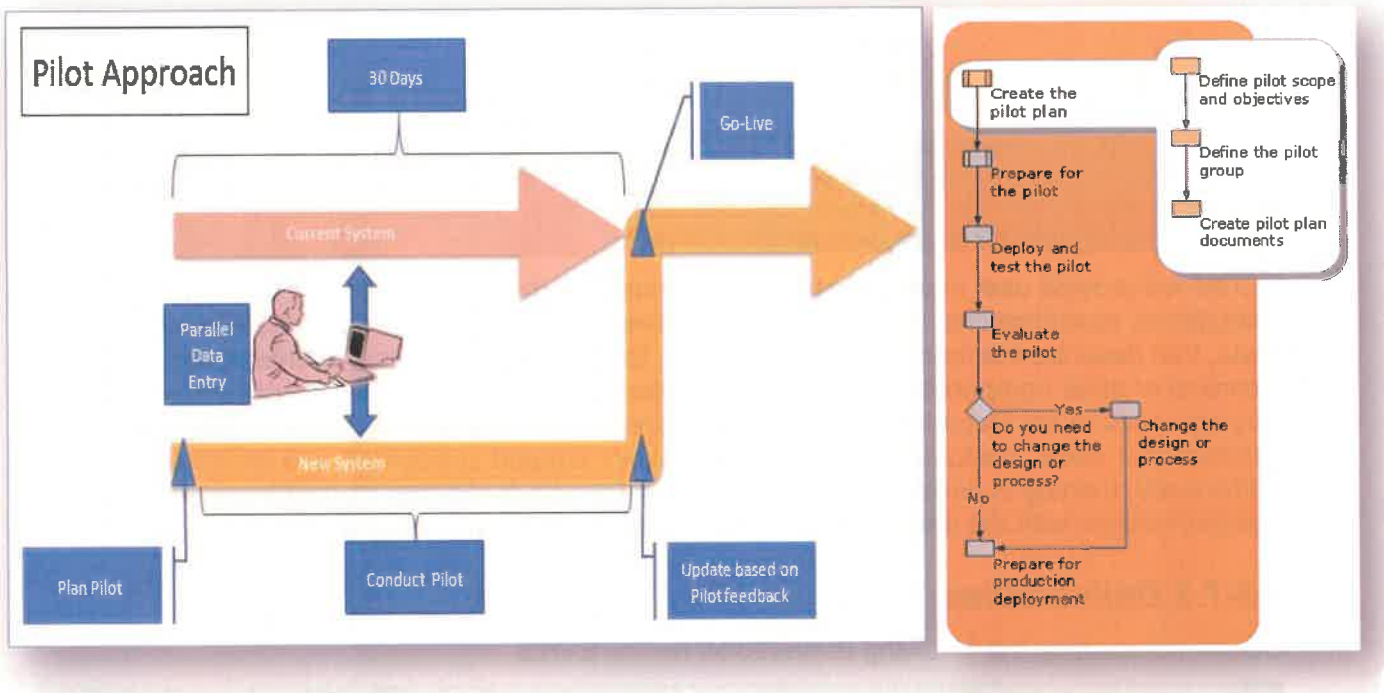


Figure 2: Pilot Approach

Figure 3: Key Tasks for Pilot Implementation

D2-9.1 Selecting the Pilot Group

Good pilot group candidates have some of the following traits for successful Pilot:

- Are able to derive tangible benefit from the e-Vital System (i.e. Automated entry from their internal system)
- The group should be able to absorb some reduction in performance due to dual data entry.
- Represent the target environment - Choose groups or sites that do not have unique requirements or operating environments, because the pilot should predict how the design and rollout will work in the organization at large. Most pilot participants should have the same technical expertise as the average user in the organization.
- Perform a variety of activities using a variety of computer hardware.
- Are enthusiastic about the e-Vital project.
- Selection of a pilot group early is important. If appropriate, they should have a voice during requirements so they feel part of the project from beginning (or they should at least be part of multiple preview sessions as the project is being developed).
- Are comfortable with technology.

D2-10 Question 10: Production Implementation (Milestone 10)

The Scope of Work provides an overview of the purpose of Milestone 10 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone

Pre-conditions for roll out (implementation) execution will be:

1. User Acceptance Testing (UAT) completed and severity level 1 & 2 resolved
2. Data migration testing done/discrepancies resolved
3. Train-The-Trainers training completed
4. System Software/Hardware installed on the Servers
5. Roll out plan/checklist approved by WV DHHR

The following matrix will be followed for rolling out new e-Vital application in the WV DHHR production environment:

Step	Action	Result	Next Action	Notes
1	Conduct meeting with WV DHHR stake holders to: • Review results from UAT. • Review checklist • Discuss back out strategy	Roll out plan accepted	Proceed to step #2 if approved; else rework the plan and present revised rollout plan	Create checklist of WV DHHR resources with their roles /responsibilities in the production migration

Step	Action	Result	Next Action	Notes
2	Choose Implementation date based on the following: A. Volume of data to be converted and any effort required post migration program for fixing the data. Weekday, Weekend or 3 day weekend may be chosen. B. Critical Staff vacation plans C. Other considerations to be determined during analysis	Date Determined	Go to Step #3	If migration is planned over the weekend document building access procedures and servers maintenance policies for the weekend
3	Execute data migration routines, run any fix up programs or manual procedures as planned. Create migration reports and submit results to WV DHHR business owner.	Data validation successful	Proceed to action item number 4. If unexpected errors encountered correct program/data until approved	Get sign off on data validation report
4	Run deployment scripts to install new e-Vital application. Test few modules from the application to validate application is functional and configuration parameters are ok.	WV DHHR approves application deployment	Proceed to action item number 5.	
5	Implement end of day verification process to validate system is performing as expected. Generate reports to ascertain that system is functioning as designed.		Results accepted. If any data inconsistencies are found or other severe errors encountered, inform stakeholders and evaluate options including back out strategy.	Get sign off on successful implementation

D2-10.1 Support Services

GCOM understands and agrees to provide WV DHHR's designated users and support staff access to GCOM's support staff. The support staff will be identified as part of the implementation planning process. It will be adequately trained and informed on the technical features of the e-Vital system to be able to provide the necessary support as required in this RFP.

D2-10.2 System Acceptance

GCOM realizes the importance of the Training, as part of the system acceptance process. Our goal will be to make this process completely transparent to WV DHHR business users. GCOM has a very detailed and comprehensive Training plan.

Gain Hands-On Experience: During this stage, the WV DHHR team will start working on production problems and enhancements to get "hands-on" experience. To understand the

SDLC processes and increase the team's confidence in a gradual fashion, this activity is divided into two steps as detailed below:

Step 1: The WV DHHR team will assume secondary support of all enhancements & production problems while the GCOM team will maintain primary support. The GCOM team, when working on enhancements/production problems, will call the WV DHHR team and brief them on the changes to be done (design and pseudo code). The WV DHHR team will make the programming changes under the guidance of the GCOM team. WV DHHR team will request assistance from GCOM if needed. The GCOM team will review and conduct walkthrough of the code completed by DOHMH/IT, any issues identified will be discussed and corrective action explained. WV DHHR team will then implement the fix/enhancement.

Step 2: The WV DHHR team will assume primary support, taking responsibility for the resolution of the reported problem(s). The GCOM team will move to a secondary support role. WV DHHR team will design and follow the procedures to make requisite changes. WV DHHR team will call in GCOM team only if they have questions or issues.

D2-10.3 Steady State

During the Steady State stage, WV DHHR assumes full responsibility for performing all of the activities specified in the Application Maintenance engagement. The Steady State process focuses on meeting service levels, reducing problem reports, improving application efficiency and maintaining effective communication with WV DHHR users.

D2-11. Question 11: System Warranty (Milestone 11)

The Scope of Work provides an overview of the purpose of Milestone 11 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone

GCOM typically provides following terms and conditions for System warranty. GCOM has factored in cost to support following terms and conditions

- GCOM shall warrant the software to be free from defects that prevent full performance of the system in accordance with the detailed system design for a period of 12 months from the date of acceptance. During this 12 months' period, GCOM is responsible, at its own expense, for "break-fix" of any component of the e-Vital Project.
- GCOM agrees to make corrections free of charge to any discovered problems, bugs, defects, security vulnerabilities and/or exploits, or failures that should otherwise work correctly and per the requirements set forth in this document and during analysis and pilot phases of the project.
- All deliverables received by WV DHHR will be covered by the warranty, including any accepted changes incurred throughout the project.

GCOM performs the following types of fixes as part of its warranty

- **Corrective or Emergency (break fix)**: This service relates to the elimination of an error condition, which is impacting the operability of a production system. This service covers

all associated root cause analysis, coding, testing, change control, software distribution, documentation, job rerun, and file/database recovery required to fix the error condition.

- **Preventive**: This service provides activities to prevent failure of the User's application by advanced detection and correction of latent errors. Examples include, Implement changes for "hot fix" communication requests issued by OS vendor; correct edit rules to prevent recurrence of failures (info provided by review of helpdesk calls resolutions); monitoring and cleanup for apps without automated self-cleaning facilities. Implement and use monitoring tools to detect problems before they impact the use.
- **Perfective**: Perfective maintenance provides quality/maintainability/operability improvements to a specific application or application portfolio with the objective of reducing resource consumption. Examples include optimization of resources, code restructure etc. This is typically performed when given code module requires modification due to functional changes or corrective, preventive fixes.
- **Adaptive**: Typically required as a result of operating system upgrades, database upgrades, browser changes or any other underlying software from 3rd party. GCOM expects to be notified by the client well in advance of impending upgrade in order to enable GCOM to perform QA against the newer version of the software.

One technology upgrade is included per year as part of basic Warranty & maintenance:

- GCOM will update all project artifacts impacted (UML diagrams, Build scripts, design etc.) due to any work done as part of Warranty or Support/Maintenance work.
- Root cause analysis will be done by GCOM and findings presented to WV DHHR within 2 weeks, for all severity level 1 problems.
- Average Time to resolve for Severity Level 1 problem will be 2 hours or less. It must be noted that depending on the nature of the problem, GCOM may propose work around while permanent fix is identified and migrated.
- GCOM's goal will be to have no severity level 1 problems; fully automated functional test will enable us to strive for this goal.
- WV DHHR will get a monthly status report indicating the number of incidents reported, resolved average time to resolve, open incidents etc. GCOM will create up to 4 reports based on the WV DHHR requirements; this will allow WV DHHR to monitor system stability and see trends.
- 99% of the support calls received will meet the response time SLA as defined below:

D2-11.1 SLA during warranty & support/maintenance

Level	Priority	Response Time objective	Description
L1	High (Production System Down)	Real Time, but maximum of 1 business hour	The customer production system is not operational The problem affects more than 90% of the users Immediate solution is not available

Level	Priority	Response Time objective	Description
L2	Medium (Serious Impact on System Operation)	2 business hours	Customer production system is operational but a major feature is not operational or the performance is very slow Problem affects significant number of users Immediate solution is not available
L3	Low (Sub system or device failure and electronic support cases)	1 business day	System is available and functional for a significant number of users Interim solution is available to keep the system operational
L4	Additional feature in product;	Till Next Release of product	System is available and functional for all users The feature requested / defect in product does not affect the day to day working of the system but its provision would provide added benefits to the users.

D2-12. Question 12: System Maintenance and Support (Milestone 12)

The Scope of Work provides an overview of the purpose of Milestone 11 and the tasks that would successfully execute the milestone. Please provide a brief (1-2 page) narrative expressing your plan for the milestone and associated tasks along with any details you wish to provide explaining your approach to conducting the activities associated with the milestone

GCOM provides level 3 help desk services. These services are available Mondays through Fridays from 9AM to 5PM. Our level 3 help desk covers application incidents and problems, immediately engaging GCOM technical resources to support application issues. Our level 3 help desk also supports the WV infrastructure team in triaging network and server issues related to the EVRS infrastructure configuration.

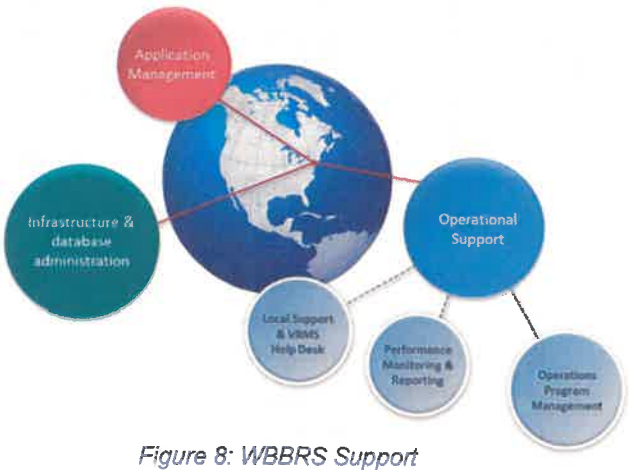


Figure 8: WBBRS Support

Our level 3 help desk is access by the authorized MI DHHR super user(s). Electronic Vital Records System (EVRS) Support and Customer Support includes the following components:

- Operational support:
  - Operations Program Management
  - Performance Monitoring and Reporting
  - Dedicated Support Team and GCOM EVRS Product Help Desk
- Application Management:

- Infrastructure and database administration

A cornerstone of GCOM's operations support approach is a dedicated, Electronic Vital Records System (EVRS) infrastructure and application support team. Our team is responsible for:

1. Serving as DHHR's first point of contact for routine and planned application and infrastructure support needs.
2. Monitoring the Electronic Vital Records System (EVRS) solution performance monitors and taking action of threshold alerts automatically issued by the system. This is inclusive of core Electronic Vital Records System (EVRS) functionality including but not limited to monitoring and support of repository management, system interfaces, and report generation.
3. The solution support includes upgrades, patches, maintenance and support of Electronic Vital Records System (EVRS) as shown in the figure below.

GCOM's Approach to VRMS Post Production Support Operations provides the right mix of Managed Services so that DOH can focus on its Mission

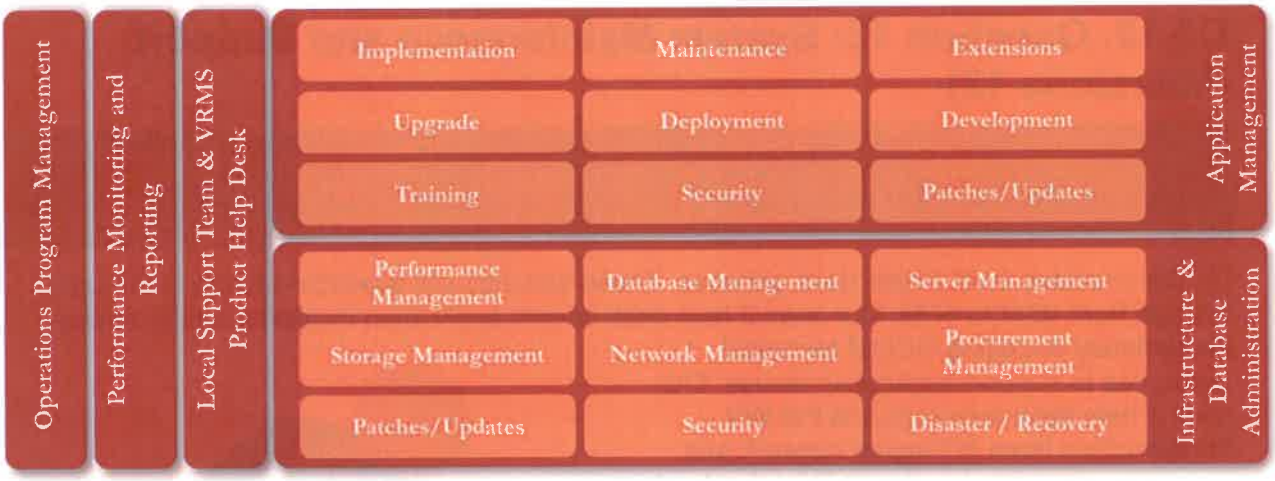


Figure 9: GCOM's application to application maintenance services provides a turnkey solution across Electronic Vital Records System infrastructure, Application Configuration Management and Governance, and support DHHR specific business and state regulatory enhancements.

4. Coordinating, planning, and executing the Electronic Vital Records System (EVRS) product and infrastructure releases and upgrades with DHHR's governance team and technical team. All hardware and software changes to the Electronic Vital Records System (EVRS) will go through a proper configuration management process inclusive of software/hardware change approval and tracking across the SDLC from requirements to test to deployment. A DHHR specific Requirements Traceability Matrix will be maintained in both the implementation and operations phase of the Electronic Vital Records System (EVRS). GCOM will use TFS for requirements traceability and test management. GCOM will use TFS version control for software code configuration and version management.
5. Implementing GCOM's Electronic Vital Records System (EVRS) specific configuration and custom extension enhancements as prioritized by DHHR. All hardware and software

changes to the Electronic Vital Records System (EVRS) will go through a proper configuration management process inclusive of software/hardware change approval and tracking across the SDLC from requirements to test to deployment.

Our support process has a point of contact that will provide support for DHHR system administrators Monday through Friday 7:00 AM to 5:00 PM Eastern Time (EDT or EST as applicable) as well as evenings and weekends as requested.

Our approach will include providing a single number that the DHHR technical leads and program leads can call that will immediately contact the GCOM Customer Support Representative on duty. In the event that the GCOM primary point of contact (POC) is not available or does not answer, the primary support number will automatically roll to GCOM's specific escalation path until the call is acknowledged by a member of the GCOM Team. GCOM's escalation path for the DHHR EVRS project will include GCOM Corporate officers, including the CSO, COO, CTO, EVP, and CEO.

GCOM provides a summary report with key service level metrics. The report is provided in monthly written form and is presented to the key DHHR Stakeholders. The report includes service level metrics and a self-assessment of any penalties in the reporting period.

GCOM understands that the services levels apply to all components of the solution provided by GCOM including hardware and software infrastructure, the GCOM EVRS Product, and DHHR specific configuration and extensions of the EVRS Products.

The severity of the incidents or problems will set the initial level using the guidelines set forth in the figure below.

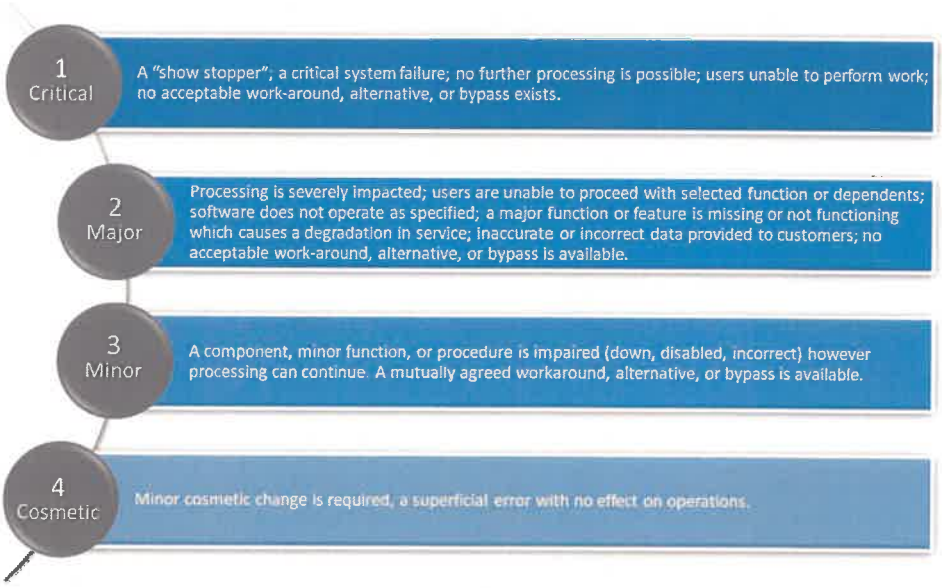


Figure 10: severity of the incidents or problems will set the initial level using these guidelines

System Uptime Criteria. Percentage of time the system is up during planned uptime periods. We anticipate that the Service Level Plan will target a 99.9% system uptime for the Electronic Vital Records System (EVRS) during business hours.

D2-12.1 Types of Support Response

GCOM will provide DHHR with a single email and phone number to request GCOM incident support. GCOM will also provide a JIRA Service Desk system that will enable DHHR to enter a service ticket via the web. The JIRA Service Desk system will guide users with ticket severity ratings. Severity 1 issues entered in JIRA, phoned or emailed in, will trigger GCOM incident management process and will result in a GCOM incident response and triage team being mobilize to triage, classify and mitigate the issue.

GCOM will provide multiple channels to access our operations and support team including a dedicated phone number for emergencies, primary point of contacts mobile phones, email, and a web based ticketing system.

D2-12.2 Incident Management Response

GCOM uses a dedicated instance of JIRA Service Desk to provide post production support tracking. JIRA is a web based ticketing system that allows authorized users to submit, track and collaborate on service tickets. JIRA allows to track our customer's service request, product enhancement requests, and production support requests. The tool provides a client specific log-in for client system administrators. Once logged in to our online tracking tool, client administrators can log a request, see a dashboard of pending requests and ticket status, communicate or add additional information to a previously logged request, and/or can request escalation of a service request. Our online tracking tools provides automated notifications by request for each open ticket status change event or comment entered to keep both GCOM support staff and client administrators looped in service request status, next steps, and current responsible party for the next step.

GCOM will provide JIRA limited licenses for DHHR users. JIRA will be used to track level 3 and level 4 application and infrastructure support tickets.

Section 3 - Technical Questions

Offeror's Technical Response should include a combination of narrative descriptions and tables for the following twelve (12) questions.

D3-1. Technical Question 1

Please provide a comprehensive narrative statement, not to exceed four (4) pages, that describes the methodology used to configure the system, the method by which the offeror will ensure the utilization and integration of the materials provided by the state, and the method by which the offeror's system development life cycle (SDLC) methodology and project management methodology support complement each other. Offeror should illustrate how the methodology will serve to accomplish the work and meet the state's project schedule.

D3-1.1 Approach and methodology to requirements management

GCOM strongly believes that managing requirements is a key tool for business and project success. Through GCOM's requirement management approach, we can ensure that the final delivery from a project or initiative aligns with the initial strategic intent. In other words, we can deliver exactly what the stakeholders expect and what the business needs. Requirements Management is an iterative set of activities that help ensure that elicitation, documentation, refinement, and changes of requirements is adequately dealt with during a project lifecycle, with a view toward satisfying the overall mission or need in a quality manner and to the customers' satisfaction. GCOM is not only a product development company but a system integrator who has experience implementing projects from 2 million to 40 million in size. Our past experience has shown that requirements management improves all major aspects of organizational strategy (portfolio, programs, and projects) or operations management (day-to-day business) by reducing cost, improving quality, decreasing time taken, decreasing risks and enabling effective scope management. GCOM's four steps for successful requirements management are as follows:

GCOM's eVital Record Management Platforms serves as New York City's Vital Record Management system. With over 8.5 Million Residents, our New York City Vital Records Systems serves is one of the largest and most robust in the nation.

- Review the Project scope/documents
- Identify number of modules as part of the scope
- Identify Stakeholders, and business areas they represent
- Identify the deliverables for each phase.
- Understanding of Current Process and documentation
- Review requirement documents provide by the WV DHHR such as Attachment D1_Functional Specifications, Attachment D2_General System Specifications and Attachment D3 _Forms Specifications
- Attachment F - Current System and Data Info

- Attachment G - Future State Workflow
- Business Facility walkthrough
- Review any additional documentation WV DHHR may provide.
- Preparation for User Sessions
- Based on the review of documents update high-level Process flow diagram
- Document the Pain and Process Improvement Areas
- Identified Actors and create/update high level use case diagrams
- Initiate draft of Business requirement specification.
- Initiate draft of Data specification document
- Initiate draft of Validation Rule document
- Meet with Solution Architect to validate the requirements and limitations: The last thing we want to do is get too far into our requirements before we identify our solution approach. Therefore, GCOM involves VRMS Solution architect and Data architect into requirements efforts and putting in place a solid business case.
- Conduct User Sessions with identified Business Stakeholders

GCOM's VRMS Solution is already built so our approach for requirement sessions is to present the GCOM VRMS solution demo to users and make them aware of its capabilities. It will also allow users to find out configuration items, business rules, and data migration requirements. This allows us to make the software work around the business process rather than the business work around the software. The VRMS Functional Lead will find themselves digging deeper into the business process, ensuring the VRMS is appropriately configured or customized to meet the business needs.

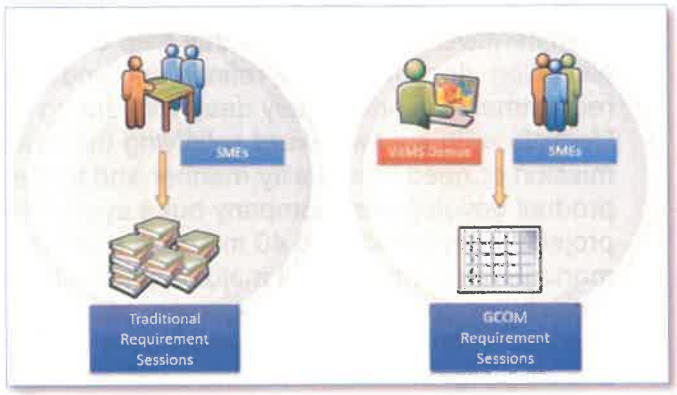


Figure 11 Traditional vs GCOM Requirement Sessions

GCOM's plan is to make a training environment available for business very early to review the VRMS solution and hear feedback during the requirement validation sessions. SMEs uncovering the VRMS solution will lead to the robust requirements, since the user will be aware of the capabilities of the VRMS solution.

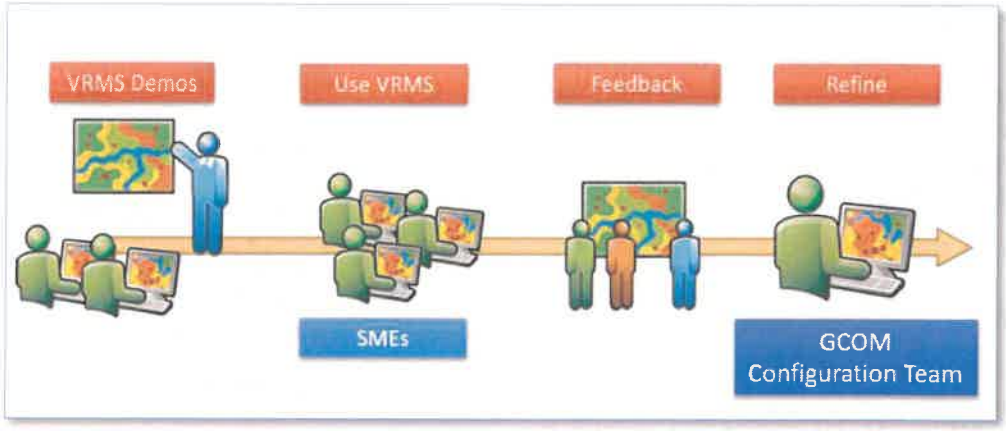


Figure 12 Requirement solidifying process

During these sessions, the Functional team will validate the business process flow, activities, understand the to-be process, and gather functional and non-functional requirements. It will produce the **Finalized Requirement document** and **GAP analysis document** that will include gap between the detailed requirements and the proposed solution.

D3-1.2 Process to track the individual requirements, prioritize, and maintain the status of each

Once the **Finalized Requirement document** is approved, each individual requirement gets into GCOM TFS for the implementation team. GCOM's Team Foundation Server is a single-point-of-truth for what state your requirements are in, what the details of that requirement are, who is currently working on them and who changed what when, and what the priority is.

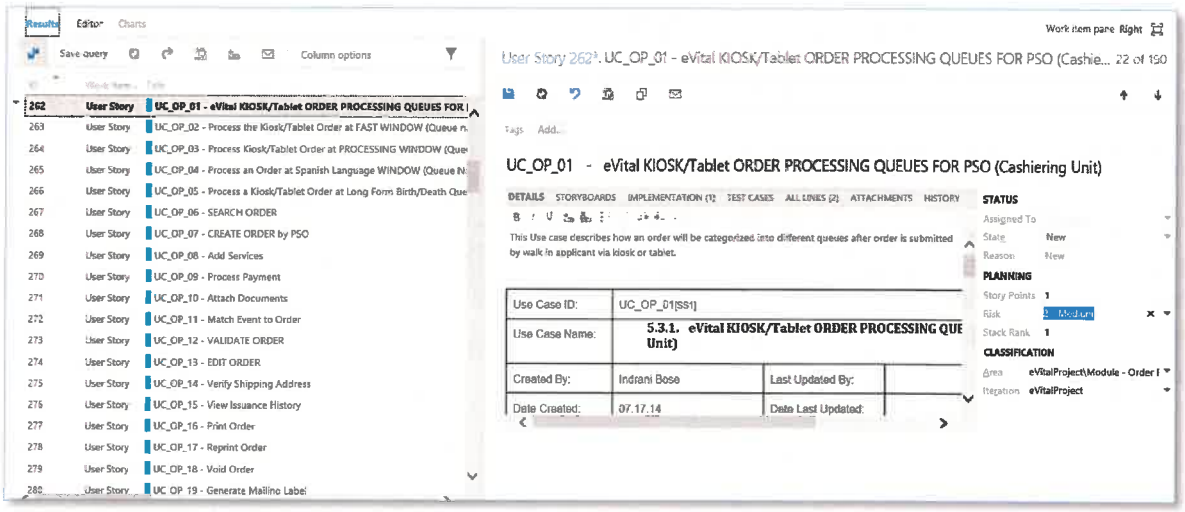


Figure 13 GCOM TFS with requirement

Note: User Stories are considered as requirement in TFS.

Each requirement (User Story) workflow defines how a work item progresses upon its creation to closure. For example, the four main states defined for the User Story define a progression of four states, from New, Active, Resolved, to Closed. Please refer to diagram "User Story, Workflow state".

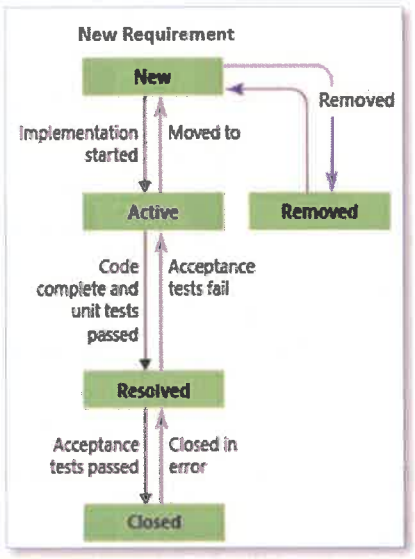


Figure 14 User Story, Workflow State

D3-1.3 Requirement Traceability using TFS

In Visual Studio, other work items are used to identify work that needs to be done to a requirement before it can be deemed complete. Different work item types contain the following: Task, Test Case, and Bug.

In Visual Studio, GCOM has created queries to show any type of traceability report. Examples: Requirements to Tests Matrix, Requirements to Tasks, Requirements to Issues, Test Cases with Bugs to name just a few. These queries can also be exported or opened in excel, sent to someone thru email or opened in Microsoft Project. Queries exported to excel allows for adding additional excel reporting features like a Pivot Charts. Visual Studio comes with many reports that trace Requirements showing linked tasks and remaining work left, test case results state and many more scenarios. Please find below a sample of user story tracking:

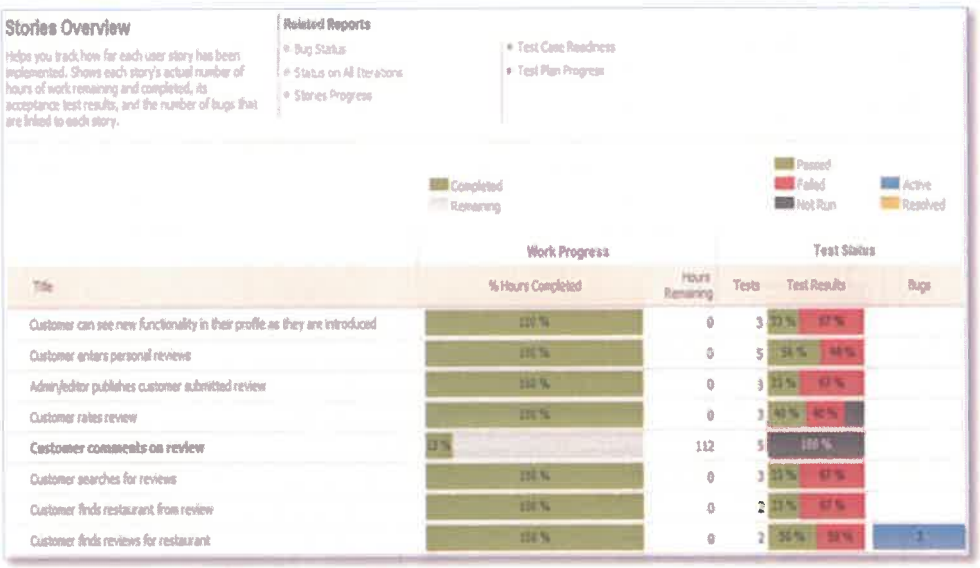


Figure 15 User Story Tracing

D3-2. Technical Question 2

Provide a narrative, not to exceed one (1) page that explains the Offeror's philosophy and approach to maintaining and upgrading the system including releases to the State. Please to address the following areas:

- *Frequency of releases during the project phases*
- *Frequency of new releases after go-live*
- *Process used to determine what features will be included in each release pre and post go live*
- *Support provided to clients during and after upgrades to a new release*
- *Policy regarding mandatory upgrade to new releases*
- *Policy on sharing new functionality between clients*
- *Policy regarding client notification of potential impacts of new release to the client's system and*
- *Method that is recommended to keep changes to the configuration or tables made by the customer from interfering with the application of new releases.*

GCOM's release management follows the best practices of ITIL and aligns with the project plan to deploy GCOM VRMS software releases, feature enhancements, security updates, patches and system updates. Our methodology is to build, test and deliver the capabilities that will meet the stakeholder's requirements and intended objectives. As part of the GCOM VRMS product lifecycle, we continuously work towards product enhancements, implementing new technical capabilities, performance improvements and fixes to address any reported issues. Every year, we issue a major release that includes major new features included in the product and a Maintenance/Hot fix release as needed to address known issues.

Major Release: Yearly release that introduces new features and capabilities to the GCOM VRMS product. The release goes through rigorous testing cycles before being launched for general availability. The new features and capabilities will be reviewed and enabled as requested by DHHR.

Maintenance / Hot-Fix Release: The hot-fix or maintenance release contains the latest fixes, security updates, system updates and patches to the customers who looking to address specific issues. Eventually the hot-fix or maintenance release is integrated into the Major Release. The release is tested and verified before making it available to the DHHR.

Code Base: A separate code base is maintained for each customer providing flexibility and faster releases to address new features or enhancements. All new features are considered as a functional operation and can be enabled or disabled by updating the system configuration. Major modules will require release deployment.

The release management is a critical bridge between development and production deployments. Our DevOps approach improves the collaboration between the deployment and IT Operations by developing a continuous delivery pipeline and delivering new features to DHHR. The delivery pipeline is automated to ensure consistent and repeatable deployment process.

Any releases that are scheduled will be planned, developed, tested, verified and deployed to the production environment. Any release must go through the following phases:

Release Planning: Features or enhancements to the product based on the priority and approval from DHHR are grouped into a release and scheduled and tracked using a project

plan. The features are developed and tested, and deployed to the staging environment for user acceptance.

Test, Build and Configure Release: Release that has been tested in lower environments will be configured and deployed to Staging or Pre-Production environment using automated build scripts for the end user acceptance testing. The new features are tested, validated and verified to ensure the new features meet the requirements. The build upon acceptance will be scheduled for the deployment.

Performance testing will be performed in the Staging or Pre-Production environment. We can scale-up and build other environments (Training, Data Conversion etc.) as needed by DHHR. Based on the requirements we can configure additional environments.

Production Deployment: The deployment will verify all the deployment procedures and steps are followed through and release is deployed to the production environment.

D3-3. Technical Question 3

Describe the offeror's experience with mapping data from current systems to their system, the process used to document the mapping for each event and the method by which the offeror works with the state to convert the data, identify, and rectify conversion issues. Please discuss how the offeror will migrate and link images to vital event records. Please describe how the imaging will be store and integrated with the EVRS solution.

D3-3.1 Approach and methodology to data conversion and validation

Data conversion is always one of the most critical tasks. GCOM has extensive expertise in converting legacy data. This section defines the overall methodology for converting data from the DAVE system to the GCOM VRMS. This section outlines the details to support the multi-phase release approach, migrations of transactions including pending and complete transactions. It also specifies the validation approach to conversion and where it is more prudent in the process. The picture below provides a conceptual data flow for data to be converted from data sources into the GCOM VRMS database.

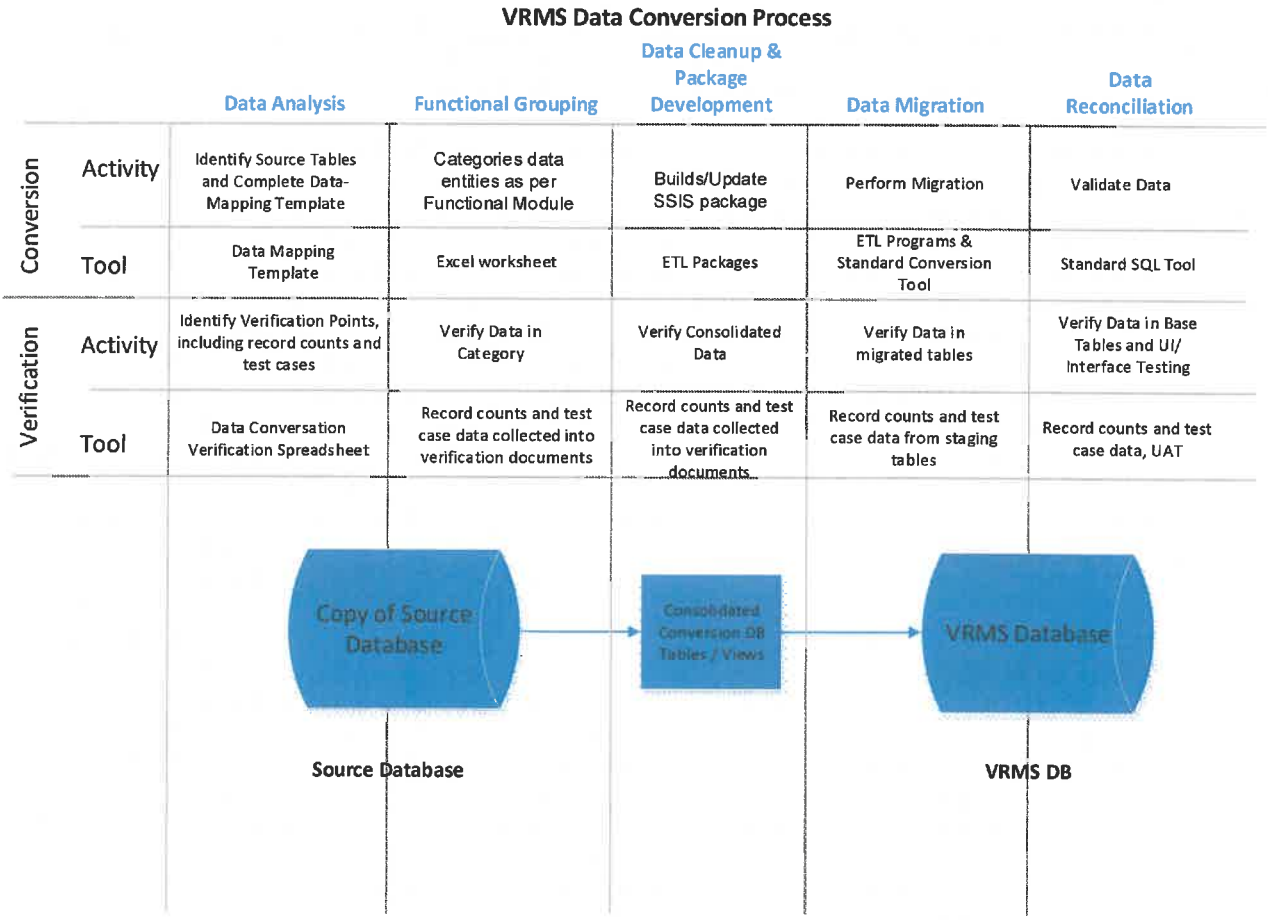


Figure 16 Data Conversion Approach

D3-3.1.1 Data Analysis

The primary purpose of the analysis is to evaluate each data source, determine the data details to be converted and complete data mapping template for each data source. Another outcome of the data analysis process is a recommendation of the conversion type for each data source by the data conversion team. Data mapping is not limited to the field level, it will also map dropdown values, workflow statuses, queue listing etc.

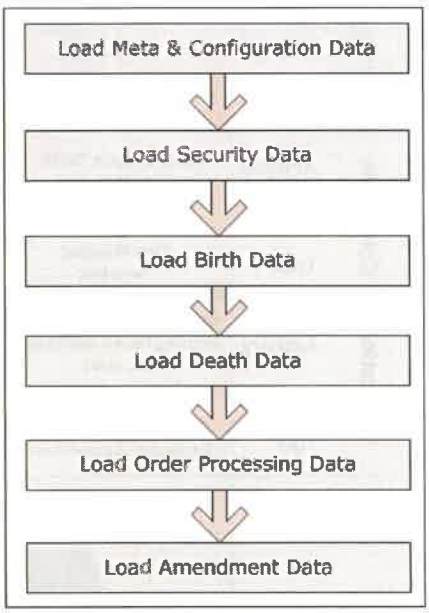
D3-3.1.2 Functional Grouping

Primary purpose of the functional grouping is to categories data entities (tables) based on how they are used in each functional module. **Exhibit 7 - Table Grouping** contains the result of this preliminary analysis of the EVERS database.

The grouping of GCOM VRMS tables can be easily identified by referring to the eVital data dictionary.

D3-3.1.3 Data Cleanup & Package Development

During the Data Cleanup & development phase, the GCOM builds new or updates the SSIS package using Microsoft SQL Server Data Tools based on the mapping specification. SSIS Packages developed for DAVE to GCOM VRMS conversion. Data is migrated in order based on the feature. All Meta and Configuration data are migrated prior migrating any transaction data. SSIS package uses database views as source and stored procedure as destination to transfer data. The transformation logic is built in stored procedure. Transformation relationship are maintained in the destination table. This will help to relate the migrated entity data to the source data after the migration. There will be a version tracking in place to track the version of both systems. This information will be maintained in a table in VRMS database. . The Data Mapping templates for each data source will be used as a guideline for developing the field level mapping and required data translations.



D3-3.1.4 Data Migration

During the data migration phase, the GCOM will use the ETL Program i.e. SSIS packages and standard SQL Server to load the data from the Conversion Database to GCOM VRMS.

The Conversion Environment will be used to execute several pre-mock conversions prior to the formal mock conversions in production.

D3-3.1.5 DATA RECONCILIATION

The purpose of this phase is to identify the issues and conversion discrepancies and rectify them. Conversion controls are in place for verification and validation to ensure that data is properly converted. The conversion controls are broken into two components, validation scripts and manual validation. Set of validation scripts will be built to validate the migrated data. WV DHHR performs manual validation after the data is converted into VRMS system.

Test scripts executed against the Accela UI to verify that the data is in the appropriate location within the Accela application. All of the Accela basic functions will be tested.

The validation reports generate the following reports:

1. Record level Controls
2. Balance Level Controls
3. Error Reports

It is recommended that a dedicated test database will be created by using latest production backup of the DAVE system. The sensitive data are scrubbed before using them in test environment. Multiple QA cycle will be executed on the test environment and data will be validated using Data Validation Scripts. Based on the result, the data migration process is fine-tuned to obtain optimum performance. At the end of this process, the expected timeframe will be determined for actual migration process. Two mock runs will be executed in the test/train environment before production migration. Final QA/Certification process will be executed by the business user prior to migration in production environment.

D3-3.1.6 EXPERIENCE WITH MAPPING DATA FROM CURRENT SYSTEMS TO THEIR SYSTEM

GCOM team has successfully migrated the New York City DAVE 15.1 (VitalChek system now LexisNexis) data into GCOM VRMS data without enough detail documentation and knowledgeable SMEs. The process has been very painful, but we have learned a lot by analyzing the DAVE 15.1 data in depth. We believe that this unique knowledge gained by GCOM team will not easy to acquire by any other Offeror without spending time.

D3-3.1.7 LEVEL OF EFFORT, AND LIST ANY ASSUMPTIONS RELATED TO THE CONVERSION EFFORT.

The following table shows the estimated level efforts based on our prior experience with DAVE 15.1 conversion.

Table 7: Estimated Level of Effort

Module/Tasks	Total Estimated Efforts	Estimated effort for Mapping	Estimated effort for Development
Data Migration Plan	5 days	N/A	N/A
Birth Module	30 days	15 days	15 days
Death	30 days	15 days	15 days
STOP (Fetal Death)	22 days	10 days	12 days
ITOP	22 days	10 days	12 days

Module/Tasks	Total Estimated Efforts	Estimated effort for Mapping	Estimated effort for Development
Interfaces	N/A	N/A	N/A
Security (Authorization)	12 days	4 days	8 days
Amendment	20 days	10 days	10 days
Order Processing	16 days	8 days	8 days
Order Intake	12 days	4 days	8 days
Finance and Reconciliation	16 days	8 days	8 days
Migration QA	15 days	N/A	N/A
Prepare for UAT	5 days	N/A	N/A
Mock Run 1 on Testing	10 days	N/A	N/A
Resolve any issues	5 days	N/A	N/A
Mock Run 2 on Testing	10 days	N/A	N/A
Resolve any issues	5 days	N/A	N/A
Prepare for Training	15 days	N/A	N/A
Prod Data Migration – Go Live	15 days	N/A	N/A

The following table shows possible risks that can exists and mitigation/reduction strategies. Any other risk identified will be noted and discussed with WV DHHR.

Table 8: Risks and Mitigation Strategies

Risk	Mitigation / Reduction Strategy
Possible loss of data due to lack of detailed data definition document of EVERS.	WV DHHR should provide GCOM EVERS data definition document of EVERS that provides information of tables, fields and values in code tables. AND/OR DHHR should provide designated a staff to GCOM Team with access to source application and database in non-prod environment.
Possible loss of data due to change in business rules	Detailed information can be provided only after the comparison of source system and VRMS business rules.
Possible loss of data due to corrupted data	Every possible action will be taken to identify the data and work with DHHR

D3-3.2 Image migration and linking to event records

Careful planning, the right technology components, and experienced personnel are all integral to the image migration process. A proven methodology is also key, such as our process explained below:

Step 1: Image Repository Analysis.

The process starts with studying the source of the data and getting to know the documents themselves, as well as the current image repository in which those documents are stored. That means looking at the types of documents in question and the metadata or indexes used to describe them, as well as understanding how documents relate to each other, how they're physically collected and how the related metadata is stored. Knowing all of this will help the entire migration process move more smoothly.

Step 2: Extraction.

Images will be extracted from networked shared drive and metadata will be derived to make it ready to populate in the GCOM VRMS database. GCOM will write a utility for migration process to extract the images and store in SQL Server or any other Document Repository that state would like to use with assumption that Document Repository has APIs to pull and push the images.

Step 3: Transformation.

Images may need to be converted or repurposed from one format to another before loading it into GCOM VRMS system. GCOM VRMS requires document content streams and all associated resources and metadata to be in a specific format prior to loading.

Step 4: Indexing (linking images to record).

Key information about content – which varies depending on the type of data in question – is stored in indexes and metadata. During the migration process, it may be necessary to add new indexes, for efficient new ways to access content and meet business and regulatory requirements.

Step 5: Loading.

As the final step in the sequence, content data, metadata indexes and related document resources are loaded into the GCOM VRMS system. Metadata that describes this content goes into a separate index file, pointing to the location of individual documents.

D3-4. Technical Question 4

Interoperability is an increasingly important aspect of all systems in the health field. Please describe offeror's experience with and plans for addressing interoperability in the vital records area. Specifically, issues such as Master Patient Index (MPI), electronic health records, insurance exchanges and other registries and health programs should be addressed.

Being System Integrator and Product vendor GCOM understand the importance of interoperability which supports the ability of different information systems, devices or applications to connect, in a coordinated manner, within and across organizational boundaries to access, exchange and cooperatively use data amongst stakeholders, with the goal of optimizing the health of individuals and populations. There are following three aspects of the interoperability through business and end user benefits.

- Technical: Moving Data from System A to System B
- Semantic: Ensuring that System A and System B understand the data in the same way
- Process: Enabling business processes at organizations housing System A and System B to work together.
- Keeping the above three aspect in mind, GCOM solution architects always thrive to design the system that supports interpretability using widely used standards. GCOM has experience in HL7 (NY Health Exchange), NIEM (GCOM CCH) and ANSIX12 (NJ Medicare Billing) standards.
- The GCOM VRMS architecture supports various type of interfaces to internal and external systems. The high-level VRMS System Interfaces are implemented using two methods as follows:
- Real-time data exchanges using Web services: Web Services provide the real-time interface between two systems.
- Extracts data using SSIS packages and shared with other systems.

There are pros and cons with each method; each interface needs thorough analysis before deciding to use web service or SSIS package interface. In addition, The State needs to evaluate expertise available to support the application.

GCOM is committed to keeping VRMS a leading-edge Vital Records Management System Product. We understand the importance of Medical Examiner (ME) role in VRMS system. Considering that, we have already built the interface with ME system. Current GCOM VRMS architecture supports import/export from/to external ME system. It offers the following two options:

- Option 1: ME system can consume VRMS web services to push the death record
- Option 2: ME system can generate a death record file for VRMS to process

Additionally, VRMS not only allow processing of preliminary death record from ME system but also offers the following interface methods:

- ME to submit amendment request

- VRMS to submit Cremation clearance request
- VRMS to refer death cases to ME to review

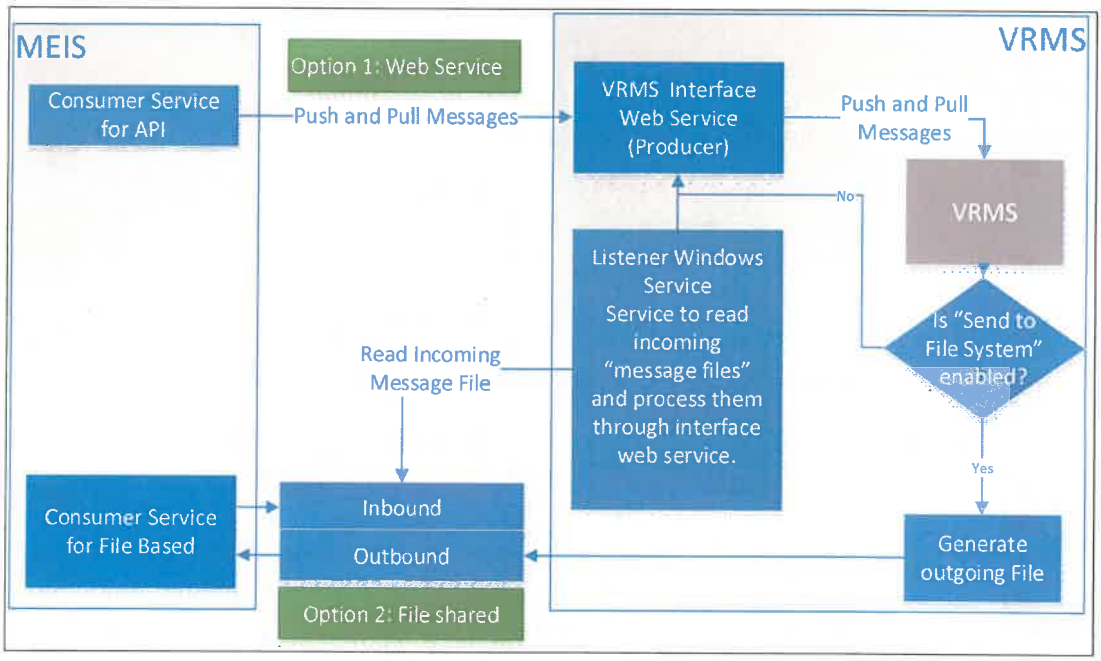


Figure 17 ME system interface with VRMS

GCOM VRMS architecture is flexible enough to implement the Vital Records Health Level 7 (HL7) Fast Healthcare Interoperability Resources (FHIR) standard with existing experience our team will able to adopt it in GCOM VRMS with minimal efforts.

Here is the sample high-level interface diagram from current VRMS implementation:

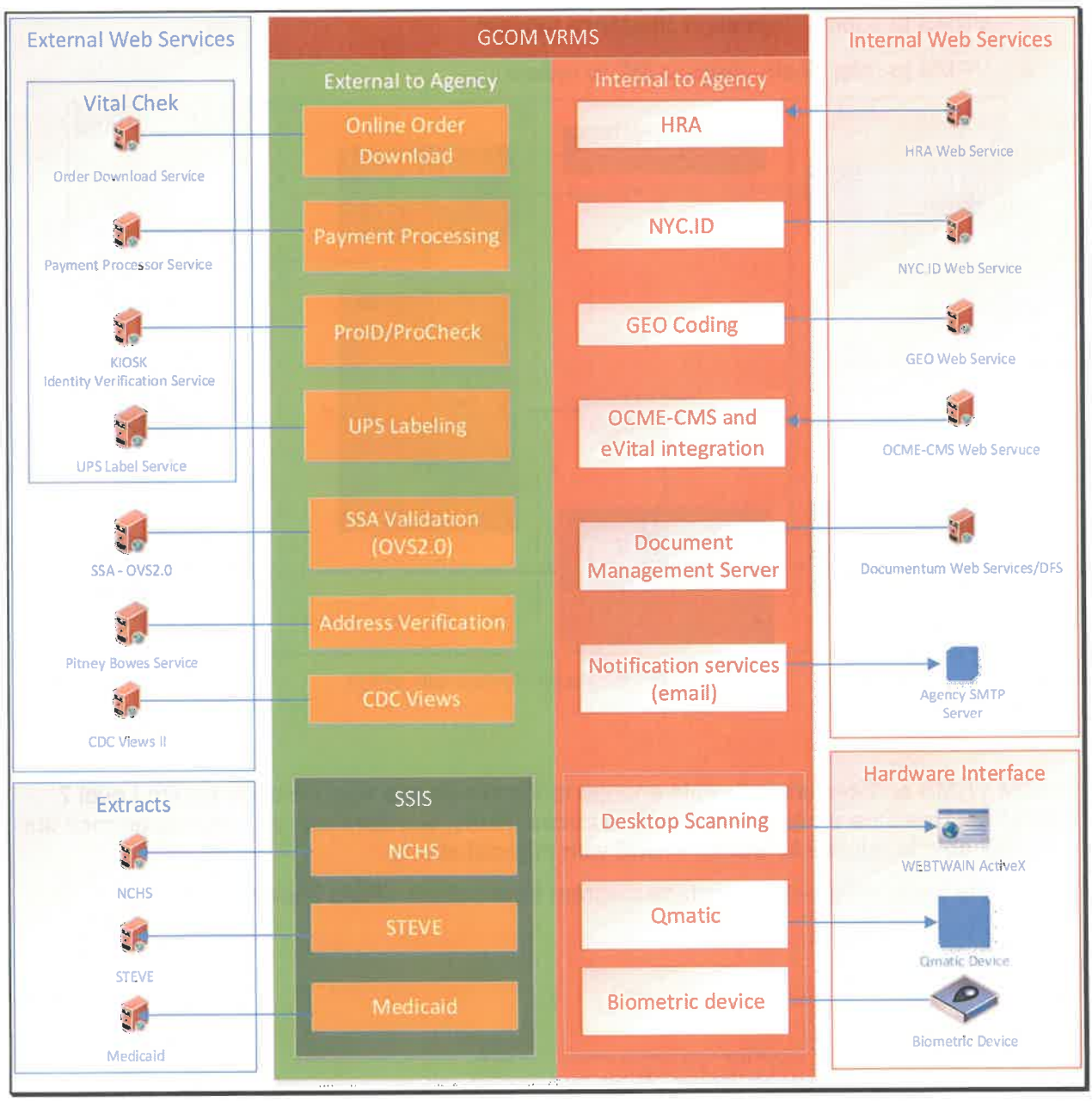


Figure 18: Sample High-Level Interface Diagram

D3-5. Technical Question 5

To what degree is the application mobile ready? Please respond specifically to the following questions:

Is there an application available from an App Store (Google Play or Apple) or is your mobile presence an optimized web page or both?

Do the screens automatically adapt to the mobile device being used?

Is the entire application available to the mobile user or only certain features? If the latter, please detail which features are available.

Describe plans for moving to or enhancing the mobile readiness of the application.

Do releases and updates to the mobile application follow the same philosophy as the main system as described in question two?

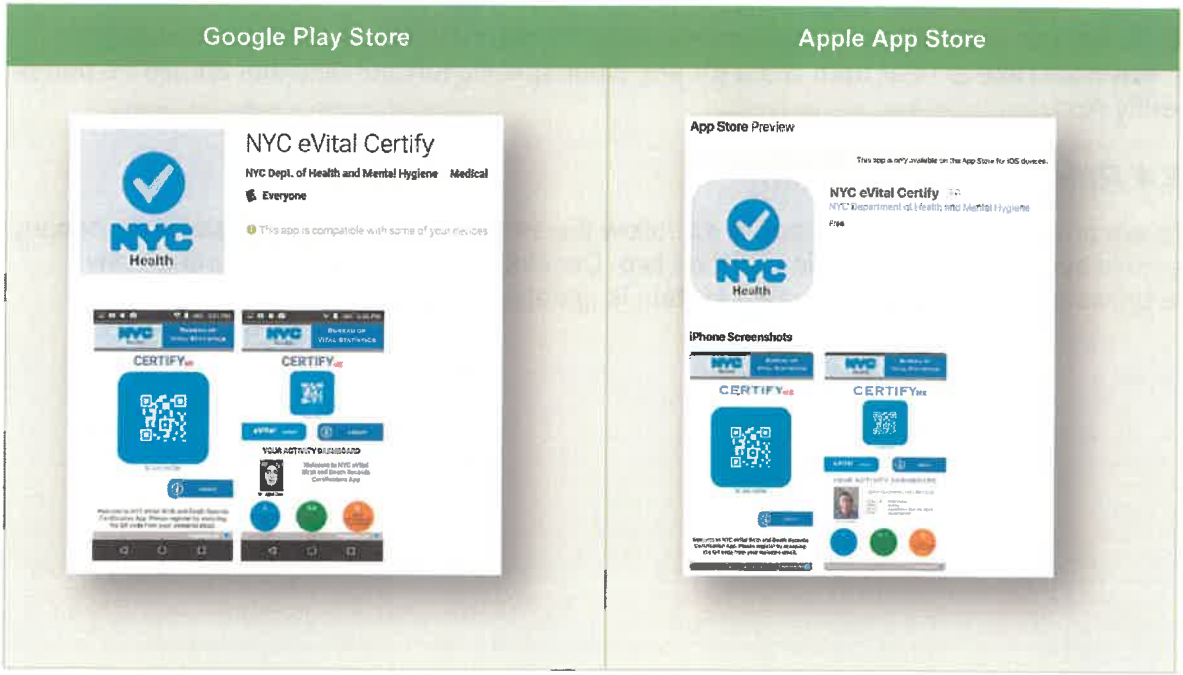
Please limit your response to 2 pages

D3-5.1 App Store (Google Play or Apple) Presence

GCOM VRMS Certify native App is available for all users who are in certifier role to certify the cases on Android as well as on Apple store. Certifier users includes Doctors, Funeral Directors, Medical Examiner etc. Main objective was to give the secure access to certifier users while they are way from the desktop.

Here is the link for App Store:

- Apple: https://itunes.apple.com/us/app/nyc-evital-certify/id1188786801?mt=8
- Google Play: https://play.google.com/store/apps/details?id=gov.nyc.health.evitalcertify&hl=en



D3-5.2 Optimized Web Pages

GCOM VRMS is built using the responsive web design, which is platform and device-size independent. GCOM VRMS is accessible from a variety of mobile devices including the iOS and Android platforms. Sample screenshots on Android and iOS devices are shown below:

Table 9: Sample Screen shots on Android and iOS

D3-5.3 Future Plans

GCOM VRMS currently offers the responsive design which GCOM will continue to support in future. We would like to hear from State for any other specific functionality that should be part of our Certify App.

D3-5.4 Release Management

If there are any updates to mobile app it will follow the same path as follow the same philosophy as the main system as described in question two. Desktop application access through any mobile browser is available as the main system is updated.

D3-6. Technical Question 6

The goal of this project is to move the state to a common modern technology platform utilizing a single database for all vital events. Please provide a narrative explaining how the proposed solution is integrated; communicates between modules with specific focus on movement of records between modules an queues based on record status.

Please limit your response to 2 pages

D3-6.1 Proposed Solution Integration and Communication Between Modules

GCOM's Vital Records Management Solution (VRMS) is a next-generation Electronic Vital Event Reporting, Issuance and Records Management System using single database. VRMS is a fully integrated solution for tracking and managing the processes associated with registering all vital events, as well as data compilation, analysis, and dissemination, letting you focus on delivering outstanding customer service. VRMS is HIPAA-compliant, and has security features such as access control, encryption, and secure data transmission and non-repudiation mechanisms through the use of electronic authentication devices. GCOM VRMS is the industry's most flexible, configurable, extensible, and interoperable Vital Records Management Solution in the

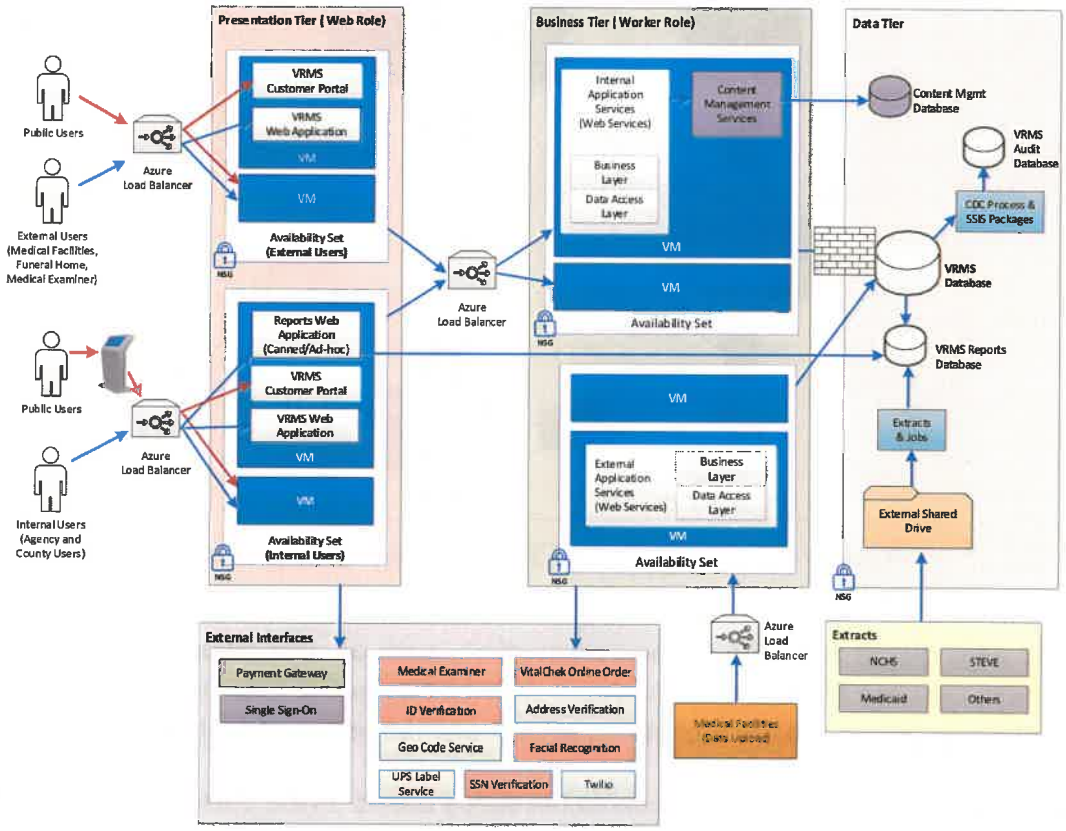


Figure 19 VRMS Conceptual Architecture

Marketplace today.

Taking advantage of the latest technologies and best practices, the VRMS system is an N-Tier service-oriented architecture. The system supports high performance, scalable and highly available solutions which can be extended with ease. The figure below provides an overall Conceptual View representing the VRMS system with major interface points, solution components (Birth, Death, Fetal Death, ITOP, Order Processing, Amendment, Accounting etc.), and identified interactions.

D3-6.2 Movement of records between queues based on the record status

Please refer to the conceptual diagram to understand how workflow and queues are implemented using workflow engine and Queue engine that moves the record.

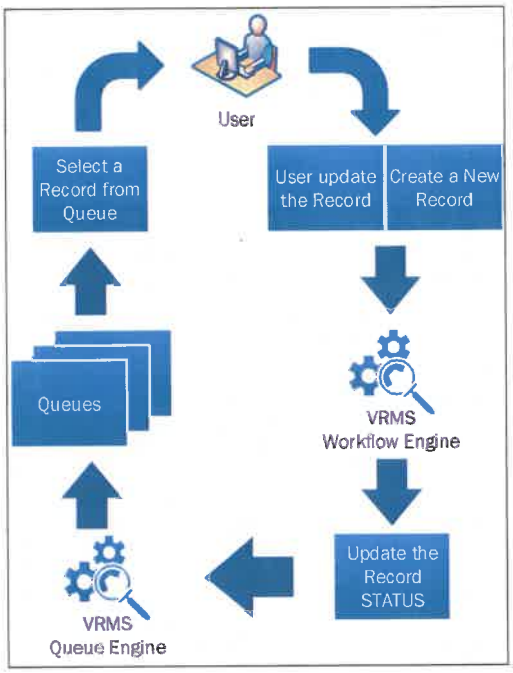


Figure 20 Conceptual Diagram of Workflow/Queue Implementation

Access to each queue is control by the configuration, such as user roles. User can start a new case or picks the case from queue, once user updates the record. One user can have access to multiple modules, such birth, death, fetal death etc. and respective modules' queues.

VRMS workflow engine updates the records the status based on the data entered. Based on the updated records status, VRMS queue engine process the record and pushed the record to specific queue based on the business defined workflow and queues.

D3-7. Technical Question 7

The State is committed to maintaining all operating software at current release levels. Please describe your company's policies and procedures to ensure that the proposed system continues to be operational as State software is upgraded. In your response include the timeframe within which you guarantee upgrades based upon the date a new release is announced. Please specify if your policies exclude any types of software (for example, operating system, database, ad hoc reporting tool).

Please describe your policies and procedures for maintaining the State at up-to-date levels of the proposed system. In your response please describe your release process including the frequency and support provided. If new requirements, such as a new certificate format, were mandated would that be covered by the maintenance agreement?

GCOM is committed to supporting the original environment throughout the term of the contract. However, it may be beneficial to keep WV VRMS close to the latest VRMS product version to gain benefits from new features and fixes for new security vulnerabilities.

D3-7.1 Release process including the frequency and support provided

GCOM's release management follows the best practices of ITIL and aligns with the project plan to deploy GCOM VRMS software releases, feature enhancements, security updates, patches and system updates. Our methodology is to build, test and deliver the capabilities that will meet the stakeholder's requirements and intended objectives. As part of the GCOM VRMS product lifecycle, we continuously work towards product enhancements, implementing new technical capabilities, performance improvements and fixes to address any reported issues. Every year, we issue a major release that includes major new features included in the product and a Maintenance/Hot fix release as needed to address known issues.

Major Release: Yearly release that introduces new features and capabilities to the GCOM VRMS product.

Maintenance / Hot-Fix Release: The hot-fix or maintenance release contains the latest fixes, security updates, system updates and patches to the customers who looking to address specific issues. Eventually the hot-fix or maintenance release is integrated into the Major Release. The release is tested and verified before making it available to the DHHR.

Code Base: A separate code base is maintained for each customer providing flexibility and faster releases to address new features or enhancements. All new features are considered as a functional operation and can be enabled or disabled by updating the system configuration. Major modules will require release deployment.

The release management is a critical bridge between development and production deployments. Our DevOps approach improves the collaboration between the deployment and IT Operations by developing a continuous delivery pipeline and delivering new features to DHHR. The delivery pipeline is automated to ensure consistent and repeatable deployment process.

Any releases that are scheduled will be planned, developed, tested, verified and deployed to the production environment. Any release must go through the following phases:

Release Planning: Features or enhancements to the product based on the priority and approval from DHHR are grouped into a release and scheduled and tracked using a project plan. The features are developed and tested and deployed to the staging environment for user acceptance.

Test,Build and Configure Release: Release that has been tested in lower environments will be configured and deployed to Staging or Pre-Production environment using automated build scripts for the end user acceptance testing. The new features are tested, validated and verified to ensure the new features meet the requirements. The build upon acceptance will be scheduled for the deployment.

Performance testing will be performed in the Staging or Pre-Production environment. We can scale-up and build other environments (Training, Data Conversion etc.) as needed by DHHR. Based on the requirements we can configure additional environments.

Production Deployment: The deployment will verify all the deployment procedures and steps are followed through and release is deployed to the production environment.

D3-7.2 New Certificate Format

GCOM will able to support new certificate format those are mandated will be covered by the maintenance agreement. GCOM would always strive to make our client self-serving as much as possible. Therefore, as part of training GCOM team will provide the utility and knowledge to to System Admin to upgrade the certificate.

GCOM's Vital Records Management System (VRMS) is a web-based system, which supports the following client web browsers if operating system supports these browsers GCOM VRMS will continue to perform as expected.

Table 10: Supported web Browsers

ID	Browser	Lowest Supported Version	Current Version
1	Internet Explorer	Internet Explorer v10 and above	IE 11 and Edge 18
2	Chrome	Chrome v56 and above	Chrome 72.0
3	Safari	Safari v10 and above	Safari v12
4	Firefox	Firefox v57 and above	Firefox v65
5	Opera	Firefox v45 and above	Firefox v57

Table 11: US Desktop Web Browser Market Share

US Desktop Web Browser Market Share As of Jan 2019	
Chrome	63.19%
Internet Explorer	10.01%
Firefox	8.6%

Safari	8.43%
Edge	8.31%
Opera	0.82%
Total	99.36%
Source: http://gs.statcounter.com/browser-market-share/desktop/united-states-of-america	

D3-8. Technical Question 8

Provide a technical narrative describing how, if successful, the offeror will host the proposed solution for the state. Specifically, the state is interested in understanding:

How replication and redundancy are handled

Security for the hosted environments and the physical site

Service level agreements and uptime

How routine maintenance is handled

Number of vital records clients that are currently hosted by the offeror.

Please limit your response to 2 pages

D3-8.1 Azure Hosted Secure Environment

GCOM is proposing Microsoft Azure Government (Infrastructure as a service option) to host WVEVRS primary site and disaster recovery site (back up site). Microsoft Azure Government delivers a cloud platform built upon the foundational principles of security, privacy & control, compliance, and transparency. Public Sector entities receive a physically isolated instance of Microsoft Azure that employs world-class security and compliance services critical to U.S. government for all systems and applications built on its architecture. These services include FedRAMP and DoD compliance certifications, CJIS state-level agreements, the ability to issue HIPAA Business Associate Agreements, and support for IRS 1075. Operated by screened U.S. persons, Azure Government supports multiple hybrid scenarios for building and deploying solutions on-premises or in the cloud. Public Sector entities can also take advantage of the instant scalability and guaranteed uptime (99.9%) of a hyper-scale xcloud service. This includes infrastructure, network, storage, data management, identity management, and many other services. Azure Government supports most of the same great features that public Azure customers have leveraged like Geo-Synchronous data replication and auto scaling to meet growing demands.

More details on Azure compliance can be found at

https://www.microsoft.com/en-us/trustcenter/compliance/complianceofferings

GCOM proposed database server will be behind the firewall where only application server can connect to the database server. GCOM is proposing Transparent Data Encryption (TDE) to encrypt production data (Azure SQL Database) at rest. TDE performs real-time I/O encryption and decryption of the data and log files. The encryption uses a database encryption key (DEK), which is stored in the database boot record for availability during recovery. The DEK is a symmetric key secured by using a certificate stored in the master database of the server or an asymmetric key protected by an EKM module. TDE protects data "at rest", meaning the data and log files. It provides the ability to comply with many laws, regulations, and guidelines established in various industries. This enables software developers to encrypt data by using AES and 3DES encryption algorithms without changing existing applications. All the servers in the Microsoft Azure Government are climate controlled, environment has fire and security hazard detection, electrical backups and physical security.

As a part of GCOM support plan, experienced support person will monitor all server health and usage using Microsoft Azure Government utilities and dashboards, monitor log files for application specific log files. Microsoft Azure Government provides notification services where real time notifications are send to the administrators using emails and mobile text.

GCOM will meet all compliance requirements as per Microsoft Azure Government. Detailed listing of compliance can be found at https://www.microsoft.com/en-us/trustcenter/compliance/complianceofferings

D3-8.2 Service Level Agreements, Uptime and Routine Maintenance

WVEVRS will be hosted in Microsoft Azure Government guaranteed uptime (99.9%). Software will be made available 24x7 as per agreed SLA between WV DHHR and GCOM. GCOM will perform routine maintenance as per agreed SLA. System downtime for maintenance (Server upgrades/patching, software upgrades/patching and hardware maintenance) will be planned well in advance so that all parties have been informed about the scheduled downtime. During the primary site maintenance, disaster site (backup site) will be made available to avoid system downtime.

D3-8.3 Replication and Redundancy

GCOM is proposing active/passive redundant (Disaster Recovery - DR) environment using Microsoft Azure government which is in different region from the primary site. SQL Server database replication would be used to sync the data between primary site and DR site, usually with a differential restore point within 15 minutes of the primary site.

D3-8.4 Current Vital Records Clients

GCOM is currently working with Commonwealth of Pennsylvania Department of Health, which will be hosted in similar Microsoft Azure environment and GCOM will be responsible to maintain the environment.

D3-9. Technical Question 9

Describe any plans to move the proposed solution to a new platform or database. If moved to a new platform, what is your policy for existing customers? For example, do you continue to support the installed software and is there a time limit on that support?

GCOM currently do not have any plans to move the proposed solution to a new platform or database. GCOM will continue to support the installed software until the agreed term with the clients.

D3-10. Technical Question 10

Please indicate to what degree the following items are configurable by a business user system administrator with some computing experience.

Item	Fully Configurable without vendor Assistance	Partially Configurable requiring some degree of vendor Assistance	Requires vendor to make change
New User Set Up	Yes	No	No
Forms	Yes, for existing fields	Yes, for adding new fields	No
Letters	Yes, with our upload utility	Yes	No
Certificates	Yes, with our upload utility	Yes	No
Screen Design: **-Formatting** **-Adding new Screens**	Yes, for adding existing fields to new screens	Yes, for adding new fields.	No
Fields: **-Adding** **-Deleting** **-Editing**	Yes, for Deleting and Editing fields	Yes, for Adding new fields	No
Edits: **-Adding** **-Deleting** **-Changing** **-Creating cross field edits**	Yes	No	No
Reports	Yes	No	No
Queues: **-Adding** **-Deleting** **-Changing**	Yes, for adding, deleting or changing **existing** queues from the user roles	No	Yes, for adding, deleting or changing **new** queues from the user roles

In a narrative please explain how the configurability works in the solution being proposed and the skills required at the State to be able to achieve the maximum benefit from the configurability offered by the proposed solution.

GCOM VRMS is the industry's most flexible, configurable, extensible, and interoperable Vital Records Management Solution in the Marketplace today. In addition to the above functional

capabilities described, GCOM VRMS offers the system administration staff a suite of configurable services which can be used to adapt the VRMS to HHC's specific workflows, business rules, and information requirements. These configurable services are not only used during the initial configuration but are also available to quickly change and enhance the system after implementation. The GCOM VRMS configurable components are listed below:

- Forms Engine to create, edit form fields on the fly
- Forms Engine with Business rules validation
- Workflows
- Queue Assignment
- Notifications
- Dashboards
- Content Management
- Geo-Coding & Address Verification
- Interfaces with SSA, UPS, Credit Card, and Identity Verification Services
- Step Up or Second Factor Authentication (Biometric)
- Role Based access & User Administration
- Standardized Data Exchange Interfaces
- Standardized and sustainable Reporting Infrastructure
- NCHS/Health Code Compliance

System administrators will need to possess the following skills in order to maximum benefit from the configurability offered by the proposed solution:

1. Enthusiasm to learn
2. Problem-solving skills
3. A technical mind
4. An organized mind
5. Attention to detail
6. In-depth knowledge of computer systems, knows how to use MS Office product
7. Ability to describe technical information in easy-to-understand terms
8. Good communication skills
9. Discretion (since confidential data is held on computer systems)
10. Knowledge of SQL Server database, queries, views and stored procedures
11. Knowledge of Windows Services to schedule any background jobs
12. Knowledge of Programming language, specially .NET with MVC framework plus

D3-11. Technical Question 11

The state prefers that the Offeror provide the in initial application training to all external stakeholders. The following chart provides information on the approximate numbers of stakeholders by event. Describe how you would approach training each group of stakeholders by event; what kind of training would be provided (in person, e-learning, online), what materials would be given to the trainees, and any follow-on support that would be provided during the go live period.

Numbers of Stakeholders by Event

Event	Stakeholder Group	Approximate number of Stakeholders
Birth	Birthing Facilities and Hospitals: -medical records clerks -birth clerks -midwives -pre-registration clerks	Hospital users 108 This number includes midwives
Death	Funeral Homes: -Assistants -Funeral Directors	Funeral Directors 499 Funeral Admins 417
Death	Medical Examiners: -Medical Examiners -County Medical Examiners	Medical Examiners 70 Deputies 241
Death	Medical Certifiers: -Hospice -Certifiers -Assistants	Medical certifiers 1500 (approximate)
Fetal Death	Hospitals Funeral Homes Medical Certifiers	Roughly the same as EBRS and EDRS
ITOP	Facilities	2
Amendments and Issuance	Regional County Offices	55 counties Approximately 80 users
All Events	State Staff	35

GCOM has extensive experience in design and delivering training that supports state vital records office staff, local administrators, system administration, health care provider and funeral directors. During the design, development and pre-deployment phases of the project our focus

is on internal state office staff, local administrators, and system administrators. In the table below, we describe when and how training occurs for each state user group during the project.

SDLC Phase	Training Delivered by user group
Planning and Design	GCOM utilizes a highly visual approach to implementing our vital records solution. The approach is driven by frequent product demonstrates to the state core team during requirements and design sessions. Not only do we capture detailed requirements using this process, but we also discuss and capture training requirements and align our Vital Record Solution terminology to the current state terminology. This process informs our training plan, materials, and training delivery strategy. It also results in a core state team of users that is very informed and aware of our vital records solution. This core group typically works with our training lead to design/tailor the curriculum to the unique needs of user groups.
Development	During the development phase, GCOM training team is building out training materials and supporting the state team with implementation of the training plan logistics. As development and system testing is complete, GCOM training team begins to build out tailored training materials for the user groups. During the development phase, GCOM begins training delivery efforts with System Administration users. We begin with user management and then work towards configuration and batch management processes. Towards the end of the development phase, GCOM will begin training delivery for the UAT team. The training will cover primary system use cases by system role; and will be structured to emulate end to end vital record management cases from initial recording to closure. GCOM anticipates that State trainers will participate in the end user training to gain familiarity with the system, the training materials, and the training scripts. UAT training course content will also include a component for recording and managing defects using agreed tool. This component will also provide defect writing guidelines, defect management process, as well as an outline for defect severity and prioritization rankings. UAT training will include representatives from both the state VR office and the state local offices who will participate in UAT. State system administrators will be responsible for UAT user management; which provides a real-world opportunity to gain knowledge and experience managing the user population.
Implementation (Pre-Production)	After completion of User Acceptance Testing, testing materials are finalized and multi-media training materials (computer-based training) are developed. GCOM has staffed the training team to complete development of these materials prior to the start of the Pilot Phase. During Pilot training, we extend the training roster to include both internal and external users. We also use pilot training to test and calibrate our overall roll-out training strategy and materials. In collaboration with State trainers, the GCOM training team will provide pilot training at State training locations. The state will be responsible for identify pilot users/offices that represent each user group (internal and external Users). Our pilot training will consist of 4 days of training at each location. Approximately 4 hours of training will be conducted per day. Pilot training will be delivered in a role based segments so that each segment can be targeted at one or more user groups. Our pilot training will employ a multi-channel strategy inclusive of instructor lead training sessions and computer-based training modules and assessments. Our pilot training will be schedule 2 weeks prior to the launch of the pilot. Pilot users training completion will be verified prior to being granted full user rights in the pilot system. GCOM will work with the State to determine if GCOM and the State will conduct pilot training at the two locations simultaneously or in successive weeks during the design and

SDLC Phase	Training Delivered by user group
	development of the training plan. Approximately 30 calendar days after the start of the pilot, GCOM and the State begin internal state worker end user system training. We recommend classroom training for state vital record office users and local administrators; centralized in State Training facility. We deliver this training using state trainers that are supported by the GCOM training team. End user training for state central office users and local administrators is delivered via two channels, classroom training and computer-based training (CBT) with assessments. Once an internal user completes the class room training, the user will be required to participate in a computer-based training module that reinforces the class room training and validates transfer of knowledge via an end of course assessment. For trainees that do not pass the CBT assessment, the trainees will be able to retake both the CBT and assessment until achieving a passing grade. This two-pronged approach will deliver internal users that are confident and capable in the new system – helping to promote it post implementation successful adoption, faster. Once local office administrator's users are trained and have passed the CBT assessment, local office users act as superusers at their local offices. Since it may not be feasible for all local office staff to attend live training, GCOM and the State will provide a schedule of Instructor Lead Web Based Trainings to deliver key system concepts and flows (organized into relevant vital record business process case flows) coupled with computer-based training and assessments that is tailored by user group. State vital record users will be required to complete both the instructor led web-based training component and the personalized/individual computer-based module before receiving access to the production system. Our proposed Moodel LMS (https://moodle.org/demo/) and our Vital Records Management Solution provide the tracking and system integration required to manage each user training requirements and successful completion; as well as ensure internal users complete training requirements prior to utilizing the new system.
Statewide Rollout and External User Training	For external system roles, GCOM training approach relies on computer-based training modules and assessment. Like internal users, external users will be tracked in the Moodel LMS and will be required to complete their personalized system training curriculum prior to gaining access to the. To supplement the computer training program for external users, GCOM will develop role-based instructor-based training, designed to be delivered via webinar, that can be used to supplement the CBT curriculum and used as a recurring opportunity for end users to ask questions and receive training assistance. External user instructor led training webinars will be delivered via state trainers and state provided web conferencing and teleconferencing tools. GCOM understand that end user training will be conducted on a rolling basis throughout the statewide roll-out of the new System. GCOM will provide support for the Moodle LMS and the instructor led training program throughout this period.

The following table lists training pre-requisites, success criteria, modalities, delivery methods and media to be used for each user group.

User Group	Pre-requisites	Success Criteria	Modalities and Delivery Method	Media
State Office **Help Desk Specialist**	Competency in Microsoft Windows and Web Based Applications	Users attend classroom-based training and complete a training assessment sheet.	Class room base training – instructor led.	Interactive computer-based training and

User Group	Pre-requisites	Success Criteria	Modalities and Delivery Method	Media
	Knowledge of Vital Records Management Processes and Policies commensurate with their planned system role.	Users complete a prescribed computer-based training curriculum and assessment that provides evidence of their readiness to use the new system in alignment with intended use.	Computer based training with assessments.	system simulations. Live training environment to support classroom training. User manuals and power point instructional presentations. Quick reference guides.
System Administrators	Competency in Microsoft Windows and Web Based Applications Knowledge with applicable NC State user management, privacy, and security policies.	System administrator attends Central Office Class Room Training. System administrator capability to provision and de-provision users during the UAT and Pilot support periods. System administrator demonstrates knowledge of State and system user provisioning policies.	Class room training (vital record office user curriculum to understand end user perspective) One on one knowledge transfer via event-based activities	Administrator manuals. On the job training.
County Office Administrative Staff	Competency in Microsoft Windows and Web Based Applications Knowledge of Vital Records Management Processes and Policies commensurate with their planned system role. Complete a train the trainer work shop so that local administrators can act as superusers, coaches and mentors at their local office.	Users attend classroom-based training and complete a training assessment sheet. Users complete a prescribed computer-based training curriculum and assessment that provides evidence of their readiness to use the new system in alignment with intended use. Attend train the trainer workshop via classroom.	Class room base training – instructor led. Computer based training with assessments	Interactive computer-based training and system simulations. Live training environment to support classroom training. User manuals and power point instructional presentations. Quick reference guides.
County Office vital records staff	Competency in Microsoft Windows and Web Based Applications	Users attend an instructor led webinars to receive generalized instruction and system navigation. Key end to end	Computer based training with assessments	Interactive computer-based training and system simulations.

User Group	Pre-requisites	Success Criteria	Modalities and Delivery Method	Media
	Knowledge of Vital Records Management Processes and Policies commensurate with their planned system role.	process flows will be reviewed and explained. Users complete a prescribed computer-based training curriculum and assessment that provides evidence of their readiness to use the new system in alignment with intended use. Local system administrators serve as coach, mentor and advocate for the new system providing how to type point instruction.	Webinars for additional instruction, questions and answers.	User manuals and power point instructional presentations. Quick reference guides.
External users/partners (Health care providers, Funeral Home Staff, Funeral Directors, Medical Examiners, Etc.)	Competency in Microsoft Windows and Web Based Applications Knowledge of Vital Records Management Processes and Policies commensurate with their planned system role.	The primary training modality is computer-based training. Each user will be required to complete training before being provisioned access to the system. Instructor led webinars will be designed to support the computer-based training curriculum; and provide opportunities for questions and answers	Computer based training with assessments Webinars for additional instruction, questions and answers.	Interactive computer-based training and system simulations. User manuals and power point instructional presentations. Quick reference guides.

The table below details GCOM approach to training delivery by user group in each phase of the project. We describe the number and frequency of trainings to be offered as part of our approach:

Project Phase	User Groups			
	State Office Users	County Administrators & users	System Administrators	External Users
Planning and Design	NA	NA	Knowledge transfer on system and user administration via event-based activities.	NA
Development	UAT Training for UAT Users, starts 2 weeks prior to UAT		On the job training via UAT and Pilot user setup	NA
Implementation – Pre-Pilot	Pilot training is conduct at state Training facility locations via classroom setting. Computer based training used to reinforce classroom training.			External users invited to participate in pilot receive classroom training as part of the pilot classroom training.

Project Phase	User Groups			
	State Office Users	County Administrators & users	System Administrators	External Users
Implementation – Pilot	Refresher or corrective training class via instructor lead webinars are conducted to align with pilot results. Webinars will be prescheduled and role bases. These sessions will also be used to collect pilot user feedback and answer pilot user questions.			
Implementation – Post Pilot, Pre-Production	State office staff will require training on most of the system use cases and business processes. In the pre-launch period, we use a combination of classroom training and computer-based training to train the State office staff. This training can be phased over a two to four-week period preceding go-live. Classroom training is delivered by state training staff with GCOM training team support. CBT training and assessment is used to confirm training effectiveness and end user readiness to utilize the new system. Local office staff will use CBT as the primary training vehicle, supplemented by instructor led web-based training and coaching/mentoring from office super users (local administrators that received full training during the UAT and Pilot phase).		NA	NA
Statewide Roll Out	NA	NA	NA	GCOM will support the CBT environment during the roll out period. This will enable the state to methodically orchestrate the onboarding of the various external users and facilities that participate in the vital records management process. We recommend that weekly or biweekly webinars be delivered by the state to supplement the CBT training curriculum throughout the statewide roll out period.

D3-11.1 Training Facility Requirements

The table below describes the training facility requirement.

Training Modality	Requirements	Responsible
Classroom Training	Modern classrooms outfitted with PC workstations are required for all class room training deliveries. PC workstations shall operate Windows 10 or above and have a Microsoft browser no more than 12 months old (as measured from the browser release date).	The state will provide classroom facilities for all classroom-based training.

	Training classrooms will have high speed access to the internet and have 25 workstations. GCOM anticipates that 25 learners will be allocated to each class.	
Instructor Led Web Based Training	State will provide web and telephone conference facilities for up-to 50 participants.	
Computer Based Training	State hosted environment. High speed, high bandwidth network connections that supports both internal and external users.	
GCOM Moodle LMS Environment	State hosted environment. High speed, high bandwidth network connections that supports both internal and external users.	
GCOM System Training Environment	An environment that is sized similar to the User Acceptance Training Environment.	Vendor or State hosted environment

D3-11.2 Refresher training strategy and end user help requirements

GCOM solution provides 1) an intuitive user experience, 2) a robust self-service online help facility and 3) an automated, self-service and accountable computer-based training program.

D3-11.3 Provide Role-Specific Training Materials

The table below presents the role-based training materials the will be delivered.

User Group	User Manual	Quick Reference Guide	Instructor Lead Webinar Materials	Computer Based Training Modules
Funeral Home Clerk	✓	✓	✓	✓
Funeral Director Medical	✓	✓	✓	✓
Birthing Facilities & Hospitals Data Entry Clerk Medical	✓	✓	✓	✓
Certifier Medical Examiner	✓	✓	✓	✓
County Staff	✓	✓	✓	✓
State Staff	✓	✓	✓	✓
County Administrator	✓	✓	✓	✓

User Group	User Manual	Quick Reference Guide	Instructor Lead Webinar Materials	Computer Based Training Modules
State System Administrator	✓	✓		✓

D3-12. Technical Question 12

Explain how the proposed solution manages work queues. Please explain the following:

If queues can be redirected from one individual to another. If so, how does this work? Do what degree can this function be individualized by: user; group of users; location?

If and how information in a queue can be sorted?

If filters can be applied to queues? If so, how does this work in the proposed solution? And is it configurable by user; group of users; or location?

Please limit your response to one (1) page.

D3-12.1 Management of work queues

Please refer to response to "D3-6. Technical Question 6" to understand how the proposed solution manages workflow and queue using its respective engines.

GCOM VRMS is queue centric workflow design that allows queue to be created for each workflow state and allow user to take desire action. Based on that concept, system allow to review case, approve, reject cases, issue certificate once it is registered and later public user or funeral home can place an order for death certificates. Each user can define its preferred queues out of queues assigned to his user role. Preferred queues are displayed on the dashboard for easy access.

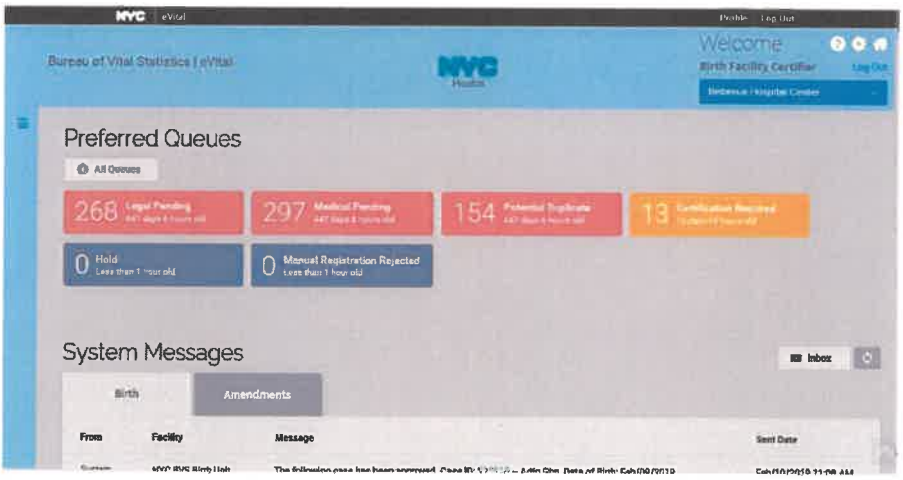


Figure 21 User Dashboard with listing of preferred queues

D3-12.2 Queues can be redirected from one individual to another.

This function is individualized by user; group of users; location as part of the workflow design.

D3-12.3 Applying Sorting and Filter to the queue

Following diagram depicts, GCOM VRMS feature to sort and filter data on any queue or search result on visible data columns.

Figure 22 Sorting and Filter to Queues or Search Results

Section 4 – Functional Response

GCOM team has carefully reviewed the Attachment D1, D2 and D3 to provide the response to each item. Please find below the summary of each attachment:

Attachment D1_Functional Specifications:

	E - Exact Match	W - Workflow or System Configuration Required	M - Modify	F - Future	N- Cannot Meet	Total
Accounting	90	90	0	20	0	200
Amendments	192	92	0	21	0	305
BDCM	36	14	0	9	0	59
Birth	133	77	0	28	0	238
Death	326	130	0	17	0	473
Death Extract	13	21	0	4	0	38
Delayed Birth	15	36	0	4	0	55
Fetal Death	12	48	0	2	0	62
Inventory	60	23	0	25	0	108
Issuance	195	216	0	13	0	424
ITOP	35	18	0	6	0	59
New User Setup	19	14	0	1	0	34
OOS	22	4	0	2	0	28
Paternity	9	66	0	1	0	76
Query and Rejection Cycle	26	16	0	4	0	46
Registration	72	84	0	11	0	167
Grand Total	**1255**	**949**	**0**	**168**	**0**	2372
%	53%	40%	0%	7%	0%	100%

Attachment D2_General System Specifications

	E - Exact match	W - Workflow or System Configuration Required	M - Modify	F - Future	N- Cannot Meet	Total
Count	552	319	0	83	3	957
%	58%	33%	5%	9%	0%	100%

Attachment D3_Forms Specifications for Addendum

	Yes	No	Total
Count	199	22	221
%	90%	10%	100%

Per the RFP requirement we have also provided the excel versions of Attachment D1, D2 and D3 in electronic format.

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR SETUP OF A NEW USER

The New User Setup Process automates the process of collecting user agreements and setting up the EVRS account as well as validating that the license for professional users exists and has not expired. The function to sign up as a new user is accessed from the State Vital Records webpage. If the user's job function does not require a professional license, once the personal information is complete, the new user signs the User Agreement. The shell of a new account is established in EVRS and the record is queued for the System Administrator to assign a Role and Profile and default password. If the user is a professional, the license number is required. The license number is used to immediately check the Professional Licenses Database to make sure the license exists and has not expired. If the license information is valid, the user finishes the process and the record is queued for the System Administrator. If the license is not valid, one of two things can happen: the application for the new user is placed in a queue for the State to manually validate with the professional licensing board, or the application is rejected.

Description: New user wishes to establish account (Box 1). New user accesses signup from State webpage (Box 2). New user fills in personal and job information (Box 3). Complete? (Box 4). If no, go back to Box 3.

A person wishing to become an electronic user of EVRS accesses the signup form from the State Vital Records webpage. The user completes the name and job information. Job functions are selected from a list. If the job function is associated with a professional license, the license number is a required field. The information entered is edited for completeness and consistency.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
NU-1	**Access Signup Function**	The new user signup function is accessed from the State Vital Records webpage.	***E - Exact Match***	
NU-2	**Information State Defined**	The information collected on the new user screen is State defined and consistent with the information stored in the EVRS User Account File.	***W - Workflow or System Configuration Required***	
NU-3	**Job Functions Module Specific**	The system allows job functions to be module specific.	***E - Exact Match***	
NU-4	**List for Job Functions**	The selection of the new user's job function is made from a list that includes the roles authorized for EVRS.	***E - Exact Match***	
NU-5	**Jobs Associated with License**	The system can distinguish which roles do and do not require a professional license.	***E - Exact Match***	
NU-6	**Professional License Number Required**	If a role requires a professional license, the license number is a required field.	***E - Exact Match***	

NU-7	**May be More Than One License Number**	In the case of funeral homes, the user enters a license number for the funeral home and also a license number for the funeral director.	***E - Exact Match***	
NU-8	**User Can Exit**	The system provides the new user with a way to exit without finishing the application.	***E - Exact Match***	
NU-9	**State Notified**	A message containing user identifying information is sent to the System Administrator when a new user aborts the application.	***W - Workflow or System Configuration Required***	
NU-10	**Information Not Saved**	If the user exits without finishing the application, no pending user account record is saved.	***W - Workflow or System Configuration Required***	

Description: Check Professional License Database (Box 5). License in order? (Box 6). If no, flag placed on record (Box 7). Queue for State review (Box 8).

The combination of the job function and the license number provides the information necessary to search the Professional License Database to determine if the license exists and if it is active. If the license is in order, the user proceeds to sign the User Agreement. If the license does not exist or has expired, the system places on flag on the application and the record is queued for the State to review.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
NU-11	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues		
NU-12	**Immediate Verification**	EVRS checks the Professional Licensing Database immediately to determine if the license is valid.	***W - Workflow or System Configuration Required***	
NU-13	**Combine Job Function and License Number**	EVRS determines the criteria for searching the Professional Licensing Database by combining the job function and license number.	***W - Workflow or System Configuration Required***	
NU-14	**License Exists**	To be valid, the license number must exist and be assigned to the user applying for a log on.	***W - Workflow or System Configuration Required***	
NU-15	**License Active**	To be valid, the license number must be active (not expired).	***E - Exact Match***	
NU-16	**License for Facility**	The funeral home establishment must have a valid license.	***E - Exact Match***	
NU-17	**Both Licenses in Order**	For the new funeral director account to be established, the funeral home license must be active and the funeral director license must be tied to that funeral home license.	***W - Workflow or System Configuration Required***	
NU-18	**License Problem**	If the license is not valid or not assigned to the individual applying for EVRS access, the system places a flag on the record.	***W - Workflow or System Configuration Required***	
NU-19	**Flagging Message**	The system provides the user with the reason that the application requires further review.	***W - Workflow or System Configuration Required***	
NU-20	**New User Application Review Queue**	If an application is flagged for review by the State, the application is placed in the New User Application Review Queue.	***E - Exact Match***	
NU-21	**Application Rejection**	If the license cannot be verified by the State, the system rejects the application.	***E - Exact Match***	
NU-22	**Rejection Message**	The system provides the user with the reason for the rejection and the recourse.	***E - Exact Match***	
NU-23	**Print Message**	The user can print the rejection message.	***E - Exact Match***	
NU-24	**No Account Record Started**	When an application is rejected, the record is not saved.	***E - Exact Match***	
NU-25	**Notify System Administrator**	A message is sent to the System Administrator of the attempt to create a user account.	***E - Exact Match***	
NU-26	**Message Includes Identification**	The message sent to the System Administrator includes the name and contact information for the person attempting to gain EVRS access.	***E - Exact Match***	
NU-27	**Messages Can be Sorted**	The messages sent to the System Administrator can be sorted and displayed in multiple state defined orders (e.g., by name, work address, license number).	***W - Workflow or System Configuration Required***	

Description: If the record is complete, new user signs User Agreement (Box 9). Signed? (Box 10) If no, go back to Box 9. If yes, System Administrator establishes new user account (Box 11). Queue for role assignment (Box 12). System Administrator completes setup (Box 13).

Once the user information is complete and valid, the user reads and attests that they understand and will abide by the User Agreement. Once the User Agreement has been signed, EVRS establishes a new account and attaches the signed User Agreement to the record. The record is queued for the appropriate System Administrator to set up the role/profile and default password.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
NU-28	**User Agreement Online**	The new user can read the entire User Agreement online.	***E - Exact Match***	
NU-29	**Auto-Populate User Agreement**	The User Agreement is auto-populated from the validated information entered by the user.	***W - Workflow or System Configuration Required***	
NU-30	**Attest to Understanding**	The system provides a mechanism for the user to attest that they understand and are willing to comply with the User Agreement.	***W - Workflow or System Configuration Required***	
NU-31	**Signature**	The system provides a method for the user to electronically sign the form with their signature.	***W - Workflow or System Configuration Required***	
NU-32	**Set Up Account**	The system uses the information entered by the new user to add a new record to the Account File.	***E - Exact Match***	
NU-33	**Attach User Agreement**	The signed User Agreement is attached to the new Account record.	***W - Workflow or System Configuration Required***	
NU-34	**Queue for System Administrator**	The system queues the record for the appropriate System Administrator who has responsibility for the facility where the new user works.	***E - Exact Match***	
NU-35	**Send Message After State Defined Time Period**	If the System Administrator has not assigned the role and profile within a State defined period of time, the system sends a reminder message to the System Administrator.	***F - Future***	Release Spring 2020

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined
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N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR ENTERING AND PROCESSING BIRTH RECORDS

NAPHSIS use case models were used as reference materials for the redesign of the State birth processes. Specific NAPHSIS use case models for starting a birth event include:

EBRS UC 001 v. 2.3 - Create BR for Live Birth
EBRS UC 002 v. 2.1 - Create Paternity Acknowledgement
EBRS UC 006 v. 2.4 - Update a Record
EBRS UC 005 v. 2.0 - Create Multiple Records for Plural Delivery
EBRS UC 010 v. 1.9 - Submit Record
EBRS UC 013 v. 2.3 - Create Delayed Birth Record
EBRS System Specification and Business Rules v. 10.0

BUSINESS PROCESS: START A BIRTH RECORD AT THE FACILITY (HOSPITAL OR BIRTHING FACILITY) OR MIDWIFE ATTENDING A BIRTH AT HOME

OVERVIEW OF THE PROCESS:

Records for births that occur at a hospital or birthing facility are started at the facility by logging into the EVRS system. Minimum demographic information to start a case is entered. The system checks for a match to an existing record in the EVRS database. Potential record matches are reviewed by the user and if a record from the list is found to be a match, the record is retrieved. If no match is found in the EVRS, the system automatically checks the Health Exchange to find a match. If a match is found, the user reviews the information and decides whether to accept the data into EVRS. If yes, a new EVRS record is created and the user makes additions and modifications as necessary based on the parent or facility worksheets. If no match exists in EVRS or in the Health Exchange, a new record is created in EVRS.

As part of the search process, the system searches for and retrieves any data for the mother from the health exchange. This information is dropped into the record and presented as a possible match to the search. If the users selects this record, they have the ability to validate and change the information as needed in order to complete the record. If the birth clerk determines that the Health Exchange data is not a match, the data is not retained in the EVRS. EVRS does not change the data in the Health Exchange database.

If the birth is a plural birth, the user creates a new record for each baby. User defined medical and demographic data common to all babies auto populates from the first plural birth record entered in the system to second plural birth record, and so on. This information includes both the mother and father's or second mother's information as well as the medical information related to the pregnancy. Auto population occurs for the number of babies born as part of the plural birth. Plural births are automatically linked by the system and common information is auto-populated by the system.

The system provides a variety of methods by which a mother and father may complete a paternity acknowledgement. The first method is that the system user may access the paternity acknowledgement fields in the record directly through a tablet or mobile device. The user will complete the fields with each parent. Upon completion of this portion of the record, the system will auto generate a "form" that the parents will review on the tablet and then sign electronically before the user who is a notary. The user will then notarize the paternity acknowledgement through integration with ENotary software. The notarization information is attached to the electronic birth record. The second method is to complete the paternity fields in the system, auto-generate the paternity form, and then print it out for the parent to physically sign. The notary then notarizes the paper document manually and scans and attaches the form to the birth record. Finally, the paternity may be completed electronically, signed electronically by the parents, and then printed and notarized by the notary. The notarized form is then scanned and attached to the record.

Once the record is complete, the Parents' Verification Report can be printed out of the system and reviewed by the parents. If there are errors on the report, the user accesses the record in the system and corrects the information. The user may print a new report for the parents to review. Once the facility determines that the information is correct, the signed verification form, the mother's worksheet, and the facility worksheet are scanned and attached to the record. Upon submission, the record is registered with both a local file number and a state file number.

Births that occur away from a hospital or birthing facility (e.g. home births) may also be reported electronically if attending medical personnel have been granted access to the system. The state will have the ability to data enter home births. As an example, certified midwives who deliver a large number of babies may be granted system access to report births just as if they were in a hospital or birthing facility.

When a mother calls the State office to request a Home Birth Packet, the mother's information is entered into the system and a pre-registration may be started. This is done for tracking purposes by the State.

The State treats Abandoned Infants, Foundlings and Safe Haven cases as one record type; the user has the option of selecting an Abandoned/Safe Haven case when starting the record. The fields are the same as a normal birth record; the edits are minimal and are user-defined.

Description: Birth event occurs at a facility or with a licensed midwife (Box 1). Birth clerk enters minimum information (Box 2).

A system user wishes to initiate a birth record. This can occur as part of pre-registration, after the birth, or any time in between the two events. The user logs onto the system and enters a state defined minimum data set to search for a record. The system first checks the EVRS database to look for a matching record. If a match exists, the record is opened for the user to review and modify. If no match is found, the system sends a request to the Health Exchange. If a match is found, the data is displayed for the user to decide whether or not to use it to create a record in EVRS. If no match is found in EVRS or the Health Exchange, or if the matching record is rejected by the user, a new record is started in EVRS.

If necessary, the user may print a blank parent or facility worksheet from the system to collect the birth information.
The system has various queues available and facilities are able to display the status of records for their facility by status. The queues are in place to assist users with identifying records that need attention. For example, pending queues list the records that have been started and still need to be completed and sent to registration. Records that are more than seven (7) days old and have not been submitted for registration move to the Overdue queue. A pop up message will alert facilities to records that are in the Past Due queue when the user logs on to the system. Facilities that want to review records before they are submitted to the state have an Administrative Review queue that lists the records waiting for final approval.

For records that are submitted to the State but rejected back to the hospital, the system lists these records in the Rejected Records queue.

	Business Rule Name	Business Rule Description	Vendor Response	
B1	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
B2	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
B3	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		

B4	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
B5	Pending Queue	The system allows users to save a record as pending so that they may come back to the record and finish it later. The record is saved in a "Pending" queue.	E - Exact	
B6	Notarization Queue	The system provides a queue to display birth records with paternities that are scheduled to be notarized, including who is scheduled to perform the notarization and the date, time and location.	E - Exact	
B7	Reminder Queue	The system provides a Reminder Queue. This queue contains records that are (3) or more days old and have not been submitted to the state.	W - Workflow or System Configuration Required	
B8	Overdue Queue	The hospital user has the ability to view a queue of birth records over seven (7) days old that have not been submitted to the state.	W - Workflow or System Configuration Required	
B9	Administrative Overdue Queue	For larger hospitals, the system provides an Administrator Overdue Queue for records over seven (7) days old.	W - Workflow or System Configuration Required	
B10	Administrative Review Queue	For those hospitals wishing to review records prior to submitting to the State there is an Administrative Review queue.	E - Exact	
B11	Rejected Records Queue	The system provides a Rejected Records queue. This queue contains records rejected by the State back to the facility for further action/clarification.	E - Exact	
B12	Display Records By Status	The facility has the ability to display all of its own records for the facility by status.	E - Exact	
B13	Past Due Pop Up Message	When a facility user logs on, the system will provide a pop up message indicating that there are records that are over three (3) days old. The message will remind the user of the statutory requirement to submit records within seven (7) days of birth	W - Workflow or System Configuration Required	
B14	Rejected Records Pop Up Message	When a facility user logs on, the system will provide a pop up message indicating that there are rejected records that need to be reviewed.	W - Workflow or System Configuration Required	
B15	Parent Worksheet	The system provides a worksheet to capture the parent information.	E - Exact	
B16	Facility Worksheet	The system provides a worksheet to capture facility information about the birth.	E - Exact	
B17	Worksheets Print From System	Both the parent and the facility worksheets may be printed from the system	E - Exact	
B18	Standard Birth Worksheets Available in Multiple Languages	The system provides the parent worksheet in English and Spanish.	F - Future	Release Spring 2020
B19	Worksheet Configurable	The parent worksheet can be configured by the State to add a version in a new language, should it be needed in the future	F - Future	Release Spring 2020
B20	Pre-Registration	The system allows the user to begin the record during the hospital pre-registration process.	E - Exact	
B21	Pre-Registration Data Limited	Data captured in the EVRS during pre-registration is limited to parent information.	E - Exact	
B22	Birth Record Search	When a facility user searches for birth records, they are allowed to see records that were started during pre-registration at other facilities.	F - Future	Release Spring 2020
B23	Birth Record Transfer	The system provides the ability to transfer a birth record that was started during pre-registration from one facility to another facility without contacting the originating facility.	F - Future	Release Spring 2020

Description: Found? (Box 3). If no, search Health Exchange. for matching record (Box 5). Found? (Box 6). If yes, display demographic information from Health Exchange (Box 7). Correct Mother? (Box 8). If yes, start birth record in EVRS using demographic info from Health Exchange (Box 9).

To avoid creation of duplicate records, the system always searches for a matching record prior to starting a new record. The system first checks the EVRS database to look for a matching record. If a match exists, the record is opened for the user to review and modify. If no match is found in EVRS and if the birth has already occurred, the system sends a request to the Health Exchange. If a match is found, the data is displayed for the user to decide whether or not to use it to create a record in EVRS. If no match is found in EVRS or the Health Exchange or if the matching record is rejected by the user, a new record is started in EVRS.

Potential matches in EVRS are displayed in a summary list format with the most likely match displayed first. The user reviews the records identified and determines if a match has been found. If yes, the user selects the record. The system authenticates the user and the record ownership to determine if the user has rights to the record. If the user does have rights, the system prompts the user to work in the existing record. If the user does not have rights to work in the record, the system displays a message to the user indicating that s/he does not have ownership rights and to contact the current owner of the record or the State. Access to the record is denied.

In the case of a plural delivery, the system displays the linked records in the system and allows the user to add records to this set of linked records. A unique new record is created for each baby. Common medical and demographic information auto populates from the first plural birth entered in the system to second plural birth, and so on. Unique data for each child is entered manually. Plural births are automatically linked by the system. If the plural delivery included a fetal death, the system allows the user to add a fetal death record and link it to the corresponding plural birth records.

	Business Rule Name	Business Rule Description	Vendor Response	
B24	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
B25	State Defined Minimum Information to Start a Case After Birth	The minimum information used to start a case after a birth is State defined and different from the minimum information used to start a case before the birth. It is currently envisioned to include, but is not limited to, mother's name, mother's maiden name, mother's date of birth, baby's date of birth, and time of birth.	E - Exact	
B26	Search on Birth and Fetal Death	The system searches both fetal death and birth records within the entire database to determine potential matches.	E - Exact	
B27	Check EVRS First	The system uses the search information entered by the user to search for an existing record in EVRS.	E - Exact	
B28	Display Possible Matches	If the EVRS search finds potential matches, they are displayed to the user in a list format.	E - Exact	
B29	Order of Matches	The list of potential matches is ordered from most to least likely match.	E - Exact	
B30	Limit Search	If the results of a search contain records from outside the facility, the user is prevented from opening the record.	E - Exact	
B31	Record Outside the Facility Doing the Search	If the results of a search contain records from outside the facility, the system issues a message to the user asking the user to call the facility listed on the record.	F - Future	Release Spring 2020
B32	Open Records from List	The system allows the user to open and view potential matches from the summary list without losing the original search results	E - Exact	
B33	Return to Summary List Screen	The system provides an easy way to disregard the opened record and return to the summary list.	E - Exact	
B34	Continue Work	The system provides an easy way for the user to accept the opened record and begin working in it	E - Exact	
B35	Check Health Exchange	If the system does not find a match, the EVRS sends a request to the Health Exchange to see if there's a match.	F - Future	Release Spring 2020
B36	Multiple Health Exchange Searches	If no match is found, the user can request additional searches of the Health Exchange by altering the search criteria	F - Future	Release Spring 2020
B37	Record Found in Health Exchange	If a match is found in the Health Exchange, the EVRS presents the data to the user for review	F - Future	Release Spring 2020
B38	Add Record to EVRS	The system provides the user with a method to specify that the data returned from the Health Exchange should be used to create a record in EVRS.	F - Future	Release Spring 2020

B39	Reject Record from Health Exchange	The system provides the user with a method to reject the data from the Health Exchange.	F - Future	Release Spring 2020
B40	No Match Found	If no match exists in EVRS or the Health Exchange, a new record is created in EVRS using the data entered in the search.	E - Exact	
B41	Source Identified	Every data field in the EVRS record that was supplied by the Health Exchange is identified as originating from the Health Exchange.	F - Future	Release Spring 2020
B42	Linkage Search for Plural Delivery	When the system searches for records that need to be linked for a plural delivery, the system searches all facilities within the State as the Mother may have given birth in one facility and then been transferred to another where the remaining babies were delivered.	W - Workflow or System Configuration Required	
B43	Plural Delivery - Match from Another Hospital	If, in the linkage process, the system finds a record related to a plural delivery that was created by another facility than the one linking the records, that record retains the originating facility information	F - Future	Release Spring 2020
B44	Unlinked Plural Deliveries	The system flags unlinked plural deliveries so that they may later be linked by the State.	E - Exact	
B45	Use Plurality to Test Number of Linked Events	The system uses the plurality number entered in the birth record to edit and control the number of birth and/or fetal death records that are linked.	E - Exact	
B46	Message for Unlinked Plural Deliveries	The system includes a mechanism to remind users (message, indicator, queue) that additional birth records that may still be due. Message is issued if user uses plurality functions.	E - Exact	
B47	Potential Match is Part of Plural Delivery	If the search returns a match that is one record of a plural delivery, the system provides an option to add another record to the plural delivery.	E - Exact	
B48	Plural Delivery Confirmation	The system seeks an actionable confirmation from the user before starting the new record for a plural birth.	E - Exact	
B49	System Automatically Links Plural Deliveries	The system automatically links the individual records in a plural delivery.	E - Exact	
B50	Linkage Number for Plural Deliveries	A system generated linkage number is applied to all the records of a plural delivery	E - Exact	
B51	Linkage Number Indicates Birth Order	The system generated linkage number is the same for all records within one delivery, plus an indicator of the birth order for each record.	E - Exact	
B52	Linkage Number Included in Statistical Extract.	The system generated linkage number is included in the statistical extract	E - Exact	

Description: If no information was found in the Health Exchange, create new birth record in EVRS (Box 10). If an existing record was found in EVRS, it means someone had already started the record and the clerk can add additional information to the record (Box 4). Enter and edit data (Box 11).

If a match is found in EVRS, it means that someone has already started the birth record and the record is displayed for additional data entry or review. If a match is found in the Health Exchange, the information is displayed for the clerk to review and, if accepted, the new EVRS record is populated with the data received from the Health Exchange. If a match is not found in EVRS or the Health Exchange, a new record is created using the search information entered by the user. Screens specific to a birth record appear and the user enters the information for the birth or modifies data from the Health Exchange. Certain fields related to the user's identified location will automatically populate, such as the facility identifying number, the entire physical address, and the county/census area

If the birth is a plural delivery and the user has selected this type of birth, the system automatically copies over relevant information from the plural delivery to the next record that is created. The system allows for both live and fetal deaths in a plural birth.

Users are able to directly enter birth data information into the system using hand held devices. The system will search the Health Exchange to determine if data is available to populate the record. Once the data is transferred and/or entered by the user the record is saved for future access and editing.

If a user accidently creates a record using an incorrect event type, this can be corrected without losing the information that has been entered in the system. The ability to make a change to an event type is determined by a user's role. For example, if a user starts a live birth record when the record should actually be a fetal death record, the event type can be changed without losing the relevant data already entered.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	
B53	Screens Specific to Type of Birth Event to be Started	The screens are specific to the type of birth event to be started in the system by the facility for example: live birth, abandoned infant/Safe Haven, home birth.	E - Exact	
B54	Include Facility Number	The system automatically populates the record with the corresponding facility number, physical address, city, zip code and county/census area.	E - Exact	
B55	Include Child's Medical Record Number	The system allows the user to enter the child's medical record number into the birth record.	E - Exact	
B56	Clone Plural Delivery Information	The system automatically copies over, or clones, the relevant information on the plural delivery to the next record being created.	E - Exact	
B57	Plural Deliveries Accommodate Both Live Birth and Fetal Death	In plural deliveries, the system accommodates both live births and fetal deaths (e.g. all live, all fetal death, and combination).	E - Exact	
B58	Hand-Held Device to Create Record in Patient's Room	The system provides the capability for a system user to use a hand held device to enter/edit the birth data directly into the system, bypassing the need for a worksheet. The record can then be saved for future access and editing.	E - Exact	
B59	Check Health Exchange When Using Hand Held Device	The system will check the Health Exchange for existing data to start the record when a hand-held device is used.	F - Future	Release Spring 2020
B60	SSA Electronic Signature for Hand-Held Records	For records entered with a handheld device, the system must capture an electronic signature for SSA for attesting to the accuracy of the information entered.	E - Exact	
B61	Convert One Event to Another	The system may allow the user, depending on user role, to change the type of event being created without losing the information already entered into the system. For example: if a hospital clerk accidently starts a birth record rather than a fetal death record, the system may allow the user to change the type of event being created without losing the data already entered.	F - Future	Release Spring 2020

Description: Side by side comparison of prenatal and mother's delivery info (Box 12). Select fields to update (Box 13).

For all birth records, the tabs/screens follow the same order as the parent and facility birth worksheets. The user is able to come back and open a saved record to complete the data entry as many times as needed to complete the record

The system will automatically check for State defined soft edits and alert the user when found. When a user selects "unknown" for a field, they are asked to enter a comment for that value before proceeding. If a mother chooses to not provide details for any of the fields, the system allows the user to indicate that the mother has refused to provide the requested information. The system asks the user to double key identified sensitive birth data for specific State-defined birth fields such as date of birth, sex of child, and mother's maiden name.

If the parents request a Social Security Number (SSN) for the baby, specific information is required, including the baby first and last name, mothers' name, city of birth, mailing address, city, state and zip code. For out of state births, the system does not request a SSN.

The baby's last name can be changed until a paternity acknowledgement is indicated as signed. Once this is indicated, the fields for baby's last name lock and cannot be changed.

In the case of a plural birth, the user creates a new record for each baby. Defined medical and demographic information auto populates from the first plural birth entered in the system to second plural birth, and so on. This information includes parent information as well as medical information related to the pregnancy. Demographic and medical information specific to each child born is entered. Auto population occurs for as many babies are born as part of the plural birth. Plural births are automatically linked by the system and common information is auto-populated by the system. All records associated with the plural birth are linked and can be easily displayed together. If the plural birth includes a fetal death, the systems allows the user to enter this record and link it to the other records associated with the plural birth.

Changes can be made by the user until submitted for registration. This includes an increase or decrease in the number of births or fetal deaths associated with the plural birth. If one or more of the linked records have been submitted for registration and an update is made to one of the records that has not been submitted for registration, the state is notified that an amendment may be needed on a submitted plural record

For births that occur on the way to a facility, the record is entered as if the birth occurred at the facility. The user is prompted to enter the physical location of the birth in this type of record and the record is flagged as a birth outside a facility, though no indicator is printed on the certificate.

If a birth occurs somewhere else and the baby is brought to a facility; the facility is only responsible for filing if the infant is determined to be a newborn (24 hours) and has been brought to the facility immediately following birth. Records for infants over 24 hours old follow the process of Unattended Home Birth

The user will have the option of selecting Abandoned Infants, Safe Haven, or For Adoption Only when starting the record. The fields are the same as a normal birth record and are all available, though not required, to be completed by the user. The edits are minimal and are user-defined.

For Immunization, the record captures whether the Hep B shot was administered and includes the date and time of administration, manufacturer (pick list), lot number, and expiration date. The tab/screen also captures if HBIG was administered, including the date and time of administration and dose, as well as other State defined immunization information. The record can be submitted to the State prior to the completion of the Immunization tab/screen and this tab/screen can be filled in later. If the record has been released to the State prior to the completion of the Immunization tab/screen, all other screens are locked and are read-only. Once the immunization tab/screen is completed, the fields are locked.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
General Rules for All Births				
B92	**Enumeration Extract**	Please refer to General Requirements, section CC Specific Exports and Imports.		
B93	**Screen Layout**	The tabs/screens in the system match the layout of the parent and facility birth worksheets to facilitate data entry.	***E - Exact***	
B94	**User Able to Access Record Multiple Times**	The user is able to display and edit the record as many times as needed for the facility to enter all the data.	***E - Exact***	
B95	**Soft Edits State Defined**	All soft edits are state defined by the State.	***E - Exact***	
B96	**Edits for Syphilis and Ophthalmia Neonatorum**	The system provides state edits for syphilis checks and ophthalmia neonatorum checks.	***W - Workflow or System Configuration Required***	GCOM VRMS list is configurable.
B97	**State Defined List of Birth Defects**	In addition to the standard 2003 birth certificate medical information, WV also captures a State defined list of birth defects.	***W - Workflow or System Configuration Required***	GCOM VRMS list is configurable.
B98	**Edits for Birth Defects**	The system provides State defined edits for a State defined list of reportable birth defects.	***W - Workflow or System Configuration Required***	GCOM VRMS list is configurable.
B99	**Soft Edit on "Unknown"**	Soft edits for "unknown" values are state defined by the State.	***E - Exact***	
B70	**Comment Field for "Unknown"**	The system provides the user with a soft edit message requesting that they enter a comment for the "unknown" value before proceeding.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B71	**Facility Timeline for Entering Birth Record**	Facilities may enter a birth record for a baby born at the facility within one year of birth.	***E - Exact***	
B72	**Mother Refused to Provide Information**	The system provides an option to indicate that the mother refused to provide the information for any given field.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B73	**SSN Override**	SSN for both parents is a soft edit and does not stop filing of the birth record.	***E - Exact***	
B74	**Confirm Sensitive Birth Fields**	The system asks the user to double key specific birth fields. Data is State defined.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B75	**Court Order Indicator for Surrogacy**	The system has a checkbox to indicate whether intended surrogate parents have obtained a Court Order at the time of birth.	***E - Exact***	
B76	**Attach Court Order**	If the checkbox is selected, the system prompts the user to attach the court order to the record.	***W - Workflow or System Configuration Required***	GCOM VRMS validation rules are configurable.
B77	**Intention to File Court Order**	The system has a checkbox to indicate if the intended parents have not yet obtained a court order at the time of birth, but intend to do so.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B78	**Surrogacy Intended Parents Field**	If checkbox for intention to file a court order is selected, a field opens for the facility to input the intended parent's information on the birth record. This information does not print on the birth certificate until the court order is attached to the record. The intended parent information that is captured is State defined.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B79	**Surrogate Birth Without Court Order Flagged for Adoption**	In the event of a surrogate birth, if a court order has not been obtained by the intended parents at the time of birth, the birth record is flagged as "For Adoption Only"	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B80	**Check Box for Intention to Obtain Surrogacy Court Order**	If checkbox for intention to submit a court order is selected, the system sends the certificate into pending queue.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B81	**Lock Father's Fields If No Court Order**	If court order checkbox is not selected, father's fields are locked and only birth mother's information may be entered.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B82	**Unlock Father's Fields if PAF is Filed**	The system provides a checkbox to indicate that a PAF has been filed for surrogate baby, which unlocks the father's fields in the birth record.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B83	**Scan Surrogacy Court Order**	System allows user to scan and attach court order to birth record that is a surrogacy case.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B84	**Court Orders for Surrogacy from WV Courts Only**	If the court order was not from a WV court, the surrogacy cannot proceed. The system flags the record and places it in a pending queue for review prior to registration.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B85	**Surrogacy Queue**	Any record that is a surrogate case goes into a Surrogacy queue for review prior to registration, regardless of pending status.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B86	**Request SSN for Baby**	The system provides a Yes/No dropdown option for the user to select whether the parents are requesting a SSN for the baby.	***E - Exact***	
B87	**Hard Edit on SSN Request**	The record cannot be submitted without a Yes/No selection for the SSN of the baby.	***E - Exact***	
B88	**SSN Request on Out-of-State Birth**	The system does not request a SSN for an out-of-state birth record.	***E - Exact***	
B89	**Changes to Record**	Any field in the record can be changed until the record is marked as signed.	***E - Exact***	
B91	**Lock Fields**	The system limits the user's ability to change specific State defined fields after a paternity acknowledgement has been signed.	***E - Exact***	
B92	**Lock Print Screen Option**	The ability for a user to use the print screen function is defined by the State.	***E - Exact***	
B93	**For Adoption Only Indicator**	The system provides an indicator that a mother has given birth at a facility but intends to put the baby up for adoption.	***E - Exact***	
Additional Rules for Surrogacy				
B94	**Surrogacy Indicator**	The system has a separate screen within the birth record for surrogacy.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B95	**Birth Mother's Medical Information**	The system captures the medical information of the birth mother.	***E - Exact***	
B96	**Names of Intended Parents**	The system provides fields for the facility to input the intended parent's information on the birth record. This information that is captured is State-defined and does not print on the birth certificate unless a court order is attached to the record.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B97	**Attach Court Order**	The system prompts the user to attach the court order to the record.	***W - Workflow or System Configuration Required***	GCOM VRMS validation rules are configurable.
B98	**WV Courts Only**	The system provides a method to indicate whether the court order was issued by a WV court. If it was not a WV court, the system flags the record and places it in a pending queue for review prior to registration.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
B99	**Intention to File Court Order**	The system has a method for the user to indicate that the intended parents have intentions to obtain a court order but have not yet done so at the time of birth. This sends the record into a pending queue.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.

B100	PAF screens	The system allows the biological father to establish paternity through an Affidavit of Paternity	E - Exact	
B101	Attach PAF	The system allows the user to scan and attach the notarized PAF form to the record.	E - Exact	
B102	Surrogate Birth Without Court Order Flagged for Adoption	If the intended parents have no intentions to obtain a court order, the birth record is flagged as "For Adoption Only."	E - Exact	
B103	Surrogacy Queue	All surrogate records will be sent to a Surrogacy queue for review prior to registration, regardless of the record's pending status.	W - Workflow or System Configuration Required	GCOM VRMS workflow queue can be configured
Additional Rules for Plural Delivery				
B104	Plural Delivery Has Own Set of Screens	set of screens related to updating each individual record in the plural delivery with information such as date of birth.	E - Exact	
B105	Plural Delivery - Display All Outcomes	In a plural delivery, the system makes it easy to display all the records (birth, fetal death) associated with the plural delivery together.	E - Exact	
B106	Type of Plurality	The system allows user to change type of plurality (live / fetal death).	E - Exact	
B107	Plural Delivery Common Fields State Defined	The state defines which fields are considered common fields in a plural delivery that auto populate all remaining records in the plural delivery after the first record has been entered.	E - Exact	
B108	Decrease Plurality of Delivery	If the user needs to decrease the plurality of the delivery, the system displays the list of linked records based on the original plurality of delivery and the user chooses for deletion as many records from the list as the difference in the original and new plurality of delivery.	E - Exact	
B109	Increase Plurality of Delivery	If the user chooses to increase the plurality of delivery, the system displays the existing linked records.	E - Exact	
B110	Confirm Increase/Decrease Number of Plurality in Delivery	The system asks the user to confirm the addition or deletion of records.	E - Exact	
B111	Prompt User to Enter Number of Live Births and Fetal Deaths	The system prompts the user to enter the number of live births and fetal deaths in the plural delivery	E - Exact	
B112	Fetal Death	The system provides an easy way to create and link a fetal death record for a fetal death that is part of a plural delivery.	E - Exact	
B113	Updating Information on Linked Records	The system allows the user to update information on linked records that have not been submitted for registration.	E - Exact	
B114	Send Notification to State on Linked Record Update	If some of the linked records have already been submitted while others have not, and common information is changed on those not submitted, the system automatically sends a notification to the state indicating that an amendment may be needed on the records already submitted	F - Future	Release Spring 2020
Additional Rules for In Transit / Born Outside a Facility Birth				
B115	Child Born In Transit	If a child is born while enroute to a facility and not removed from the moving conveyance, the hospital processes the birth record as if the child were born within the physical hospital/birthing facility building. The hospital is listed as the physical location of birth.	E - Exact	
B116	Display "En Route"	The record displays "En Route" to express that the child was born in transit in order to facilitate statistical analysis of birth.	W - Workflow or System Configuration Required	
B117	Removed from Conveyance	If the mother/baby is removed from the conveyance, the birth is recorded where they were first removed.	E - Exact	
B118	Born Outside Facility	The system provides a "Born Outside a Facility" checkbox for a user to indicate when a child is born en route to a medical facility. This opens address fields for the user to enter the physical place of birth. The child's birthplace is entered as the first place they are removed from the moving conveyance I.E. "mile marker 23" or "123 main St." etc.	E - Exact	
B119	No Printed Indicator of Born Outside Facility Birth	The birth record is flagged in the system as a "Born Outside a Facility" birth, but no indicator is printed on the face of the certificate.	E - Exact	
B120	Child Born Outside Facility Then Brought to Facility	In the case where a child is born outside of a facility and then transported to a medical facility, the facility is responsible for completing the birth record.	E - Exact	
B121	Unattended Home Birth	The system provides an "Unattended Home Birth" checkbox for a user to indicate when a child is born at home. This opens state defined fields so that the user may enter the location of the unattended home birth.	E - Exact	
B122	Must Be Born Within One (1) Year	The system does not allow a facility to enter a birth record for an infant over one (1) year old.	E - Exact	
B123	Delayed Birth After One (1) Year	If a facility attempts to start a birth record for a infant after one (1) year from the date of birth, the system alerts the user that a delayed certificate of birth is required and must be filed with the State, and prevents the user from starting the record.	E - Exact	
Additional Rules for Foundling Infants				
B124	Foundling Infant Record	The facility has the option to start a birth record for a foundling infant. Edits are relaxed to allow for blank fields and/or "unknown" to be entered in the field for information not needed/not available.	E - Exact	
B125	Separate Foundling Infant Screen	Reports of foundling infant are entered on a separate set of screens specifically designed for data entry of foundling infant information.	E - Exact	
B126	Parental Information for Foundling Infant	The user has the option to indicate a baby as a Foundling infant and that no mother is present. The system does not display the screens that do not apply such as parental information and mother's medical information.	E - Exact	
B127	Mother May Give Limited Information	The user has the option to indicate a baby as a Foundling infant and that limited information is available from the mother. The system display all the tabs for parental information and mother's medical information but the edits are relaxed.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B128	Edits of Foundling Infant Record	The foundling infant record edits are distinct from those of a regular birth record.	E - Exact	
B129	Foundling Infant Medical Record Number	The system requires the user to enter the child's medical record number in the foundling infant record.	E - Exact	
B130	Signature on Foundling Infant Records	Signature on foundling infant records require three signatures; that of the birth clerk, and two signatures from Child Protective Services (case worker and the supervisor).	W - Workflow or System Configuration Required	GCOM VRMS navigations are configurable.
B131	State Creates Foundling Infant Record	The system provides the capability for the State to create the Foundling infant record of live birth using the same screens as a facility would use.	E - Exact	
B132	Foundling Infant Record at State	If the foundling infant record is started at the State, the system captures information regarding supporting documentation.	E - Exact	
B133	Foundling Infant Signature at State	Foundling infant records started at the State only require one electronic signature by a vital statistics employee from the State. That user is State defined.	E - Exact	
B134	Foundling Infant "Unknown" Responses	Unknown responses for foundling infant records do not require the user to enter comments into the record.	E - Exact	
B135	SSN Request for Foundling Infant	The system does not generate a request for SSN for a foundling infant record. The field to request a SSN is greyed out/looked.	E - Exact	
B136	Void Foundling Infant Record	The State has the ability to void an foundling infant record.	E - Exact	
Additional Rules for Safe Haven Cases				

B137	Safe Haven Record	The facility has the option to start a birth record for a Safe Haven case.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B138	Screens for Safe Haven Cases	The user selects the option to enter a Safe Haven case; the system displays all birth screens including parental information and mother's medical information but information is optional and not required to be submitted.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B139	Edits of Safe Haven Cases	The Safe Haven record edits are distinct from those of a regular birth record.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B140	Safe Haven Case Medical Record Number	The system requires the user to enter the child's medical record number in the Safe Haven record	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B141	Signature on Safe Haven Records	Signature on Safe Haven records require three signatures; that of the birth clerk and a second and third approver as defined by the State.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B142	State Creates Safe Haven Record	The system provides the capability for the State to create the birth record for a Safe Haven case.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B143	Safe Haven Record at State	If the Safe Haven record is started at the State, the system captures information regarding supporting documentation.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B144	Safe Haven Signature at State	Safe Haven records started at the State only require one electronic signature by a vital statistics employee from the State.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B145	Safe Haven "Unknown" Responses	Unknown responses for Safe Haven records do not require the user to enter comments into the record.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B146	SSN Request for Safe Haven Cases	The system does not generate a request for SSN for a Safe Haven record. The field to request a SSN is greyed out/locked.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B147	Void Safe Haven Record	The State has the ability to void a Safe Haven record.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B148	Convert Birth Record to Safe Haven	A birth record can be converted to a Safe Haven record only by the State.	F - Future	Release Spring 2020
B149	Remove Mother Demographic Information	If a birth record is converted to a Safe Haven record, the mother's demographic information is retained in the system but restricted from being printed on the birth certificate. Restricted fields may include, but are not limited to, Name, SSN, and other State-defined data.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B150	Preserve Mother's Medical Information on Safe Haven Records	For birth records that have been converted to Safe Haven records, the mother's medical information is preserved but restricted from being printed on the birth certificate.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable
B151	Restrict Mother's Demographic Information	The mother's demographic information may only be accessed by an authorized user based on profile and role. Restricted fields may include, but are not limited to, Name, SSN, and other State defined data.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B152	Extraction of Mother's Demographic Information	Only State defined fields from the Mother's demographic information will be extracted for statistical reporting.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B153	Extraction of Mother's Medical Information	The system allows mother's medical information to be extracted for statistical reporting.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B154	Administrative Hold Queue	The system sends all Safe Haven records into an Administrative Hold queue that can only be accessed by an authorized user based on profile and role.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
Additional Rules for a Midwife Entering a Home Birth Record				
B155	Midwife Birth	User is prompted to select whether the home birth was attended by a midwife.	E - Exact	
B156	Notation for "Home Birth" in Record	The birth record is flagged as a home birth, but no indicator is printed on the face of the certificate	E - Exact	
B157	Midwife Records Do Not Automatically Register	Records entered by a Midwife for a home birth do not automatically register and must be reviewed and approved by the State.	E - Exact	
Additional Rules for Immunization and Newborn Screening				
B158	Immunization Alert	The EVRS alerts the users to start a vaccine record when birth record is started.	E - Exact	
B159	Immunization Fields to Be Captured	Fields to be captured on Immunization tab/screen include those on the 2003 standard birth certificate. In addition, WV also captures fields including, but not limited to: if Hep B shot was administered, including date & time of administration, manufacturer (pick list), lot #, and expiration date of vaccine; if HBIG was administered, including date and time of administration and dose, manufacturer (pick list), and lot #; if mother was tested for syphilis while pregnant, name of the lab that performed testing whether or not eye prophylaxis was administered, and if it was administered capture date of administration and what medication was used.	E - Exact	
B160	Not Required for Submitting Record	The birth record may be submitted to the State without the completion of the Immunization tab/screen.	E - Exact	
B161	Can Be Added Later	The fields for the Immunization tab/screen may be populated after the record is submitted to State.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B162	Immunization Fields Open and All Other Tabs/Screens Lock	The fields on the Immunization tab/screen remain open until populated and all other tabs/screens are locked once submitted to the State	W - Workflow or System Configuration Required	GCOM VRMS navigations are configurable.
B163	Immunization Fields Lock	The fields on the Immunization tab/screen lock once submitted to the state.	E - Exact	
B164	Newborn Screening Indicator	The EVRS provides a yes or no indicator for whether or not Newborn Screening has occurred.	E - Exact	
B165	Newborn Screening Number	The EVRS provides the ability to enter the Newborn Screening number into the birth record.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B166	Mother's Waiver to Refuse Immunization	If the mother refuses to allow newborn screening or immunization, an indication that a waiver was completed is entered into the system.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.

Description: Is PAF Involved (Box 14). If yes, Go to Process Paternity Flow.
Please See Paternity Flow-

Description: If no PAF is involved, preview/print hospital/parent verification report (Box 15). OK? (Box 16).
When the birth record is complete, the hospital prints a verification form for the hospital and the parents to review. The verification form is clearly marked as Verification Form, a non legal form that does not contain any medical information. If the name entered for the baby will not be accepted by the SSA, the system may print a statement notifying the parents of this issue. The verification form will have signature locations for two parent, the labels for which will populate based on the requested parent type at creation of the record (i.e., parent 1/parent 2, mother/father, etc.) The parents will sign the form once the information is verified as accurate, and the signed form will be retained at the hospital. The hard copy of the signed verification form is scanned and attached to the record. The system also allows the user to capture the parents' signature on a hand-held device.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B167	Forms	Please see Reports and Forms - Appendix C for rules on forms.		
B168	Reports	Please see Reports and Forms - Appendix C for rules on reports.		
B169	Print Verification Form	Once the record has been completed, the system allows the user to print the verification form for the parent(s) to verify that all the demographic information has been entered correctly.	E - Exact	
B170	Two Signature Locations	The verification form contains two signature locations with labels populated based on the requested parent type at creation of the record (mother/mother, mother/father, etc.).	W - Workflow or System Configuration Required	GCOM VRMS navigations are configurable.
B171	Print Verification Form More Than Once	The verification form may be printed as many times as needed to ensure that the information has been entered correctly	E - Exact	

B172	Print Multiple Copies at Once	The user can select the number of copies of the verification form to be printed at one time.	E - Exact	
B173	Signed Verification Form	The system allows the user to select Yes/No if the verification form was signed by either parent.	W - Workflow or System Configuration Required	
B174	Verification Form Not Signed	The system provides a comment box for the user to indicate why neither parent signed the form.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B175	Scan and Attach Verification Form	The system allows the user to scan and attach the signed verification form to the record.	E - Exact	
B176	Use of Symbols in Names	Fields for given names cannot contain symbols that have no phonetic standing on their own other than numerals used for generational identifiers or common punctuation such as hyphens or hyphenated names, apostrophes used as part of a given name or surname, commas to separate surnames from generational identifiers, and periods in generational identifiers or when an initial or abbreviation is used as part of a name.	E - Exact	
B177	Generational Identifier	Only one (1) generational identifier is permitted and must be of common usage.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B178	Use of Names	Field for given names cannot contain writing that is not part of the standard twenty-six letter English alphabet or modifications thereof; Name cannot contain commonly recognized profanity or is otherwise demeaning. Use of professional or educational honorific acronyms (for example PhD) are not permitted. A diacritical mark (accents over letters, etc.	E - Exact	
B179	Use of Diacritical Marks in Names	The system permits the entry of diacritical marks on the birth record.	E - Exact	
B180	Printing of Diacritical Marks in Names	The system prints diacritical marks on the birth certificate.	E - Exact	
B181	Submission of Names with Diacritical Marks to SSA	The system will remove diacritical marks when transmitting names to SSA.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable
B182	SSA Name Acceptance	The system may print a statement on the birth verification form if the baby's name will not be acceptable to SSA.	E - Exact	
B183	Verification Form Clearly Marked "Not Legal Copy"	The printed verification form indicates that it is not a legal birth certificate.	E - Exact	
B184	Verification Form Does Not Contain Medical Information	The printed verification form does not display or print any medical information.	E - Exact	
B185	Allow Hand-Held Device to Capture Digital Signature	The system allows the user to capture the parents' signature on the verification form using a hand-held device.	F - Future	Release Spring 2020

Description: Scan and attach supporting documents to record (mother's worksheet, facility worksheet, completed Paternity and any other documents to record) (Box 17). Submit record for registration (Box 18). Go to Registration Flow.

When the record is complete, the facility marks the record as "complete", electronically signs the record, scans all the worksheets and the record is registered.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B186	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
B187	Confirm Parent Worksheet Review	a specific action to confirm that the Parent Worksheet was used to validate the parent information.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B188	Confirm Facility Worksheet Review	For records that were partially completed using data from the Health Exchange, the user specifies whether or not a Facility Worksheet was also used to populate/validate the facility information.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B189	Determine if Worksheets Need to Be Scanned	The system has the capability to determine if a parent and facility worksheet was used to populate the record.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B190	Scan Worksheets	If a parent and/or facility was used to populate the record, the system makes sure the document(s) are scanned and attached to the record prior to submitting the record to the State.	E - Exact	
B191	Facility Signs Record	The certifier signs the record electronically before it is submitted to the State.	E - Exact	
B192	Authorized User Can Certify Record	Allow an authorized user at facility to certify record if no physician or birth attendant is available to verify medical information.	E - Exact	
B193	Birth Confirmation Within Facility	The system provides the ability for birth records to be queued internally for a second review to confirm the birth prior to submitting to the State. This is not a quality assurance review, simply confirmation that the birth did occur in the facility to help ensure that fraud is not taking place.	E - Exact	
B194	Second Review Location Specific	The ability to queue records for birth confirmation is specific to each location and the functionality may be turned on or off as required by each facility.	W - Workflow or System Configuration Required	GCOM VRMS validation rules are configurable.
B195	Second Review Signature	The system provides the ability for the second reviewer to confirm that each record has been reviewed and attest that the birth did occur as indicated on the record.	W - Workflow or System Configuration Required	GCOM VRMS Signature component integrated with navigation rules.
B196	Flag Records Not to Be Submitted	If the confirmation process finds fraudulent records, the reviewer can flag these records to prevent them from being submitted to the State.	E - Exact	
B197	View Sub-Set of Data	Before signing, the signer may review a listing containing a sub-set of data for a range of birth records.	E - Exact	
B198	Delete/Void Records	Only State authorized personnel may delete and/or void birth records.	E - Exact	
B199	Facility May View Records After Submission	Hospitals may view but not alter birth records they created after they have submitted them to the state, except for the immunization tab.	E - Exact	
B200	Facility May View and Perform Ad-Hoc Reports Against Records	Hospitals may run authorized ad-hoc reports that include records already submitted.	W - Workflow or System Configuration Required	GCOM VRMS design to create new reports.
B201	Lock All Fields on Submitted Records	All birth fields (except for immunization) are locked from further updating at the facility once the birth record is submitted to the state.	E - Exact	
B202	Indicate Paternity Form to Follow	For facilities without a scanner available; the system allows the record to be submitted without the corresponding Paternity form, but the record will indicate that the Paternity form has been signed/notarized and will be submitted by mail.	E - Exact	
B203	Reminder to Submit PAF	If paternity form to follow indicator is selected, system generates letter reminding parents to complete and submit a PAF.	E - Exact	
B204	Do Not Issue When Paternity Form in Mail	If a birth record is submitted with a paternity form on the way, a "do not issue" flag is applied to the record.	W - Workflow or System Configuration Required	GCOM VRMS forms design is configurable.
B205	Plural Delivery	Records from a plural delivery may be submitted at different times.	E - Exact	
B206	Submit Birth Record with Minimal Information in Special Circumstance	The system allows a user to submit a birth record with minimal information in cases where the mother refuses to provide information or relinquishes the child.	E - Exact	
B207	Scan and Attach Verification Form	The hospital scans and attaches the verification form to the birth record.	E - Exact	
B208	Lock Immunization Record	Once the hospital completes the immunization tab, the full birth record is locked.	E - Exact	

BUSINESS PROCESS: UNATTENDED HOME BIRTH

This process describes the steps for an unattended home birth that occur outside a medical facility and without a licensed midwife in attendance, and where the mother and baby were not transported to a medical facility within 24 hours of the birth.

The Home Birth Packets are obtained from the State and the State enters the requestor's information in the system for tracking purposes. If the requestor is eligible to receive the packet, the State sends (or gives) the packet to the requestor. After the birth, the Home Birth Packet is completed by the parent(s) or midwife and brought in or mailed to the State. The user at the State starts a record in the system and attaches proof of birth, pregnancy documentation, and evidence to prove that the mother was in the State during the timeframe of the birth. The user reviews the documentation provided as evidence that the unattended home birth occurred in the State. If there are no errors, the verification form is printed for review by the parent(s). If a parent identifies errors with the information entered, the user can edit the information and reprint the verification form. Once the information is correct, the record can be registered.

If the documentation is incomplete or witnesses to the birth are required, the record is saved in a pending queue and a letter is generated by the system indicating what is required to be able to complete the unattended birth record. Multiple letters may be issued for one record. For unattended home births, the system will include the following three (3) fields on the record: attendant, certifier and witness. The attendant and certifier fields will be greyed out and say "none." The witness field will be available to input the name of a parent, other than the mother, or another witness. Any attendee, certifier, or parent must file the birth record if present. In the case of an unattended home birth where the mother was the only witness to the birth, she can select a checkbox on the worksheet which prompts her to fill out her personal information and sign attesting to the birth of the child on the date and at the address provided on the worksheet. In this case, the mother is indicated as the Certifier/Attendant to the birth. When Vital Records is inputting the information into the EVRS, the checkbox opens fields that allow mother's information to be added to the record under "Certifier/Attendant". Upon receipt of the necessary information, the State accesses the pending queue, opens and updates the record, and scans the received documentation. This is an iterative process until such a time as the record can be filed.

After a State defined period of time, records that have not been completed will be voided or purged from the system.

Please note: All the rules, as defined in Start a Birth Record apply to the data entry of a paper birth record at the State. In addition, the following rules apply to unattended home births.

Description: State receives documents from parents (Box 1); State user logs into EVRS and searches for the mother and/or child (Box 2). Match found? (Box 3). If no, start a new record (Box 4). If yes, open the existing record (Box 5)

The Home Birth Packets are obtained from the State. The system user enters the requestor's information in the EVRS system for tracking purposes. If the requestor is eligible to receive the packet, the user gives/ sends the packet to the requestor. After the birth, the Home Birth Packet is completed by the parent(s) and brought in or mailed to the State. The user enters the search criteria to find an existing record. If the record is found, the user opens the record and begins data entry. Otherwise, the system creates a new record for the user to access.

B209	**User Log In**	Please see the General Requirements section B - User Authentication for rules related to user log in.		
B210	**User Profiles**	Please see the General Requirements section C - Roles, Profiles and Institutional Affiliations for rules related to user log in.		
B211	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
B212	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
B213	**Starting a Record at a Facility**	Please see all the business rules related to starting a record as these apply to unattended home births.		
B214	**Paternity Rules**	Please see all the business rules related to paternity at the facility and amendments as these apply to unattended home births.		
B215	**Home Birth Option**	The system provides a home birth option to be selected by the user.	***E - Exact***	
B216	**Indicator for Intended vs. Unintended Unattended Home Birth**	The system captures whether the unattended home birth was intended or unintended.	***E - Exact***	
B217	**Record Request for Home Birth Packet**	At the time a parent requests a Home Birth Packet, the user enters State defined information to document the request, such as but not limited to State ID, Passport, and military ID.	***F - Future***	***Release Spring 2020***
B218	**Search on Requestor**	The system will search on the requestor to see if this is the first request or if there have been prior requests for a Home Birth Packet.	***F - Future***	***Release Spring 2020***
B219	**Prior Request Message**	If prior requests have been made within the last year, the system will return a message indicating that the requestor has requested a Home Birth Packet in the last year.	***F - Future***	***Release Spring 2020***
B220	**View Prior Request**	The system will allow the user to view all prior requests made regardless of the location where they were made.	***F - Future***	***Release Spring 2020***
B221	**Allow New Request**	The system allows the user to continue and create a new request if the user deems the request appropriate.	***F - Future***	***Release Spring 2020***
B222	**Requestor Information**	The system provides fields to capture the requestor's name, address, phone number and ID number and type. ID may be a State driver's license or US Passport, or other State defined ID.	***F - Future***	***Release Spring 2020***
B223	**Mother's Information**	The system provides fields to capture the mother's name, address and phone number.	***W - Workflow or System Configuration Required***	
B224	**Due Date**	The system provides fields to capture the estimated due date and/or actual due date.	***F - Future***	***Release Spring 2020***
B225	**Date Packet Provided**	The system will capture the date the packet was provided to the requestor. This date will be auto-generated by the system.	***W - Workflow or System Configuration Required***	
B226	**Queue for Issuance**	Once completed, the request for a Home Birth Packet is queued as a Pending Home Birth request for issuance.	***W - Workflow or System Configuration Required***	
B227	**Requests for Home Birth Packet Linked to Record Once Created**	Once the state starts a Home Birth Packet request, the system links the record and request.	***F - Future***	***Release Spring 2020***
B228	**Printing of Certificates**	Printing of certificates can be done either in registration or the front desk to fulfill the request.	***W - Workflow or System Configuration Required***	
B229	**Tab /Screen Order**	The screen and tab order for a home birth match the home birth worksheet.	***W - Workflow or System Configuration Required***	
B230	**No Medical Record Needed in Home Birth**	For a home birth, the State can start a birth record without the medical record number.	***E - Exact***	
B231	**Pending Request**	The document is held in a pending queue until the completed packet is received.	***E - Exact***	
B232	**Remove Abandoned Requests**	The time after which pending requests for Home Birth Packets are removed is State defined.	***F - Future***	***Release Spring 2020***

Description: Start birth record in the system (Box 6) and scan documentation (Box 7)

When the user is ready to start the record, the user selects "home birth" and the format of the tabs/screens match the home birth worksheet. The required information from the worksheet is entered in the system and supporting documentation is indicated. Any supporting documentation is scanned and attached to the record.

Unattended home births have three (3) fields for attendant, certifier and witness. The attendant and certifier fields will be grayed out because there are none. The third field is used to record the "Witness," who is neither an attendant nor certifier. Documentation or an affidavit may be produced by the witness.

In the case of an unattended home birth where the mother was the only witness to the birth, she must check a checkbox on the worksheet which prompts her to fill out her personal information and sign attesting to the birth of the child on the date and at the address provided on the worksheet. In this case, the mother is indicated as the Certifier/Attendant to the birth. When Vital Records is inputting the information into the EVRS, the checkbox opens fields that allow mother's information to be added to the record under "Certifier/Attendant".

Please note: All rules that relate to starting a record, record edits, electronic signatures, queues, registration and issuance apply to an unattended home birth records and are not repeated here. The business rules in this section are specific to unattended home birth records started at the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*

B233	Rules for Facility Birth Apply	All rules that relate to starting a birth record, record edits, electronic signature, queues, registration and issuance apply to an unattended home birth and are not repeated here.		
B234	Enter Address of Birth	The system allows the user to enter the address where the child was born (i.e., 102 Main Street) for a home birth.	E - Exact	
B235	Select Supporting Documents	The system allows a user to select, from a pre-defined list, the supporting documents that were presented as proof of the home birth.	E - Exact	
B236	Check Box for Mother as Certifier	A check box is selected if mother was only attendant to the birth. The check box indicates that the mother is attesting to attending the birth.	W - Workflow or System Configuration Required	
B237	Check Box Opens Fields for Mother as Certifier	When the "Mother as Certifier" check box is selected, additional fields open to capture the mother's first and last name as the Certifier/Attendant to the birth.	W - Workflow or System Configuration Required	
B238	Scan Signed Signatures	The system prompts a user to scan submitted signed documentation and attach it to the electronic home birth record.	W - Workflow or System Configuration Required	
B239	Indicate Scanned Documents Attached	Supporting documentation is scanned into the system and attached to the electronic record.	E - Exact	
B240	Notation for "Unattended" Made in Record	The birth record is flagged as an unattended home birth in the birth record, but no indicator is printed on the face of the certificate.	E - Exact	

Description: Record complete? (Box 8); Print out verification form if desired for parent review and signature (Box 9)

Upon review of the supporting documentation the user may find that additional documentation is required. In this case, the user will save the record to a pending queue. If the documentation is in order, the user will print out a verification form for the parents to review and sign. The parent verification form can be printed more than once if errors are discovered by the parents that need to be corrected.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B241	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
B242	Verification Form	The system allows the user to print out a home birth verification form for the parents to review and sign.	E - Exact	
B243	Verification Form Optional	The user does not have to print out a Verification Form.	E - Exact	

Description: OK? (Box 10); If yes, scan Verification Form into the system (Box 11); Submit record electronically (Box 12). Register record and assign SFN and LFN. Record leaves queue (Box 13). Go to Registration Flow.

If the record is correct, the State will review after they have scanned and attached all of the documentations. The State reviews the record prior to registration. If the record is OK, the state and local file numbers are assigned and the record leaves the queue. The Registration Flow takes over.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B244	State File Number	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
B245	Queues	Please see the General Requirements, section O - Queues for rules regarding the pending queues.		
B246	Query and Rejection Cycle	Please see the Query and Rejection Cycle Flow for rules on how to reject a record.		
B247	Edit Record	The user may edit the record as many times a necessary until the information is correct. Whenever there are soft edits, the system provides the option to specify "mother refused" or "unknown."	E - Exact	
B248	Scan Signed Form	The system provides the ability for the user to scan and attach the signed or edited verification form to the record.	E - Exact	
B249	Verify Legal Information	If auto-registration is turned off, the system prompts user to confirm verification of demographic fields on birth record prior to registration. This functionality can be turned on or off by an authorized user	F - Future	Release Spring 2020
B250	Confirmed Action to Register Record	The system asks the user to confirm the action being taken to register the record.	W - Workflow or System Configuration Required	
B251	Verify Legal Information	System requires the State to review and verify legal information prior to registering.	W - Workflow or System Configuration Required	
B252	Option to Turn Off Auto Registration	The State has the capability to turn on or off the auto registration function.	W - Workflow or System Configuration Required	
B253	Record Leaves Queue	Once the record is registered, it automatically leaves the pending queue and is ready for issuance.	E - Exact	
B254	Fulfill Request From Record	If there is a pending request for certified copies, the user may fulfill that request immediately	W - Workflow or System Configuration Required	
B255	Move Request to Ready-to-Fulfill Queue	If there is a pending request for certified copies, the system will automatically move the request from the pending queue to the ready-to-fulfill queue at the location designated in the request	W - Workflow or System Configuration Required	

Description: Can verification form be fixed? (Box 14); If no, the record is saved in a pending queue (Box 15); Print out appropriate letters and/or documentation from EVRS. Bypass this step if needed (Box 16).

If there are errors in the record that cannot be immediately fixed, the record is saved in a pending queue. The user may print out one or more letters or documents from the system indicating what is required to complete the record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B256	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
B257	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
B258	Pending Home Birth Queue	This system provides a queue for pending (in process) home birth records.	E - Exact	
B259	Not a Mandatory Step	The system will let the user bypass the letter generating step if desired	F - Future	Release Spring 2020

Description: Receive requested information (Box 17); Access the pending queue (Box 18); Finish record (Box 19).

The applicant returns the needed documentation to the State. The user logs into the system, accesses the record through the queue, completes the record, and scans the documentation

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
B260	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
B261	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
B262	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
B263	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
B264	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
B265	Pending Home Birth Queue	The system provides a queue for records that are pending.	E - Exact	

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: PROCESSING A PATERNITY AT A FACILITY

In WV there are only two-way paternities, which means that only two parents may be listed on a birth certificate at one time.

If mother is unmarried and wants to list the biological father on the birth certificate, they must both sign a Paternity Affidavit Form (PAF). The unmarried mother also has the option to not list a father on the birth certificate.

If mother is married, her spouse will be automatically listed as the father unless mother specifically refuses to list a father. However, if mother is married but her spouse is not the biological father, the process can go one of two ways: the spouse can sign a Non-Paternity Affidavit (Non-PAF), while mother and the biological father both sign a PAF. This process is referred to as PAF/Non-PAF; Or, if the mother and biological father and/ or spouse cannot come to an agreement to sign a PAF/Non-PAF, the hospital selects an indicator within the record that the family intends to file a PAF. This action places the record in a Paternity Pending Queue for review and approval at the State prior to registration.

Description: Birth Record is started (Box 1); Mother married? (Box 2); If no, Want to list father? (Box 3); If no, No father listed on BC (Box 4); Continue with Birth Flow

Once a birth record is started, the user will have the option of creating a paternity. If the mother is unmarried, the user has the option to bypass paternity screens.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA1	**Hospital, State or Child Support Completes**	Paternities can be completed at the hospital, by Child Support Enforcement Office, or by the State.	E - Exact Match	Template Configuration would be required
PA2	**Paternity Screens**	The system allows access to the paternity screens from within the birth record. Format of screens are State defined.	E - Exact Match	Template Configuration would be required
PA3	**Paternity Fields**	The system provides fields for the user to enter the paternity information into the birth record. Fields may include, but are not limited to, father's name, address, SSN, and other State defined data.	E - Exact Match	Template Configuration would be required
PA4	**Father Not Required When Mother Not Married**	When the mother indicates she is not married and there is no paternity, the system allows the father's information to be blank.	W - Workflow or System Configuration Required	configured to leave Father Information as Blank
PA5	**Flexibility in Response "Married?"**	The system provides a field to indicate if the mother was married within the last 300 days.	W - Workflow or System Configuration Required	configured to indicate if the mother was married with last 300 days
PA6	**Update Status to "No Paternity"**	If the mother is single and chooses not to complete the Paternity Affidavit Form, the system updates the record status to "No Paternity".	E - Exact Match	Template Configuration would be required

PA7	Inactivate Father's Fields	If the mother is not married and chooses not to complete a paternity, the system grays out the father's fields.	W - Workflow or System Configuration Required	GCOM VRMS Forms Designer could be configured to gray out Father's Information
PA8	Register Upon Submission	If the mother is single and chooses not to complete a paternity, or the mother is married but refuses to have the spouse on the birth record, the record is registered upon submission to the State.	E - Exact Match	Template Configuration would be required
PA9	Reason for No Paternity	In the case where a mother does not request a paternity, the system provides a drop down to select a State defined reason for refusal, including "other."	W - Workflow or System Configuration Required	GCOM VRMS Forms Designer could be configured to provide the requested dropdown
PA10	Reason Not Required	The "Reason for No Paternity" field is optional.	W - Workflow or System Configuration Required	GCOM VRMS Forms Designer could be configured to make the Field as Optional
PA11	Comment for No Paternity	In the case of "other" being selected as the mother's reason for not requesting a paternity, the system requires the user to enter a free-form comment.	W - Workflow or System Configuration Required	configured to allow user to enter free form comments

Description: If yes to Want to list father, PAF/Non-PAF? (Box 5); If yes, Correct? (Box 6); If yes, Paternity is notarized (Box 7); Scan and attach completed form to record (Box 8); Continue with Birth Flow; If no to PAF/Non-PAF, Intention to file indicator (Box 11)

If mother is unmarried, a Paternity Affidavit Form is made available to add the father's information. The Paternity Affidavit Form is auto populated with the demographic information from the record and a verification copy may be printed for the parents to complete and sign. Hospital users may also review and verify the information with the parents electronically from a tablet. Once the facility determines that information is correct, the parents sign the PAF in front of a notary and the PAF is scanned and attached to the birth record. If using e-notary, the PAF is notarized in the system.

For hospitals without a scanner, once the record is submitted to the State, it is flagged and placed in a Paternity Pending queue so that the State knows that a Paternity Affidavit form is being mailed to the State. The flag prevents issuance of a certified copy of the birth record to prevent potentially incorrect information from being printed. The process flow then returns to the "Birth Flow."

If the parents are unable to complete a PAF at the time of birth, the system user can indicate in the record that the parents have intentions of filing an PAF at a later time.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA12	E-Notary	Please see General Requirements T - Electronic signature and E-Notary for rules related to e-notary and electronic signature.		
PA13	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
PA14	Option to Request Paternity Affidavit Form	If the mother answers that she was not married within the last 300 days, the system provides the option for the mother to request to establish paternity.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA15	Language Versions Configurable	The PAF can be configured by the State to add a version of the PAF in another language if needed in the future.	F - Future	GCOM VRMS could support building of forms in different languages
PA16	Affidavit Prints Out of System	The Paternity Affidavit Form may be printed from the system with instructions for the parents.	E - Exact Match	
PA17	Generate Paternity Tracking Number	The system generated birth record number is also the paternity tracking number.	W - Workflow or System Configuration Required	Case ID/Tracking Number which is configurable
PA18	Paternity Tracking Number Not Displayed	The paternity tracking number does not display on the screen.	W - Workflow or System Configuration Required	GCOM VRMS Form allows hide and display of fields on UI bassed on Business Rules
PA19	Auto Populate Affidavit	The system auto populates the mother, father and child information from the birth record into the Paternity Affidavit Form.	E - Exact Match	
PA20	Parents Sign Paper Form	If e-notary is not being used, a paper copy of the Paternity Affidavit Form is printed for signature and notarization.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA21	Print for Verification	The PAF may be printed for verification purposes prior to signing.	E - Exact Match	
PA22	Parent's Signature	When parents sign a paper Paternity Affidavit Form, the system provides the user with a way to indicate receipt of the parent's signatures in the system.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA23	System Tracks Date and Time Signed	The system provides fields to capture the date and time the PAF was signed.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA24	Print Paternity Affidavit Form Multiple Times	The PAF may be printed multiple times.	W - Workflow or System Configuration Required	printing of Forms Pre and Post Registration with Watermarks
PA25	Paternity Tracking Number Prints on Paternity Affidavit Forms	The system tracks the number of times the PAF is printed.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA26	Parents Can Change Mind	The mother or father may change their mind about completing the paternity up to the point when the paternity document is signed and notarized.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

PA27	Void Paternity Affidavit Form	If the mother and father decide not to finalize a Paternity Affidavit Form, the Paternity Affidavit Form is voided.	W - Workflow or System Configuration Required	VRMS Authentication system allows system admin to assign this functionality to required
PA28	Father's Information Removed	If the Paternity Affidavit Form is voided, the system has the ability to remove and lock all father fields.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA29	Do Not Allow Paternity at Hospital if Record is Registered	The system does not allow a hospital to process a paternity after the record has been submitted for registration at the State.	E - Exact Match	
PA30	Date and Time Signed	If the date and time that the PAF is signed is after the birth record has been registered, a message will pop up indicating the record has been registered and the hospital can no longer file the PAF.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA31	Print PAF at Hospital for Parents	If the parents wish to file a PAF after the birth record has been registered, the hospital may print a PAF for the parents to sign and notarize, and submit to the State for filing.	W - Workflow or System Configuration Required	printing of Forms Pre and Post Registration with Watermarks
PA32	Intention to File PAF Flag	If mother and biological father intend to complete a PAF but do not file one at the time of birth, the system has a checkbox to indicate parents' intention to file a PAF and flags the record as pending PAF	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA33	Allow Mother to Complete Electronically	The system allows the mother to complete her portion of the PAF electronically even if the father is not present at the time of birth.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA34	Capture Father's Information	If the "Intention to File PAF" checkbox is selected, the system provides the user with the option of entering father's information. Data is retained in the system but does not appear on the birth certificate until the notarized PAF is received at the State and attached to the birth record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA35	Paternity Affidavit Received within 30 Days of Birth	PAFs must be filed within 30 days after DOB or the system removes father's information and the record is filed with no father listed on the record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA36	Flag Removed	Once the father's information is removed from the record, the pending PAF flag is removed.	W - Workflow or System Configuration Required	after expiration of certain period (Business Rules)
PA37	Move to Registration Queue	Once the pending PAF flag is removed, the record is moved from the pending PAF queue to the registration queue.	W - Workflow or System Configuration Required	GCOM VRMS supports updating records with comments based on Business Rules
PA38	Comment for No PAF/Non-PAF Received	If a record moves from the pending PAF queue to the registration queue, the system generates a comment to indicate that a PAF and/or Non-PAF was not received at the State.	W - Workflow or System Configuration Required	GCOM VRMS supports updating records with comments based on Business Rules
PA39	System Sends Letter to Mother	If the father is removed from record, the system sends a letter to the mother explaining why the PAF was voided and next steps.	W - Workflow or System Configuration Required	could be confifured to send automatic notifications based on business rules
PA40	System Sends Letter to Father	If the father is removed from record, the system sends a letter to the father explaining why the PAF was voided and next steps.	W - Workflow or System Configuration Required	could be confifured to send automatic notifications based on business rules
PA41	Supporting Paternity Documentation	The system allows the user to select from a State defined drop down list to indicate what supporting documents were presented.	W - Workflow or System Configuration Required	specified document type as per Configurable List Items
PA42	Scan Notarized Paper PAF	The system prompts the user to scan and attach the notarized Paternity Affidavit Form when it is in paper format.	W - Workflow or System Configuration Required	specified document type as per Configurable List Items
PA43	Scan Supporting Documentation	The system allows the user to scan and attach any supporting documentation.	W - Workflow or System Configuration Required	specified document type as per Configurable List Items
PA44	No Scanner	For hospitals without a scanner, the record is flagged for a pending queue awaiting the arrival of the paper copy of the PAF at the State.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA45	"Paternity Complete" Status Locks Fields	An indicator is set in the system when the paternity status is complete to lock all the paternity fields.	W - Workflow or System Configuration Required	GCOM VRMS supports locking and unlocking of records based on business rules
PA46	Paternity Signed by Parents	When there is a paternity in process, the system does not allow the birth record to be submitted to State until the record indicates that the parents have signed and notarized the Paternity Affidavit Form.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA47	Request Paternity Form at State	Paternities that are not processed at the birthing facility prior to registration must be requested from the State.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA48	Display But Do Not Print Comment Fields	The system displays the comments within the record but does not print the comments on the certificate or form.	W - Workflow or System Configuration Required	GCOM VRMS Form allows hide and display of fields on UI bassed on Business Rules
PA49	Legal Guardian Signature	If either of the parents are under 18 years old, the signature of the parent's legal guardian is required on PAF and Non-PAF.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

PA50	Additional Fields for Under 17 Years	The system populates additional State defined fields if the mother or father is 18 years old or younger and is an unemancipated minor.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
Additional Rules for E-Notary (The State Cannot Use E-Notary at Go Live; But Wants to Build in the Function for Future Use.)				
PA51	Hide Function	The system provides the ability to deactivate the function for e-notary.	W - Workflow or System Configuration Required	GCOM VRMS Form allows hide and display of fields on UI bassed on Business Rules
PA52	Paper Flow	When e-notary is not used, the system automatically reverts to the paper flow with the corresponding edits.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA53	No Scan for E-Notary	The system does not prompt the user to scan and attach the notarized Paternity Affidavit Form when e-notary was used.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA54	Notarize Online	The user who is also a notary can sign the form, attach the seal and other evidence required for notarization, and attach the evidence to the paternity.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA55	E-Notary Completes Paternity	When e-notary is used, the act of completing the notarization also completes the process of filing the Paternity Affidavit Form.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA56	Image of E-Notarized Form Attached	The image of the notarized Paternity Affidavit Form is attached to the record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA57	Schedule Notarizations	The system provides the capability for an authorized user to schedule notarizations in the system by entering the date, time and person who will notarize the birth record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA58	Display Notary Schedule	The system provides the capability to display the schedule of notarizations by notary, date and time.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA59	Print Notary Schedule	The system provides the capability to print the schedule of notarizations by notary, date and time.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

Description: If PAF/Non-PAF is not correct, Can fix?(Box 9); If yes, Fix (Box 10); If no, Intention to file indicator (Box 11); Continue with Birth Flow

If there are errors on the Paternity Affidavit Form, the user accesses the record in the system and corrects the information. The user may print a new verification form for the parents to review or review with them on a tablet.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA60	Query and Rejection Cycle	Please see the Query and Rejection Cycle for all rules related to rejecting or correcting a record in the system.		

Description: If mother is married, Is the spouse the Father? (Box 12); If yes, Enter spouse as father (Box 14); If no, Spouse wants to be listed?(Box 13); If yes, Enter spouse (Box 14) and Continue with Birth Flow; If no to Spouse wants to be listed, Want to list father? (Box 3); If no, No father listed on BC (Box 4); If yes, PAF/Non-PAF? (Box 5); If no, Intention to file indicator (Box)

If the mother is married, the husband is indicated on the birth record as the father unless the mother refuses. If she refuses, a selection of "Married Refused Husband Info" is made on the record.

If mother is married and the spouse is not the father, but the biological father wishes to be listed, a Paternity Affidavit Form is made available to add the father's information. An Affidavit of Non-Paternity is also made available for the mother and spouse to sign.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA61	Mother Refuses	The system provides a field to indicate if the mother is married but refuses to have the spouse on the birth record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA62	Disallow Paternity Affidavit	The system does not allow a Paternity Affidavit Form if the mother is married or divorced/widowed within the last 300 days (between conception and birth) unless a Non-Paternity Affidavit Form is submitted by mother's current husband, or the user had indicated that a Non-PAF will be filed.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA63	Non-Paternity Affidavit	The system allows access to the Non-Paternity Affidavit screen from within the birth record. Fields may include but are not limited to spouse's full name, address, SSN, and other State defined data.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA64	Intention for Non-PAF	If the "Intention to File PAF" checkbox is selected, an additional "Intention to File Non-PAF" checkbox is opened to indicate if the mother and her spouse intend to complete a Non-PAF. If the checkbox is selected, it flags the record as pending Non-PAF and allows the mother to complete her portion of the document electronically.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA65	Capture Spouse's Information	If the "Intention to File Non-PAF" checkbox is selected, the system provides the user with the option of entering spouse's information. Data is retained in the system but does not appear on the birth certificate until the notarized Non-PAF is received at the State and attached to the birth record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

PA66	Reminder Letter	If either "Intention to file PAF" or "Intention to file Non-PAF" checkbox is selected, the system sends a letter to the mother reminding her to submit a notarized PAF or Non-PAF. Timeline for sending the letter is State-defined.	W - Workflow or System Configuration Required	GCOM VRMS allows to set up corespondences across all record types based on BusinessRules
PA67	Non-Paternity Affidavit Received within 30 Days of Birth	Non-PAFs must be filed within 30 days after DOB or the record is filed with no father information listed on the record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

END OF PROCESSING A PATERNITY AT A FACILITY

BUSINESS PROCESS: PROCESSING A PATERNITY AT THE STATE

If a PAF or Non-PAF was not filed at the time of birth, the parents may file a paternity at the State. They have the option of mailing in the notarized forms or filing them in person at the State office. Non-PAFs must be filed in conjunction with a PAF within one year of DOB; it may not be used to rescind paternity after a birth certificate has been registered with a father's name on the record.

Rescission of paternity are by court order only and must be filed at the State.

Description: Vital Registration receives Paternity Form (Box 1); Another father listed on BC? (Box 2); If no, Scan and attach PAF to record (Box 3); Update father's information (Box 6); Update child's surname (if requested)(Box 7); Go to Issuance Flow.

Once a birth record is started, the user will have the option of creating a paternity. If the mother is unmarried, the user has the option to bypass paternity screens.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA68	State Completes	Please see the Processing a Paternity at a Facility rules above, for all rules relating to Starting a Paternity at the State.		
PA69	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
PA70	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
PA71	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
PA72	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
PA73	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
PA74	Birth Amendments	Please see the Amendments rules, Additional Rules for Birth Amendments section, for all rules related to birth amendments.		
PA75	Pending PAF Queue	The system provides a queue for the State to view all records that are flagged as "pending PAF"	W - Workflow or System Configuration Required	based on queue logic creiteria (Business Rules) across all record types
PA76	Paper Copy Received	The system has a checkbox for indicating that the original, paper copy of the PAF or Non/PAF has been received at the State.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA77	Remove Flag if Paper Copy Received	If "paper copy received" checkbox is selected, the system removes the "pending PAF" flag from the record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA78	Scan Supporting Documentation at State	The system allows the State user to scan and attach any supporting documentation.	W - Workflow or System Configuration Required	GCOM VRMS allows to configure the documents types for each Birth Type
PA79	Prevent Printing	The flag for pending PAF prevents printing of certified copies of the birth record.	W - Workflow or System Configuration Required	GCOM VRMS can be configured to check for Flags to prevent Printing
PA80	Supervisory Override for Pending PAF	The system allows an authorized user to override a flag for pending PAF.	W - Workflow or System Configuration Required	Supervisor to overide the rules for such Flag with or without a reason

Description: If yes to Another father listed on BC, Court order to remove dad? (Box 4); If no, Reject request; If yes, Scan and attach court order to record (Box 5); Update father's information (Box 6); Update child's surname (if requested)(Box 7); Go to Issuance Flow.

Paternities can be rescinded by court order only. Once rescinded, the birth record information reverts back to the original information that was present prior to the filing of a paternity.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
PA81	Query and Rejection Cycle	Please see the Query and Rejection Cycle for all rules related to rejecting or correcting a record in the system.		

PA82	Rescission of Paternity Check Box	The system provides a check box for the user to mark a record with a paternity as "Rescission of Paternity."	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA83	Prevent Printing for Rescission of Paternity	The flag for "Rescission of Paternity" prevents printing of certified copies of the birth record.	W - Workflow or System Configuration Required	GCOM VRMS can be configured to check for Flags to prevent Printing
PA84	Scan Court Order for Rescission of Paternity	If the record has been marked "Rescission of Paternity," the system requires the user to scan and attach a court order to the birth record	W - Workflow or System Configuration Required	messages to user requesting to attach appropriate documents (messages are
PA85	Enter Court Order Number	The system provides a field for the user to enter the court order number in the record.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA86	New Paternity After Rescission	A new paternity may only be processed once a rescission is processed.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
PA87	Do Not Mark "Amended"	For court-ordered paternity rescissions, the system does not mark the new certificate of birth as "amended."	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

Business Process: Fetal Death (350 grams or +20 Weeks of Gestation)

A birth of 350 grams or more (or if weight is unknown, then after 20 weeks of gestation based upon date of last menses) with no sign of life when entirely outside the mother's body is considered a fetal death (stillbirth). The Fetal Death module is used to record the event, and an Authorization for Disposition for Fetal Remains is required. Methods of disposition may include but are not limited to: funeral home, hospital, parents, and OCME. If cremation is requested, the request will be indicated on the Authorization for Disposition and a funeral home designation and cremation permit are also required. The funeral director will be responsible for obtaining approval from the Medical Examiner for the cremation permit.

For facility cases where the OCME is not involved, the facility user completes the medical and demographic portion. The medical certifier may certify immediately, or the completed record may be queued for certification at a later time. The hospital selects the method of disposition, and the parents must sign the Authorization for Disposition for Fetal Remains. A Paternity Affidavit Form may be executed, but edits around Paternity for fetal deaths are relaxed. Once the record is certified, the facility submits it to the State for registration. The facility may print an Angel Certificate at parents' request.

For fetal deaths occurring outside of a facility, or in facility cases where there is concern over the cause of death, a medical examiner is contacted. The medical examiner decides if s/he will investigate the case and, if so, s/he completes the record in the system and submits it electronically to the State. If no investigation is required, the medical examiner rejects the record back to the facility.

For fetal deaths occurring at non-birthing facilities that are not OCME cases, the record will be reported via a paper process using the fetal death worksheets.

Fetuses that are delivered at any gestational age and does show life when entirely outside the mother before it subsequently dies, is considered a live birth and requires a birth record and a death record.

Please note: All rules that relate to starting a birth or a death record, record edits, cause of death, electronic signatures, queues, and registration and issuance apply to fetal death records and are not repeated here. The business rules in this section are specific to fetal death.

NAPHSIS Use Case Models:

- EBRS UC 003 v. 2.1 - Create Fetal Death Record
- EBRS UC 008 v. 1.9 - Certify COD on Fetal Death Record
- EBRS UC 009 v. 1.8 - Decertify COD on Fetal Death Record

Description: Baby is stillborn (Box 1); At Hospital? (Box 2); If yes, ME required? (Box 3); If no, log into EVRS (Box 8); Start record and print Authorization for Disposition, parent signs (Box 9); Disposition of body (Box 10); Complete record of fetal death and add PAF if needed (Box 11); Print Angel Certificate at facility (Box 12)

After a stillbirth in a hospital/facility, the user logs on and enters the minimal information to start a fetal death record. This includes designating the Funeral Home, if cremation or funeral is requested by parents. All fetal deaths require an Authorization for Disposition for Fetal Remains. Paternities may be needed for fetal deaths.

Please note: All rules for Authorization for Disposition found in the Death Business Rules apply to this section and are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*

FD1	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
FD2	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
FD3	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
FD4	Queues	Please see General Requirements, section N - Queues, for all business rules related to Queues.		
FD5	Data Edits	Please see the General Requirements section L - Data Editing for rules related to editing data.		
FD6	Birth Rules	The rules associated with Start a Birth record apply to fetal death.		
FD7	Paternity	The rules associated with paternity apply to fetal death.		
FD8	Authorization for Disposition	Please see the Death Business Rules, for all rules related to Authorization for Disposition within the system. All rules apply to this section.		
FD9	Cremation Permit	Please see the Death Business Rules, for all rules related to Cremation Permit within the system. All rules apply to this section.		
FD10	Bereavement Queue	The system provides a queue for records at the facility that can be accessed by bereavement specialists.	*E - Exact Match*	
FD11	Fetal Death Queue	The system provides a queue for records submitted electronically for fetal deaths.	*E - Exact Match*	
FD12	Queue Record for State	The system provides a queue for Fetal Death records with State defined soft edits.	*E - Exact Match*	
FD13	Start Record	A fetal death record can be started at a hospital/medical facility.	*E - Exact Match*	
FD14	State Defined Minimum Information to Start Case	The minimum information used to start a case is State defined.	*W - Workflow or System Configuration Required*	the any event data that includes Birth, Death, ITOP and Fetal Death.
FD15	Default Data to Start Case	The minimum data set to start a record includes: baby's date of delivery, gestational age, gestational weight, mother's medical record number, mother's last name, mother's first name, mother's date of birth, plurality and birth order.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD16	Include Baby's Medical Record Number	The system includes a Medical Record Number for the baby separate from the Medical Record Number for the mother.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD17	Name May be Left Blank	The stillborn child's first, middle and last names may be left blank.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD18	Mother's Name	The system captures the mother's first, middle and last name. First and last name are required.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD19	Search on Birth, Death and Fetal Death	The system searches birth, death and fetal death records to determine potential matches. Search is limited to the facility login location of the user.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD20	Confirm That Event is Fetal Death	Upon selecting a fetal death event, the system displays a message informing the user of the definitions of a live birth versus a fetal death and asks the user to confirm that they wish to create a fetal death record.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD21	Health Exchange Checked	The information entered is sent to the Health Exchange to look for a match.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD22	Parent Worksheet	The system provides a fetal death parent worksheet.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD23	Facility Worksheet	The system provides a fetal death worksheet for the institution to capture the medical information.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD24	Parent and Medical Worksheets	No parental signatures are required for the parent or facility worksheets.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD25	Worksheets Print from System	Both the parent and the facility worksheets may be printed from the system.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD26	Standard Worksheets Available in Multiple Languages	The system provides the parent worksheet in English and Spanish.	*F - Future*	GCOM VRMS could display worksheet in mutiple languages in future
FD27	Record Transfer	The system provides ability to transfer a record from one institution to another.	*W - Workflow or System Configuration Required*	records to another facility based on Business Rules

FD28	Funeral Home Info	The system can allow the user to select a funeral home from a list or to enter the information directly.	*W - Workflow or System Configuration Required*	GCOM VRMS supports Look Up Feature to display the statewide list of Funeral Homes
FD29	Fetal Death Requires Authorization for Disposition	An Authorization for Disposition is required for a fetal death.	*W - Workflow or System Configuration Required*	signing using Facial Recognition based on ownership of the case.
FD30	Authorization for Disposition Requires Signature of Parent(s)	Parental signature(s) are required on the Authorization for Disposition.	*W - Workflow or System Configuration Required*	GCOM VRMS supports collection of Signature using Signature Pads (Topaz)
FD31	Options for Final Disposition	Options for final disposition on the Authorization for Disposition are State defined and may include, but are not limited to, funeral home, hospital, parents, and OCME.	*W - Workflow or System Configuration Required*	GCOM VRMS Forms Desiger offers configrable list of values
FD32	Cremation Indicator	The system allows the user to indicate on the Authorization for Disposition whether cremation is requested.	*W - Workflow or System Configuration Required*	GCOM VRMS Forms Desiger offers configrable list of values and checkboxes
FD33	Funeral Home Requests Cremation Permit	The system allows funeral home users to request authorization from the medical examiner for cremation.	*W - Workflow or System Configuration Required*	Cremation Requests To Medical Examiners (Via XML File Transfer)
FD34	Distinct Numbering System for Fetal Death Authorization for Dispositions	The numbering system for fetal death Authorization for Dispositions is distinct from the numbering system for death Authorization for Dispositions and is defined by the State.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Numbering System based on Business Rules
FD35	Fetal Death Abuse or Neglect	The system provides the user a field to indicate if a fetal death is suspected to be a case of abuse or neglect.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD36	Non-birthing Facility	Non-birthing facilities have access to the Fetal Death module.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD37	Fetal Death Worksheets Starts Records For Home Fetal Deaths	If the fetal death occurred outside of a facility (i.e. a home birth) without a licensed midwife in attendance, the Fetal Death worksheet will be used to start the fetal death record at the State.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD38	Home Fetal Death Record	The system allows the State user to indicate that the fetal death record was the result of a home fetal death.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD39	Scan and Attach Fetal Death Worksheet	If the State user selects the home fetal death record type, the system prompts the State user to attach the scanned fetal death worksheet to the fetal death record.	*W - Workflow or System Configuration Required*	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

Description: If ME is required, contact ME (Box 4); Enter minimal information (Box 5). Investigate case? (Box 6). If yes, complete electronic record through EVRS (Box 7).
If the hospital or facility believes the case to be one of neglect or abuse, the user calls the medical examiner. If the medical examiner elects to take the case, the process follows the Medical Examiner Flow for a death event. Otherwise, the record is rejected back to the hospital/facility where the medical and demographic information is entered and certified.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
FD40	Medical Examiner Called	If the hospital or facility suspects neglect or abuse, they may call the medical examiner before starting the case.	*F - Future*	If medical Facility wants to record call informatio, system can provide form fields
FD41	Designate Medical Examiner	The system includes the ability to designate the case as a medical examiner case.	*E - Exact Match*	GCOM VRMS supports flagging a case as ME Case based on Business Rules
FD42	Refer to Medical Examiner	If the record includes an indication of abuse or neglect, a pop up message is displayed, indicating that the medical examiner needs to review the case.	*E - Exact Match*	GCOM VRMS supports electronic refereal to Medical Examiners office based on criterias
FD43	Authorization for Disposition Needed for Medical Examiner Referrals	An Authorization for Disposition is still required for records that are referred to the medical examiner.	*W - Workflow or System Configuration Required*	GCOM VRMS workflow provides electronic authorization of case using Facial Recognition
FD44	Medical Examiner Edits Based on Keywords	The system locks a record for the medical examiner when State defined suspicious causes are entered or selected as cause of death.	*W - Workflow or System Configuration Required*	GCOM VRMS Forms allows locking and Unlocking mechanism
FD45	Send Message to Medical Examiner	If the system locks a record when the State identifies suspicious causes of death, and a message is automatically sent to the medical examiner for review.	*W - Workflow or System Configuration Required*	GCOM VRMS can send alerts/notifications based on Business Rules
FD46	Enter Reason for Referral	The system includes State defined fields for the user to indicate why the case is being referred to the medical examiner.	*E - Exact Match*	
FD47	Queue Records for Medical Examiner	The system includes a queue for records referred to the medical examiner.	*E - Exact Match*	
FD48	Medical Examiner May Complete Record	The system allows a medical examiner to start and complete the full record.	*E - Exact Match*	
FD49	COD Can be Pending	The fetal death record can be registered with a pending cause of death.	*E - Exact Match*	
FD50	Facility Files Amendment for Pending COD	When the cause of death is not entered prior to registration of the fetal death, the hospital files an amendment to add the cause of death information.	*W - Workflow or System Configuration Required*	GCOM VRMS contains feature to amend Fetal Death Record electronically post registration.
FD51	Suspect Cases Referred to Medical Examiner	The system includes the option to notify the medical examiner to review the case.	*E - Exact Match*	
FD52	Medical Examiner Accepts Case	If the Medical Examiner elects to take the case, the facility indicates in the record that this is a medical examiner case.	*E - Exact Match*	

Description: Scan worksheet and attach to record (Box 13); Queue record for State (Box 14); Exceptions? (Box 15); If yes, review exceptions (Box 16); OK? (Box 17); If no, reject/query record (Box 18); If no exceptions, register record (Box 19); Extracts for Vital Statistics (Box 20)

Once the record is complete and the medical certifier has certified, the record is submitted and registered by the system. Certain records with specific soft edits may be queued for post-registration review by the State. Birth and death registration rules apply to the registration of a fetal death record. After the record is registered, it is ready for statistical extraction.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
FD53	**State File Number**	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
FD54	**Registration**	Rules associated Registration also apply to Fetal Death.		
FD55	**Issuance**	The Issuance module is used to produce the Certificate of Fetal Death.		
FD56	**Death Rules**	Rules associated with Death also apply to Fetal Death.		
FD57	**Electronic Signature**	Please see the General Requirements section S - Electronic Signature rules related to signing fetal death records.		
FD58	**Fetal Death Screens**	Fetal Death event has its own set of screens that are distinct from birth or death.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD59	**Screens Match Fetal Death Worksheets**	Screens for Fetal Death match the fetal death worksheets.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD60	**Edits Specific**	Edits are specific to fetal death.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD61	**Fetal Death Information Collected**	The system collects a set of State defined information on fetal death. Examples of information collected may include name of attendant, date of fetal death and disposition of the fetal remains.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD62	**Certificate of Birth Resulting in Stillbirth Indicator Controls Printing**	The system checks the indicator that specifies if the parents want a Certificate of Birth Resulting in Stillbirth to determine whether the certificate prints at the State after registration.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD63	**Reporting Timeframe**	Reports of fetal death are completed within the statutory five (5) days after the fetus was delivered or else goes to the late queue.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD64	**Verification Form Marked as "Fetal Death"**	Any verification forms of the fetal death report are clearly marked "Fetal Death."	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD65	**Print Verification Form for Parent Review**	The system allows the verification form to be printed for the parents' review.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD66	**Print Certificate of Birth Resulting in Stillbirth**	After the State defined fields for a fetal death are completed, the system allows a facility user to print a Certificate of Birth Resulting in Stillbirth for the parents from the system.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD67	**Certificate of Birth Resulting in Stillbirth**	Fields for the Certificate of Birth Resulting in Stillbirth are State defined and may be an abstract of the report of fetal death.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks
FD68	**Cause of Fetal Death Fields - Part A**	The fetal death record provides a section to capture initiating cause of death (Part A). Initiating cause of death selections are state defined. Only one selection can be made for Part A.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD69	**Cause of Fetal Death Fields - Part B**	The fetal death record provides a section to capture any other significant causes and conditions (Part B). Other significant causes and conditions are state defined and multiple selections are allowed for Part B.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD70	**Medical Certifier**	A physician or medical examiner may sign the record. Currently, there is no medical certifier for fetal deaths.	***W - Workflow or System Configuration Required***	signing using Facial Recognition based on ownership of the case.
FD71	**Certify Outside Facility**	Medical certifiers can certify the record from their local office.	***W - Workflow or System Configuration Required***	signing using Facial Recognition based on ownership of the case.
	Additional rules for fetal death under 350 grams, of if weight unknown under 20 weeks gestation			
	Please note: All rules for Fetal Death apply to this section and are not repeated here.			
FD72	**Under 350 grams/ 20 Weeks Flag**	The system flags fetal death records for fetuses that weight less than 350 grams, or if weight is unknown under 20 weeks of gestation.	***W - Workflow or System Configuration Required***	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
FD73	**Under 35o grams/ 20 Weeks Not Sent to NCHS**	If the under 350 grams/ 20 weeks flag is set, the system does not send the record to NCHS.	***W - Workflow or System Configuration Required***	GCOM VRMS has feature to flag records types which could be excluded from NCHS Extract
FD74	**Relaxed Edits Under 350 grams/ 20 weeks**	When entering a fetal death under 350 grams/ less than 20 weeks gestation, the system has relaxed edits for entering a fetal death record.	***W - Workflow or System Configuration Required***	which can easily configure by business users with business knowledge. GCOM VRMS is pre-
FD75	**State Defined Edits Under 350 Grams**	The edits for a fetal death under 350 grams/ less than 20 weeks gestation are State defined.	***W - Workflow or System Configuration Required***	which can easily configure by business users with business knowledge. GCOM VRMS is pre-
FD76	**Certificate of Birth Resulting in Still Birth**	The system provides the ability for the State to print a Certificate of Birth Resulting in Stillbirth for all fetal deaths, from the fetal death record.	***W - Workflow or System Configuration Required***	printing of Forms Pre and Post Registration with Watermarks

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR ENTERING AND PROCESSING DEATH RECORDS

NAPHSIS use case models were used as reference materials for the redesign of the death processes.
Specific NAPHSIS use case models for starting a death event include:

EDRS UC 002 v. 2.7 - Create a Case - FH
EDRS UC 002 v. 2.7 - Create a Case - MC
EDRS UC 008 v. 2.3 - Request for Medical Certification
EDRS UC 009 v. 2.6 - Sign Personal Information
EDRS UC 012 v. 2.6 - Print Permits
EDRS UC 021 v. 2.5 - medical examiner/Medical Examiner Accepts Case
EDRS UC 023 v. 2.7 - Certify Cause of Death
EDRS UC 065 v. 1.3 - Update a Case - FH
EDRS UC 066 v. 1.3 - Update a Case - MC
MVRS UC 012 v. 1.5 - Search

MVRS UC 014 v. 1.9 - Perform Edits

NAPHSIS use case models for death records started at a facility:
EDRS UC 002 v. 2.7 - Create a Case - MC
EDRS UC 008 v. 2.3 - Request for Medical Certification
EDRS UC 009 v. 2.6 - Sign Personal Information
EDRS UC 012 v. 2.6 - Print Permits
EDRS UC 021 v. 2.5 - medical examiner/Medical Examiner Accepts Case
EDRS UC 023 v. 2.7 - Certify Cause of Death
EDRS UC 066 v. 1.3 - Update a Case - MC
MVRS UC 012 v. 1.5 - Search
MVRS UC 014 v. 1.9 - Perform Edits

BUSINESS PROCESS: DEATH OVERVIEW

The future vision for EVRS is to allow death records to be initiated electronically by any stakeholder, i.e.: facility users such as hospice nurses or hospital medical records clerks; medical examiners; physicians; or funeral directors. Death records are started by logging into the EVRS system. Minimum demographic information to start a case is entered. The system checks for a match to an existing record in the EVRS database. Potential record matches are reviewed by the user and if a record from the list is found to be a match, the record is retrieved. If no match is found in the EVRS, the system automatically checks the Health Exchange to find a match. If a match is found, the user reviews the information and decides whether to accept the data into EVRS. If yes, a new EVRS record is created and the user makes additions and modifications as necessary to complete the record. If no match exists in EVRS or in the Health Exchange, a new record is created in EVRS.

Hard edits keep the record from being submitted for registration until all required fields are completed. Soft edits are validated by the user during the data entry process to confirm out-of-range values.

Once the record is complete, it is submitted electronically to the State. The State File Number (SFN) and Local File Number (LFN) are applied to the record. The record is ready for issuance, query review, and submission to NCHS for cause-of-death reporting.

Description: Minimum info to create record (Facility/Medical Examiner/Medical Certifier/Funeral Home/EMS Pronouncer) (Box 1)

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D1	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D2	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D3	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D4	**Temporary Medical Examiner Assignment**	Please see the General Requirements, section D for rules related to medical examiners serving temporarily in another county to cover vacations and other time off.		
D5	**Check Health Exchange**	Please see the Start a Birth at a Facility Requirements, for rules related to checking the Health Exchange to start a record.		
D6	**Record Started by Any User**	Minimum info to start a record can be entered by the facility, medical examiner/ME, medical certifier, or funeral home.	W - Workflow or System Configuration Required	start a record given the correct functional authorization. Some rules to

D7	**EMS Pronouncer Can Start Record**	EMS users can star a death record with minimal demographic information, pronouncing information, and other State defined fields.	E - Exact Match	
D8	**Minimum Information to Start Record**	The minimum information to start a record is used to populate the Authorization for Disposition. These include: Decedents name, Date of Death, Time of Death, Location of Death, County, and other State-defined fields.	E - Exact Match	
D9	**Removal from State**	If a West Virginia funeral home is handling a death out of state, the West Virginia funeral home starts the record in order to print the Authorization for Disposition.	W - Workflow or System Configuration Required	
D10	**Listing of Funeral Homes for Out-of-State Deaths**	If a West Virginia funeral home is preparing a body for out-of-state disposition, both funeral homes will be listed on the death certificate.	E - Exact Match	
D11	**Medical Examiner Crosses County**	A medical examiner can be designated (see general requirements) to handle cases from another county if the medical examiner for that county is on vacation.	E - Exact Match	
D12	**Record Contains County of Occurrence**	If a medical examiner starts a record for a medical examiner in another county, the record contains the county/location corresponding to the medical examiner who is unavailable (true county of) event.	E - Exact Match	
D13	**Record Contains County of Process**	If a medical examiner starts a record for the medical examiner in another county, the record contains the county/location of the medical examiner who is processing the record.	W - Workflow or System Configuration Required	
D14	**Record Contains Medical Examiner of Process**	If a medical examiner starts a record for the medical examiner in another county, the record contains the medical examiner who is processing the record.	E - Exact Match	
D15	**Signing Shared Record**	The medical examiner who completes the record will certify the record.	E - Exact Match	
D16	**Medical Examiner of Occurrence Overwrite**	The medical examiner of the county in which the event occurred will have the option to certify the record even if s/he did not finish the record.	W - Workflow or System Configuration Required	
D17	**Ownership of Medical Examiner Records**	Any medical examiner within a county or at the OCME can access a medical examiner case based on role/profile.	E - Exact Match	
D18	**Flag Out-of-County Medical Examiner**	If a medical examiner starts a record for a medical examiner in another county, the record contains a flag that designates that the record was started by a medical examiner in another county.	W - Workflow or System Configuration Required	
D19	**Identify Medical Examiner Filling In**	If a medical examiner starts a record for a medical examiner in another county, the record includes the individual who initiated the record in such a way as to not overlay the true owner of the record.	W - Workflow or System Configuration Required	

Description: Authorization for Disposition (Facility/Medical Examiner/Funeral Home) (Box 2)

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D20	**Authorization for Disposition Initiated**	Any user with access to the death module may start an authorization for disposition. The authorization for disposition is a simply a form that gets printed from the death record, it is part of the death record, and it has its own numbering. It may be a separate tab within the death record from which information entered on to the death certificate is auto-populated onto the AFD.	E - Exact Match	

D21	**Transfer Between Funeral Homes**	Transferring bodies between funeral homes requires an Authorization for Disposition.	E - Exact Match	
D22	**Transfer from Medical Examiner to Funeral Home**	Transferring a body from a medical examiner to a funeral home requires an Authorization for Disposition.	E - Exact Match	
D23	**Out-of-State Requires Authorization for Disposition**	Transferring a body out of state requires an Authorization for Disposition.	E - Exact Match	
D24	**Authorization for Disposition Number**	The system generates Authorization for Disposition numbers.	E - Exact Match	
D25	**Authorization for Disposition Number Format**	The format of the Authorization for Disposition number is year-sequence number.	E - Exact Match	
D26	**Authorization for Disposition Number Reset**	The sequence for the Authorization for Disposition number is reset at the beginning of the year.	E - Exact Match	
D27	**Print at Any Location**	The Authorization for Disposition can be printed at any location involved in the event.	E - Exact Match	
D28	**Unlimited Copies**	There is no limit on the number of copies of the Authorization for Disposition that can be printed.	E - Exact Match	
D29	**Capture Transport**	The system includes the ability to capture the identity of the transport company.	W - Workflow or System Configuration Required	
D30	**Capture Individual Authorizing Release of Body**	The death record includes a field to capture the name of the next of kin or individual who authorized release of body.	E - Exact Match	
D31	**Authorization for Disposition Fields**	The format and content of the Authorization for Disposition are State-defined.	E - Exact Match	
D32	**Aliases**	The Authorization for Disposition allows for aliases and regular names.	E - Exact Match	
D33	**Merge Feature**	The system provides the ability to merge death records if legal names and aliases are used to start multiple records for the same decedent.	F - Future	Release Spring 2020

Description: Demographic information (Funeral Home/Facility/Medical Examiner/Medical Certifier/Hospice Administrator) (Box 3)

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D34	**Demographic Information**	Any authorized user at a funeral home or facility or any medical examiner, medical certifier or hospice administrator may complete the demographic information.	E - Exact Match	
D35	**FH Notification for Change to Demographics**	The system notifies the funeral home if the certifier changes demographic information that was entered by the funeral home.	W - Workflow or System Configuration Required	
D36	**Certifier Notification for Change to Demographics**	The system notifies the certifier if the funeral home changes demographic information that was entered by the facility or certifier.	W - Workflow or System Configuration Required	
D37	**Reason for Demographic Change**	If a funeral home or medical certifier changes demographic information entered by the other party, the user changing the information will include a comment as to the reason and proof for the change.	W - Workflow or System Configuration Required	
D38	**Demographic Information**	The system provides a soft edit to compare the DOB and DOD to age-specific causes of death and notifies the user of inconsistencies.	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system

D39	**Funeral Director Certifies Demographic Information**	The system allows a funeral director to certify the demographic information on a certificate.	E - Exact Match	
D40	**Other Authorized Users Certify Demographic Information**	The system allows an authorized user, such as a medical examiner or facility acting as a funeral home, to certify the demographic information.	E - Exact Match	

Description: Medical information (Medical Certifier) (Box 4)

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D41	**Medical Information**	Any authorized user may enter the medical information.	E - Exact Match	
D42	**Certifying Medical Information**	Only a medical certifier may certify the medical information.	E - Exact Match	

END OF DEATH OVERVIEW

BUSINESS PROCESS: START A DEATH RECORD AT A FACILITY

There are multiple ways a death record can be handled at a facility:

1. The user starts a record by entering the minimum demographic information on the decedent and then queues the record for the Authorization for Disposition to be completed and printed.
2. The user can start the record by entering the minimum demographic information and medical information, and then have the medical certifier certify the death either by having him/her log directly in and certify or by queuing the record for the medical certifier to review and certify.
3. The user can complete both the demographic and medical portions of the record in cases where the facility/medical examiner is acting as a funeral home.

Description: Death occurs (Box 1); Facility logs into the EVRS (Box 2)

A death occurs and the user logs into EVRS.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D43	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D44	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D45	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D46	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D47	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D48	**Facilities May Only View Own Records**	The system allows authorized users of a given facility to view only the records created by that facility, based on login location and information.	E - Exact Match	
D49	**Pending Queue**	The system provides a queue for records that have been started at a facility but were not submitted.	E - Exact Match	
D50	**Facility Medical Certifier Queue**	The system provides a queue for records that are ready for medical certifiers to access and complete.	E - Exact Match	

D51	**Authorization for Disposition Queue**	The system provides a queue of in-process Authorization for Dispositions.	E - Exact Match	
D52	**Message for Authorization for Disposition Queue**	The system sends a message to the hospital, stating that the Authorization for Disposition was created and queued.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case

Description: Complete minimal demographic information and select funeral home (Box 3); Print Authorization for Disposition (Box 4); Funeral home picks up body with Authorization for Disposition (Box 5)

The user enters the minimum demographic information required to start a record in order to print the Authorization for Disposition to accompany the body. Once the funeral home and/or transport company signs the Authorization for Disposition and picks up the body, the facility scans and attaches the signed Authorization for Disposition to the death record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D53	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D54	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
D55	**Death Screens Specific to Function**	Death screens are specific to the function being performed.	E - Exact Match	
D56	**Death Screens Specific to Role or Location Based on Function**	Death screens are either user-role or location based, depending on the functions being performed. For example, if a facility starts a record to certify medical information, the facility would see a subset of the demographic fields sufficient to start the record and all of the medical information fields; if it was a facility acting as a funeral home, all demographic and medical fields would be available to the user.	E - Exact Match	
D57	**Hard Edits 1**	The system provides hard edits for all NCHS-required fields.	E - Exact Match	
D58	**Hard Edits 2**	The system allows for State-defined hard edits.	E - Exact Match	
D59	**Hard Edits 3**	Hard edits may be turned on and off individually by an authorized user.	E - Exact Match	
D60	**Name Not Known**	If the name of the decedent is not known at the time of entry, the system provides a way for the user to indicate this within the record that will allow the record to be certified.	E - Exact Match	
D61	**Auto-Populate with "Unidentified"**	If the record is marked as "name unknown," the systems automatically populates the name fields with "Unidentified."	E - Exact Match	
D62	**Change Name from "Unidentified"**	The system allows an authorized user to change the name from "Unidentified" to a proper name up until the time the record becomes certified.	E - Exact Match	
D63	**Multiple Name Not Known**	The system accommodates multiple unidentified bodies in such a way that duplicates are not created within the system and each unidentified body is easily and uniquely identified.	E - Exact Match	
D64	**Assign Funeral Home**	The user may assign a funeral home, if one is known when the record is started.	E - Exact Match	

D65	Funeral Home Drop-Down	The system allows a user to select a funeral home from a State-defined pick list.	E - Exact Match	
D66	Information Populates	When a user selects a funeral home, the system auto-populates all information for the selected funeral home into the record.	E - Exact Match	
D67	"Other" Not an Option	The system does not allow the user to select "other" for a funeral home, **with the exception of home burials.**	W - Workflow or System Configuration Required	configurable form pages and list items in addition to configurable validation
D68	Home Burials as "Other"	In the case of home burials, the system provides an indicator that the body is being released to the family/relation for home burial.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D69	Additional Information for Home Burials	When the check box is selected for the release of a body to the family for home burial, additional information fields are opened to capture to whom the body is released to. Those fields are State-defined and include, but are not limited to, relation to deceased, first name, last name, and address.	W - Workflow or System Configuration Required	GCOM VRMS easily allows for the enabling and disabling of fields given a business rule condition.
D70	Human Gift Registry	Human Gift Registry/Donation is an option for disposition. If selected, additional fields open to capture to whom the body is being donated to.	W - Workflow or System Configuration Required	enabling and disabling of fields given a business rule condition.
D71	Indicate if Funeral Home is In State or Out of State	The system provides a method to indicate if the funeral home selected is within the state or out of state, and which state it is located in.	E - Exact Match	
D72	Bury in Any County	A funeral home is not restricted to their own county for burial of the body.	E - Exact Match	
D73	Queue for Funeral Home	Once a funeral home is selected by a system user, the record automatically queues for the funeral home.	W - Workflow or System Configuration Required	
D74	Assign Medical Certifier	The system allows the user to assign a medical certifier, if known.	E - Exact Match	
D75	Enter Medical Information Including COD	The system allows an authorized user to enter the medical information, including COD.	E - Exact Match	
D76	Medical Certifier Queue	Once a medical certifier is assigned, the record is queued for the medical certifier.	W - Workflow or System Configuration Required	
D77	Medical Record Number	The system includes a field for the user to enter the medical record number.	E - Exact Match	
D78	OVS Verification Runs	OVS runs, at the earliest point possible, when the record is started.	E - Exact Match	
D79	OVS Verification	The results of the OVS populate in the system and are available for the user to see.	E - Exact Match	
D80	Only Funeral Homes May Order Certified Copies	The system only allows funeral homes to request certified copies of a death record through the system.	W - Workflow or System Configuration Required	person with necessarry documentation to order certified copies through Order
D81	Queue for County or State Printing	Certified copies that have been requested online by a funeral home are queued for printing at the county or State once they are registered.	E - Exact Match	
D82	Notify for Pickup	The system sends a notification to the funeral home when the certified copies are ready for pickup.	E - Exact Match	
D83	Complete Demographic Section	The system requires that the facility/funeral home complete the demographic data fields before submitting it to the State.	E - Exact Match	

D84	**Scan Signed Authorization for Disposition**	The system allows a user to scan and attach a copy of the signed Authorization for Disposition to the electronic record.	E - Exact Match	
D85	**Leave Authorization for Disposition Queue**	The system moves the record from the Authorization for Disposition queue once the Authorization for Disposition is marked as "complete."	E - Exact Match	
D86	**Transport of Donated Bodies**	A Disinterment-Reinterment Application and Permit is printed with disposition instructions to transport remains to a funeral home after a gift registry/medical research facility is finished with the body.	E - Exact Match	
D87	**Choice for Authorization for Disposition**	When a donated body is transported to a funeral home, the user can either add the transport to the previous Authorization for Disposition or create a new Authorization for Disposition.	W - Workflow or System Configuration Required	
D88	**Link Authorization for Disposition to Record**	All Authorization for Dispositions are linked to the death record.	E - Exact Match	
D89	**Update Disposition**	An amendment is required to change the method of disposition when a body is returned to a funeral home by a medical research facility. The amendment can occur on the original or new Disinterment-Reinterment Application and Permit.	E - Exact Match	
D90	**Retain Old AFD Information and Enter New AFD**	When a new AFD is created, if there was previously an AFD associated with that record, the system retains the information from the previous AFD within the death record, and allows the user to enter a new AFD with new information.	E - Exact Match	
D91	**Watermarked White Copy - Medical Examiner**	The system allows the medical examiner to print or save digital copies of watermarked white copies of a death record.	E - Exact Match	
D92	**Watermarked White Copy - Funeral Home**	The system allows authorized funeral homes to print or save digital copies of watermarked white copies of a death record.	E - Exact Match	
D93	**Watermarked White Copy - Medical Certifier**	The system allows authorized medical certifiers to print or save digital copies of watermarked white copies of a death record.	E - Exact Match	
Additional Authorization for Disposition Rules				
D94	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D95	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
D96	**Authorization for Disposition Information**	The minimum information entered by a user used to start a record is automatically populated by the system into the appropriate Authorization for Disposition fields.	E - Exact Match	
D97	**Authorization for Disposition Fields State-Defined**	The fields of the Authorization for Disposition are State-defined.	E - Exact Match	
D98	**Complete Authorization for Disposition Fields**	The user may complete Authorization for Disposition fields at the time they start the record.	E - Exact Match	
D99	**Authorization for Disposition Includes County Name**	The Authorization for Disposition includes the county name corresponding to the location of death.	E - Exact Match	
D100	**Scan Signed Authorization for Disposition**	The system allows a user to scan and attach a copy of the signed Authorization for Disposition to the electronic record.	E - Exact Match	

D101	**Mark Authorization for Disposition Complete**	The system marks the Authorization for Disposition "complete" when the funeral home and medical certifier have completed the record and signed with their PIN.	E - Exact Match	
D102	**Message for Completion**	The system sends a message to the record owners once the Authorization for Disposition is marked as "complete."	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D103	**Leave Authorization for Disposition Queue**	The system moves the record from the Authorization for Disposition Queue once the Authorization for Disposition is marked as "complete."	E - Exact Match	

Description: M.C. ready to sign? (Box 6); If yes, enter medical information and M.C. certifies record (Box 7). If no, queue record for M.C. (Box 8). The MC completes medical information and enters PIN (Box 9).
If the Medical certifier is ready to sign, s/he enters the medical information and certifies using a PIN. If s/he is not ready to sign, the EVRS user puts the record into the MC Queue. Once the Medical Certifier is ready to sign the record, s/he retrieves record from the queue, completes the medical section of the record, and certifies using a PIN.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D104	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D105	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D106	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D107	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D108	**Medical Information Rules**	Rules related to entering medical information may be found in Start a Death at a Funeral Home process Box 17. All those rules apply to this section.		
D109	**Facility Queue**	The facility queue is by facility, not by individual doctor.	E - Exact Match	
D110	**Facility Queue Sortable**	The facility queue is sortable by certifier so an administrator may quickly find their records.	W - Workflow or System Configuration Required	configurable to display any required fields.
D111	**Message in Addition to MC Queue**	The system provides messaging in addition to queues to notify medical certifiers of records waiting to be certified.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D112	**Email Sent to External Email Address**	When the system sends a message alerting the medical certifier that they have a new record to certify, an email is also sent at same the time to an external email address.	E - Exact Match	
D113	**Certifying Through Mobile App**	The system provides a mobile version of the EVRS for completion of the entire death record from a mobile or handheld device. The mobile version must function exactly as the desktop version of the EVRS functions.	E - Exact Match	
D114	**Multiple User**	The system allows multiple users to enter the medical information but the medical certifier must certify information entered.	E - Exact Match	
D115	**Assign Funeral Home**	The funeral home may be assigned at anytime by an authorized user.	E - Exact Match	
D116	**Change Medical Certifier**	The system allows a medical certifier to reassign the record to another medical certifier within the same facility.	E - Exact Match	

D117	**Verification Required**	The time of death and date of death must be verified by a physician.	E - Exact Match	
D118	**Act as Funeral Home**	The system allows a hospital to act in lieu of a funeral home in the case of body donations. *(used to read "hospital")*	E - Exact Match	
D119	**Unknown Date or Time of Death**	The choice for Date and Time of Death when they are not known are: Date of Death Unknown, Time of Death Unknown, Date of Death Found, Time of Death Found.	E - Exact Match	
D120	**File Records**	The record is submitted to the State once the demographic and medical information have been certified.	E - Exact Match	
D121	**Lock Fields**	All medical fields are locked once the record is certified.	E - Exact Match	
Additional Rules for Pending COD				
D122	**Pending COD/Manner of Death Queue**	The system provides a work queue for all records within a given facility that have a "pending COD" and/or "pending manner of death."	E - Exact Match	
D123	**Flag Pending COD/Manner of Death Records**	All records that are submitted with a pending COD/manner of death are flagged as such.	E - Exact Match	

Description: COD Rapid Reporting or Violent Death? (Box 10); If yes, a message is sent to the State and county (Box 11); The record is registered if the demographic portion is complete (Box 12); Go to Death Record at a Funeral Home Flow.

Once the MC has entered and certified the medical information, the record is checked to see if it is applicable for COD Rapid Reporting or Violent Deaths. If applicable, a message is sent to the State, alerting them that the record is applicable. After the State is alerted, or if the record is not applicable to COD Rapid Reporting or Violent Deaths, the record is automatically registered if the demographic portion is complete. If the demographic portion is not complete, go to Death Record at a Funeral Home Flow.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D124	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D125	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
D126	**Authorization for Disposition Queue**	The system provides an Authorization for Disposition Queue.	E - Exact Match	
D127	**Multiple Entities Listed on Authorization for Disposition**	The system provides the ability for multiple entities to be listed on the Authorization for Disposition.	F - Future	Release Spring 2020
D128	**Generate Updated Authorization for Disposition**	Whenever a body is moved between one user to another, an updated Authorization for Disposition must be generated (for example, when the hospital releases the body to the medical examiner and the medical examiner releases body to the funeral home; or if there is a transfer a body between Funeral Home A to Funeral Home B).	W - Workflow or System Configuration Required	
D129	**State May Update Authorization for Disposition**	The State can assist a funeral home with making changes to an Authorization for Disposition when a body is transferred between funeral homes.	W - Workflow or System Configuration Required	state to only view the information on cases that they do not own.
D130	**Funeral Home and Transport Company Fields on the Authorization for Disposition**	The system provides State-defined fields on the Authorization for Disposition to capture the funeral home and transport company information.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.

D131	**Assign Funeral Home and/or Transportation Company**	The system allows a user to assign a funeral home and/or transportation company.	W - Workflow or System Configuration Required	facilities of a given type from the list of facilities in the system.
D132	**Information Populates**	When a user selects a funeral home and/or transportation company, the system auto-populates the information for the funeral home and/or transport company selected.	E - Exact Match	
D133	**Different Funeral Home and Transportation Company**	The system allows a user to select both a funeral home and transport company, if needed.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D134	**Multiple Funeral Homes/Transport Companies**	The system allows multiple funeral homes and/or transport companies to be listed on the Authorization for Disposition.	W - Workflow or System Configuration Required	configurations allow for multiple entries on the same record.
D135	**Funeral Home and Transportation List**	The system maintains a State-defined list of funeral homes and transportation companies and additional State-defined fields, such as contact information.	E - Exact Match	
D136	**Ship Out of State**	The system allows the user to select from a State-defined list of known transporters approved to transport bodies out of state.	E - Exact Match	
D137	**Enter Family Information In Funeral Home Fields**	The system allows the user to indicate that the record is a green burial and opens the fields for the user to enter the family's information in the funeral home fields.	E - Exact Match	
D138	**Family as Funeral Home on Authorization for Disposition**	For green burials, the system automatically updates the Authorization for Disposition to include the family's information in the fields for the funeral home.	E - Exact Match	
D139	**Funeral Home Queue**	Once a funeral home is assigned, the record is queued for the funeral home.	E - Exact Match	
D140	**Do Not Queue for Transport Companies**	Records are not queued for transport companies.	E - Exact Match	
D141	**Funeral Home Selected**	The system will not allow a user to print an Authorization for Disposition before a funeral home is selected.	E - Exact Match	
D142	**Authorization for Disposition Fields Lock**	The system locks the Authorization for Disposition fields once it is complete and printed by the user.	E - Exact Match	
D143	**Authorization for Disposition "Complete" Status**	The system will consider an Authorization for Disposition complete once all fields, as defined by the State, are completed.	W - Workflow or System Configuration Required	Disposition to be signed by the Funeral Home before it is considered complete.
D144	**Print Authorization for Disposition**	The system allows the user to print the Authorization for Disposition when all required State-defined fields have been completed.	E - Exact Match	
D145	**Print on Plain Paper**	Authorization for Dispositions are printed on plain paper.	E - Exact Match	
D146	**Authorized Users May Print**	The system only allows authorized users to print copies of an Authorization for Disposition.	E - Exact Match	
D147	**Authorization for Disposition Control Number**	The Authorization for Disposition has a unique number assigned by the system. These numbers are different from the case and state file numbers and include AD, year, and sequential number (example: 2015-AD123456).	W - Workflow or System Configuration Required	[illegible] numbering system for the state file numbers and other permit numbers that can easily be expanded to include the
D148	**Print Electronic Signature on Authorization for Disposition**	The Authorization for Disposition prints with the names of the funeral home and medical certifier and the appropriate electronic signature image of the registrar.	E - Exact Match	
D149	**Optional Signature Line**	The system provides a space for the issuer of the Authorization for Disposition to physically sign the Authorization for Disposition.	E - Exact Match	

D150	**Capture Physical Signature of Receiver**	The system provides a space to capture the physical signature of the person who receives the Authorization for Disposition.	E - Exact Match	
D151	**Link Authorization for Disposition Information to Record**	The printing of an Authorization for Disposition is captured in the document history and becomes part of the death record.	W - Workflow or System Configuration Required	
D152	**"Authorization for Disposition Complete" Edit Check**	The system automatically runs edit checks once all state-defined fields are completed for an Authorization for Disposition.	E - Exact Match	
D153	**Confirm Prior to PIN**	The system provides a pop-up message for a funeral home to confirm that the Authorization for Disposition is complete prior to entering their PIN.	F - Future	Release Spring 2020
D154	**Updates to Authorization for Disposition Details**	Updates to the Authorization for Disposition do not change the death record data. The information is only aggregate to the Authorization for Disposition.	F - Future	Release Spring 2020
D155	**Update Death Certificate with Authorization for Disposition Information**	Document history for Authorization for Dispositions may include key information regarding the printing of the Authorization for Disposition, such as: number of times a permit has been printed for this case, person involved in the print request, and the Authorization for Disposition number.	W - Workflow or System Configuration Required	
Additional Rules for Green Burials				
D156	**Green Burials**	The system provides the user with a method to indicate that the burial will be at a green burial location.	E - Exact Match	
D157	**Green Burial Location List**	If the user selects green burial, the system provides the user with a list of green burial locations to select from.	E - Exact Match	
D158	**Auto-Populate Green Burial Information**	Once the user selects the green burial location, the system auto-populates fields based on the burial location selected.	E - Exact Match	
Additional Rules for Home Burials				
D159	**Authorization for Disposition Required for Home Burial**	An Authorization for Disposition is required for home burials.	E - Exact Match	
D160	**Note "Home Burial" on Authorization for Disposition**	The Authorization for Disposition includes notation of home burials.	E - Exact Match	
D161	**Note "Home Burial" on Certificate**	The death certificate includes notation of private property burials.	E - Exact Match	
D162	**Select "Home Burial"**	The system includes a method for the user to indicate home burials.	E - Exact Match	
D163	**Funeral Home License Number Not Required for Home Burials**	The system allows the funeral home license number to be an optional field in the event of home burials.	E - Exact Match	
D164	**No Funeral Home for Home Burials**	State users to capture the informant's information and demographic portion of the death record.	E - Exact Match	
D165	**Relaxed Edits For Home Burials**	The system allows for relaxed edits when home burial is selected as the method for disposition.	E - Exact Match	
D166	**Enter Method and Location of Disposition for Home Burials**	If the user indicates a home burial, fields related to the method and location of disposition are opened for the user to type in State-defined information.	E - Exact Match	
Additional Rules for Cemeteries and Crematories				
D167	**Cemetery/Crematory Users**	The system provides a role/profile for cemetery and crematory personnel.	E - Exact Match	

D168	Limited Role	Authorized cemetery/crematory users can only view records for decedents designated for their facility.	W - Workflow or System Configuration Required	
D169	Print Documents but Not Certificates	Authorized cemetery/crematory users can print documents but not certificates.	W - Workflow or System Configuration Required	
Additional Rules for Disinterment-Reinterment				
D170	Funeral Home Request	Funeral homes can create disinterment requests in the system.	E - Exact Match	
D171	Medical Examiner Requests	Medical examiners can create disinterment requests in the system.	E - Exact Match	
D172	Court Order Number	The system will capture court order numbers on disinterment permits, when a court order is needed.	W - Workflow or System Configuration Required	
D173	County of Court Order	The system will capture the county where the court order was issued.	W - Workflow or System Configuration Required	
D174	Capture Civil Action Number	The system will capture the civil action number.	W - Workflow or System Configuration Required	
D175	Capture Date of Court Order	The system will capture the date that the judge signed off on the court order.	W - Workflow or System Configuration Required	
D176	Create Disinterment-Reinterment Application and Permit	State users can create disinterment-reinterment permits in the system.	E - Exact Match	
D177	Next of Kin Signatures	The disinterment permit incorporates digital signature for next of kin, power of attorney, or executor.	F - Future	Release Spring 2020
D178	"No Court Order" Check Box	If request for disinterment was not created by court order, the system provides a check box that indicates that the request does not have a court order.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D179	Capture Requestor Information	When the "no court order" check box is selected, additional fields open to capture the requestor's information. Fields are State-defined and include, but are not limited to, requestor's name, address, and relationship to decedent.	W - Workflow or System Configuration Required	With GCOM VRMS new fields can easily be added or removed from the individual form pages.
D180	Capture 2 Signatures for No Court Order	If the "no court order" check box is selected, the system allows the disinterment request to be printed and captures signatures of both the FH Director and disinterment requestor.	F - Future	Release Spring 2020
D181	Scan and Attach Disinterment Request	The system allows users to scan the disinterment request signed by both FH Director and Requestor into the system and to attach it to the Disinterment-Reinterment Application and Permit.	W - Workflow or System Configuration Required	
D182	Disinterment Permit Queue	Disinterment permits are queued for State review and approval/denial.	W - Workflow or System Configuration Required	approves Disinterment permits that are associated to a Death Case.
D183	View Disinterment Permit Queue	The requestor can access the Permit and Authorization for Disposition Queue and view the State action (approve/deny).	W - Workflow or System Configuration Required	configurable to allow actions from the queue.
D184	Correct and Resubmit	The requestor can correct and resubmit a denied request.	E - Exact Match	
D185	Print Disinterment Permit and Authorization for Disposition	The requestor can access the Permit and Authorization for Disposition queue to print copies of the approved permit and the Authorization for Disposition.	E - Exact Match	

D186	**Create or Addend Authorization for Disposition**	Upon receiving State approval, the system produces or addends the Authorization for Disposition.	E - Exact Match	
D187	**Amend Disinterment-Reinterment Application and Permit**	The funeral home can submit a request to amend an approved permit if the disinterment date has changed from the previously specified date.	E - Exact Match	
D188	**Expiration Date of Permit**	Disinterment permits expire (60) days from the date of issuance; the system calculates that date of expiration.	W - Workflow or System Configuration Required	
D189	**Expired Permits**	The system closes permits that are more than 60 days old and places a hold on the permit. Permits with holds cannot be issued.	W - Workflow or System Configuration Required	currently set to lock out a Funeral Home from a case after 12 months.
D190	**Expiration Date Printed on Permit**	The date of expiration is printed on disinterment-reinterment permits.	W - Workflow or System Configuration Required	process allows fields to be quickly added to any printed documents.
D191	**Status of Expired Permits**	When a disinterment permit expires, its status changes to "expired" and the permit is placed in the Expired Disinterment-Reinterment Permit Queue.	W - Workflow or System Configuration Required	
D192	**Re-Issue Expired Permits**	A system user may re-issue an expired permit if the request is made by the original requestor. The status of the permit will be updated from "expired" to "re-issued". A new expiration date will print on the re-issued permit.	W - Workflow or System Configuration Required	
D193	**Re-Enter Requestor Information**	When an expired permit is requested to be re-opened the system prompts the user to enter the Requestor's information. Information must match original Requestor or re-opening of permit is denied.	W - Workflow or System Configuration Required	
D194	**"Re-Issue" Status Printed on Permit**	When an expired permit is re-issued, the status is printed as "re-issued" on the new permit.	W - Workflow or System Configuration Required	
D195	**New Expiration Date Printed on Re-Issued Permits**	When an expired permit is re-issued, a new 60-day expiration date is printed at the time of issuance.	W - Workflow or System Configuration Required	
D196	**No Charge to Re-Issue Expired Permit**	The system will calculate a no-charge for the re-issuance of expired permits.	W - Workflow or System Configuration Required	
D197	**Amend Place of Burial**	Funeral homes can submit a request to amend the place of burial once disinterment and reinterment is complete.	E - Exact Match	
D198	**Documentation for Amendment to Place of Burial**	Funeral homes must provide the completed and signed disinterment-reinterment permit when submitting a request for an amendment to the place of burial.	W - Workflow or System Configuration Required	
D199	**Authorized Signature**	Funeral home directors must sign and attest that the reinterment took place.	E - Exact Match	
D200	**Authorized Signatures if No Court Order**	If a court order is not linked to the disinterment-reinterment permit, the system will not allow the permit to be closed without the two signatures of a funeral home director and next of kin.	E - Exact Match	
D201	**Disinterment Permit Number**	The system will generate a unique disinterment-reinterment number for each permit.	E - Exact Match	
D202	**Scan and Attach Completed Permit**	Signed and completed disinterment-reinternment permits are scanned and attached to the amendment request.	W - Workflow or System Configuration Required	
D203	**Mass Disinterment-Reinternment**	If more than five (5) bodies are being reinterred, the EVRS user selects "Mass Reinterment." Selecting this option allows the user to add as many names to the permit as needed.	F - Future	Release Spring 2020

D204	**Mass Disinterment-Reinterment Permit**	When a mass disinterment-reinterment permit is issued and death certificates are not found in the EVRS to match each name on the request, the system puts a flag on that request and holds it in a queue.	F - Future	Release Spring 2020
D205	**Disinterment Queue**	A queue exists to track circumstances where death certificates do not exist for individuals disinterred through a permit, or the body of an out-of-state decedent buried in WV was disinterred.	W - Workflow or System Configuration Required	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
D206	**Reinternment Queue**	A queue exists to track circumstances where death certificates do not exist for individuals reinterned through a permit, or the body of an out-of-state decedent buried in WV was reinterned.	W - Workflow or System Configuration Required	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
D207	**Status of Permits in Queue**	The Disinterment-reinterment permit status is shown in the queue.	E - Exact Match	
D208	**Disinterment of OOS Resident Buried in WV**	If a decedent died in another state but was buried in WV, the disinterment-reinterment permit must capture the following information: State of death, date of death, death certificate number, name of decedent, and other State-defined information.	E - Exact Match	
D209	**Freestanding Permit**	If no death certificate can be linked to the decedent on the disinterment-reinterment permit, the system will allow "000000" to be entered for the death certificate number. Those numbers identify it as a freestanding disinterment-reinterment permit that is not linkable.	W - Workflow or System Configuration Required	GCOM VRMS currently disables the certificate number field when not linked to a death certificate.
D210	**Cremation Permits for Reinterments**	If the disinterment-reinterment permit states that the sole purpose of removing remains is to have them cremated, a funeral home director does not need to sign off on the permit. The permit is still needed to attain approval from the medical examiner for cremation.	W - Workflow or System Configuration Required	
D211	**Cremation Approval for Disinterred Remains**	If the disinterment-reinterment permit is for the sole purpose of cremating the remains, the EVRS user assigns the case to the medical examiner for their approval on the cremation permit.	W - Workflow or System Configuration Required	
D212	**Cremation Permits Can Substitute for Reinternment Permit**	If the disinterment-reinterment permit is for the sole purpose of cremating the disinterred remains, the cremation permit can substitute for reinternment permit. The cremation permit serves as the final approval for disposition in this case.	W - Workflow or System Configuration Required	
D213	**Cremation Permit and Disinterment Permit Linked**	When the cremation permit is substituted for the reinternment permit, both the disinterment permit and cremation permit are linked in the system through the death record.	W - Workflow or System Configuration Required	

END OF START A DEATH RECORD AT A FACILITY

BUSINESS PROCESS: START A DEATH RECORD AT A FUNERAL HOME

The funeral home is legally responsible for submitting the death certificate for filing with the State. Funeral homes may start records or continue records that have been started by other stakeholders such as a facility, medical examiner or medical certifier.

Once the funeral home has obtained the decedent information, the funeral home user enters or updates the demographic information in the decedent's record. The SSA verification executes automatically upon entering and saving the decedent's social security number. A verification copy of the worksheet may be printed for the family to review. If errors are found, the funeral home may access and edit the record as many times as needed to correct the information. Once the personal information is deemed accurate, the family signs the verification form. The funeral director electronically signs the personal information section of the certificate and a copy of the signed verification form is scanned and attached to the record.

Medical information may already have been certified by the medical certifier, in which case the record would be filed upon signing the personal information. Alternatively, the funeral home may assign the medical certifier and queue the record for the medical certifier to complete the medical information.

Once the funeral home has completed their portion of the record, they may request the number of certified copies required. Cremation permits may also be requested from the medical examiner through the system.

Description: Funeral Home notified of death (Box 1);

The funeral home is notified of the death either by the informant in person or through the system by a facility or medical certifier who has started the case and selected the funeral home.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D214	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D215	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D216	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D217	**Multiple Funeral Homes**	See rules above in Start a Death Record at a Facility Box 7 for additional rules referring to multiple funeral homes being listed.		
D218	**Funeral Home Prints Authorization for Disposition**	The system allows the funeral home to print the Authorization for Disposition in order to bring it to the scene to pick up the body.	E - Exact Match	
D219	**Standard Death Worksheet Available**	The system provides a standard death worksheet for collecting decedent information.	E - Exact Match	

Description: Funeral home user logs into EVRS and searches for the record (Box 2); Is there a match when searching for the record? (Box 3); If no, start a new case (Box 4); If yes, print an Authorization for Disposition (Box 5a) as well as printing a worksheet and meeting with the informant to collect decedent information (Box 5b)

Once logged in, the funeral home may access the queue of pending records and begin working on the case. If the user determines that the record is not in the pending queue, minimal demographic information regarding the decedent is entered to start the record. To avoid the creation of duplicate records, the system always searches for a record prior to starting a new record. The user reviews the records identified and determines if a match has been found. If no match is found, the user begins a new case.

If the user determines that a match exists, the user selects the record and prints an Authorization for Disposition and a worksheet and begins to meet with the informant to collect the decedent's information.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
D220	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D221	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D222	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D223	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D224	**Minimum Information to Start Record**	Please see rules for Start a Death Record at a Facility Box 3 for minimum demographic information rules.		
D225	**Active Record Queue**	The system provides a work queue for funeral homes for active records (records that are started but the personal information is not complete).	E - Exact Match	
D226	**Records Awaiting Medical Certification Queue**	The system provides the State with the ability to easily view all records that are awaiting medical certification.	E - Exact Match	
D227	**Certificates Ready for Pickup Notification**	The system provides a notification to funeral homes, stating that death certificates ordered through the system by the funeral home are ready for pickup and where to pick them up.	W - Workflow or System Configuration Required	GCOM VRMS sends the notification message but does not currently notify them of the facility for pick up.
D228	**Certificates in Mail**	The system provides a notification to funeral homes, stating that death certificates ordered through the system have been mailed to the funeral home.	E - Exact Match	
D229	**Ownership Rights**	The system checks to ensure that a funeral home user has the appropriate State-defined rights to start a record.	E - Exact Match	
D230	**Start Record**	If the system does not find a match, the funeral home user is allowed to start a new record if the funeral home user has access rights to the record.	W - Workflow or System Configuration Required	configured to allow Funeral Homes to start a record.
D231	**Access Denied**	If the system finds a record that has already been started in the system but the ownership belongs to another funeral home, the system will alerts the user with a message to call the State if s/he requires access.	E - Exact Match	
D232	**Cannot Start New Record**	The system will not allow a user to start a new record if a match is found by the system but the ownership belongs to another funeral home.	E - Exact Match	
D233	**Minimum Fields to Start Record**	The minimum fields required to start a record are State-defined.	E - Exact Match	
D234	**Screens Are Specific**	The screens for a funeral home to enter a death record are specific to funeral homes and display all fields necessary to submit the record to the State.	E - Exact Match	
D235	**Demographic Fields State-Defined**	The demographic data fields that are displayed for funeral homes are State-defined.	E - Exact Match	

Description: Open the record and complete/edit demographic portion (box 6)

Once the record has been accessed or started, the user enters the personal information. Edits are performed to inform the user of errors in the data. The user can correct the data, verify that the data is correct, or skip over the error and come back to correct it at a later time. The user can access the record as many times as necessary to complete the death record accurately.

If errors are found, the system displays the errors and prompts the user to correct the personal information. The funeral home may print an unofficial verification form copy to validate the information with the family once all fields are complete. This is an uncertified copy used to verify information. It is clearly marked "Not a legal copy."

The system interfaces with SSA through its published interface, OVS, to check the decedent's SSN. The interface performs according to specifications indicated by SSA and the system receives and records the results of the SSA validation process. If the information was not verified, the user can make corrections and resubmit the record up to five times. After five attempts, further attempts to verify are blocked by the OVS interface.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D236	**Complete Demographic**	The system allows an authorized user to complete the state defined demographic information for a death record.	E - Exact Match	
D237	**Time of Death**	The system does not allow a funeral home to enter the time of death.	E - Exact Match	
D238	**Date of Death**	The system does not auto-populate the date of death on the Authorization for Disposition when it is entered by a funeral home.	E - Exact Match	
D239	**Date of Death Verification Needed**	The system requires the date of death that is entered by a funeral home to be verified by a medical certifier before populating it on the death record.	E - Exact Match	
D240	**Hard Edit Fields May be Populated with "Unknown"**	Hard edit fields may accept a value of "unknown."	E - Exact Match	
D241	**Text Box for More Information on "Unknown"**	The system opens a text box for the user to enter additional information in State-defined fields where "unknown" **is** selected by a user.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D242	**Hard Edit Fields Resolved Prior to Submission**	All fields with hard edits are resolved prior to a record being submitted for registration in the system.	E - Exact Match	
D243	**Date Found**	When the record is marked "found," the date of death is the date found and the time of death is the time found.	W - Workflow or System Configuration Required	allows fields to be dynamically displayed based on other field
D244	**Date Found on Certificate**	For records marked "found," the date of death fields are labeled "Date Found" or some other State-defined title that dynamically populates on the certificate when printed.	W - Workflow or System Configuration Required	allows fields to be dynamically displayed based on other field selection.
D245	**Place of Death Options**	Place of death options are State-defined and include options such as: Hospital, Nursing Home, Residence, Assisted Living Facility, Other.	E - Exact Match	
D246	**Place of Death Accessible to All Record Owners**	Place of death is accessible on both the medical and demographic information screens.	W - Workflow or System Configuration Required	Place of Death and other medical related fields to the medical facilities
D247	**Place of Death Verification Needed**	The system requires the place of death that is entered by a funeral home to be verified by a medical certifier before populating it on the death record.	E - Exact Match	
D248	**Certifier Overwrites Place of Death**	The medical certifier can overwrite the place of death information entered by the funeral home.	E - Exact Match	
D249	**"Unknown" as Place of Death**	The system does not allow a user to select "unknown" for place of death.	E - Exact Match	

D250	"Other" as Place of Death	If "other" is selected for place of death, the user enters details in a text field.	E - Exact Match	
D251	"Hospital" as Place of Death	If "hospital" is selected for place of death, the user enters additional State-defined information. Options include: Inpatient, ER/Outpatient, and DOA.	E - Exact Match	
D252	Transient/Homeless Death	The system provides a manner of indicating that the decedent is homeless/transient.	E - Exact Match	
D253	Edits for Transient/Homeless Death	If the "homeless/transient" indicator is selected, the system relaxes edits on the entry of State-defined information.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D254	Demographic and Medical Sections May be Accessed Simultaneously	The system allows the assigned funeral home to access the demographic section of a record simultaneously to the medical certifier accessing the medical section of the record. The section not corresponding to a given user is locked.	E - Exact Match	
Additional Rules for Transfers				
D255	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
D256	Allow Funeral Home to Transfer Record to Another Funeral Home	The system allows a funeral home to transfer a record to another funeral home if the record has not been submitted to the State.	E - Exact Match	
D257	Allow State to Transfer Record to/from Another Funeral Home	The system allows the State to transfer a record to another funeral home.	E - Exact Match	
D258	In-State Funeral Homes Selected from List	When an in-state funeral home (system user) is selected **for the transfer**, the user selects the funeral home from a list and the system populates the appropriate fields with the funeral home's information.	E - Exact Match	
Additional Rules for Trade Calls				
D259	Trade Call	The system supports trade calls in which a funeral home acts as a broker for another funeral home.	E - Exact Match	
D260	Trade Call Option	When a funeral home begins a case, the system provides the option to indicate that the work being performed is a trade call.	E - Exact Match	
D261	Indicate if Trade Call is In-State or Out-of-State	The system provides a method to indicate if the funeral home requesting a trade call is in state or out of state, and which state they are located in.	E - Exact Match	
D262	Funeral Home Information for Trade Call	If the trade call option is selected, the system provides both funeral homes with the appropriate fields to capture their name, address, and license number and other State-defined fields.	E - Exact Match	
D263	Funeral Home on Record	The system will indicate which funeral home is requesting the trade call and which funeral home is performing the trade call. Only the funeral home performing the trade call will be the funeral home officially on record. The requesting funeral home will be notated elsewhere on record (for example, on the side).	E - Exact Match	
D264	Funeral Home on Record for OOS	If a WV death occurred but the burial is to take place OOS, the WV funeral home is required to file the death certificate (the funeral home on record) but the OOS funeral home is still noted elsewhere on the certificate.	E - Exact Match	
D265	Appropriate Signature	For trade calls, the personal information is marked complete and signed by the funeral home completing the record.	E - Exact Match	

D266	**Mark as Signed by Funeral Home Requesting Trade Call**	The system allows the user to indicate that the funeral home requesting the trade call has completed and signed off on the worksheet that accompanies the death record for a trade call. Record may be marked by selecting a check box indicating these actions have been completed.	W - Workflow or System Configuration Required	With GCOM VRMS new fields can easily be added or removed from the individual form pages.
D267	**Scan Worksheet**	Worksheets completed by an out-of-state funeral homes are scanned and attached to the death record.	E - Exact Match	
D268	**Funeral Home Forgets to Indicate Trade Call**	If the funeral home does not indicate that the case is a trade call, the system provides the opportunity to indicate the trade call after the case has been started.	E - Exact Match	
Additional Rules for Data Entry				
D269	**Occupation and Industry**	Please see General Requirements, II - Occupation and Industry, regarding rules related to occupation and industry.		
D270	**Funeral Home Changes Personal Information Already Entered**	The funeral home is responsible under statute for the personal information section and may change any or all of the fields previously entered by a facility, medical examiner, or medical certifier.	E - Exact Match	
D271	**Selectable Lists and Associated Edits Conform to State Statute and NCHS/NAPHSIS Guidelines**	Selectable lists and the associated edits are defined according to State statute and NCHS/NAPHSIS guidelines (or equivalent). For example: "Retired" is not an acceptable entry for occupation; the occupation prior to retirement is to be listed.	W - Workflow or System Configuration Required	GCOM VRMS allows for completely configurable list items in addition to configurable validation rules.
D272	**Funeral Home May Change Information**	The system allows a funeral home to make changes to the minimum information entered to start a record prior to submitting the record to the State.	E - Exact Match	
D273	**County of Death**	The county of death is auto-populated from the Authorization for Disposition.	E - Exact Match	
D274	**Auto-Populate Address of Facility**	When the funeral home selects a facility from a list, the address of the facility is auto-populated.	E - Exact Match	
D275	**Display Name of Funeral Directors in Selectable List**	The system provides a method of selecting the name of the funeral director in the system.	E - Exact Match	
D276	**Auto-Populate Funeral Director License Number**	The license number of the funeral director is auto-populated from the selection of the funeral director's name.	E - Exact Match	
D277	**Name of Embalmer**	The system will capture the name of the funeral home that was the embalmer.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D278	**"Other" Disposition Option**	If "other" is selected for the method of disposition, the system provides a mandatory text field for users to enter comments.	E - Exact Match	
D279	**Cemetery List**	The system provides the user with a list of cemeteries to select from for cemetery burials.	E - Exact Match	
D280	**Auto-Populate**	The system auto-populates the cemetery information if a cemetery is selected.	E - Exact Match	
D281	**Allow Funeral Home to Enter Date of Death**	The system allows the funeral director to enter the date of death if it has not already been entered by a medical certifier.	W - Workflow or System Configuration Required	Pronouncement related pages to the medical facilities and government

D282	**Allow Funeral Home to Enter Date of Death**	When the funeral director enters the date of death, the record is flagged to ask for verification of the date by the medical certifier when s/he completes the record.	W - Workflow or System Configuration Required	
D283	**Enter Date of Death Range**	The system allows all users to enter a date of death range when searching for a record.	E - Exact Match	
D284	**Enter Time of Death Range**	The system allows all users to enter a time of death range when searching for a record.	W - Workflow or System Configuration Required	
D285	**NCHS Time of Death**	The system pulls the initial time entered for the time of death range for NCHS.	E - Exact Match	
Additional Rules for Edits				
D286	**Hard Edits**	Certain State-defined fields have hard edits that do not allow the user to continue until all errors are corrected. Examples of such fields include, but are not limited to: name, sex, DOB, DOD, age, place of death and type of patient (i.e.: in-patient, DOA or ER outpatient) or other State-defined fields.	E - Exact Match	
D287	**State-Defined Soft Edits for Interrelated Fields**	The State is able to define soft edits for interrelated fields such as decedent's name, spouse's name or informant's name to ensure that spelling is the same.	E - Exact Match	
D288	**Standardize Decedent Address**	The decedent address is validated using the USPS standards.	E - Exact Match	
D289	**Standardize Place of Death Addresses**	The place of death address is validated using the USPS standards.	E - Exact Match	
D290	**Correct Addresses That Do Not Validate**	The user is provided with a message and the opportunity to correct the addresses of the decedent or place of death if they do not validate.	E - Exact Match	
D291	**Override Address Standardization**	The user can accept the address entered even if the USPS software cannot validate it.	E - Exact Match	
D292	**Consistency of Last Name**	The system checks for errors when last names are only slightly different and prompts the user to change or confirm the difference (for example, Smith versus Smyth).	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system
Additional Rules for OVS				
D293	**Auto-Execute SSN Verification**	The SSN verification executes automatically once the SSA required fields for OVS are populated.	E - Exact Match	
D294	**Meet SSA Requirements**	The OVS interface works according to the specifications defined by SSA.	E - Exact Match	
D295	**Store Flag**	The system stores a flag in the record that indicates a SSN match or no match.	E - Exact Match	
D296	**Provide Message Back to Funeral Home**	The system provides a message to the funeral home or other users, as defined by their role, about the status of the validation of the social security number.	E - Exact Match	
D297	**SSN Verification for Trade Calls**	In the case of a trade call, the SSN verification is executed when the required fields are present regardless of which funeral home enters the data.	E - Exact Match	

D298	**View Status of SSN Validation**	The system provides the State with the ability to view all records that have not successfully validated through the OVS, the number of attempts made at validating the SSN, and the current reason why they are not validating.	W - Workflow or System Configuration Required	related information and a queue can be set up show all of the non-validated records.
D299	**View "Awaiting Response" Status on SSN Validation**	The system provides the State with the ability to view, in a summary format, all records that are awaiting a response from the SSA.	W - Workflow or System Configuration Required	related information and a queue can be set up show all of the non-validated

Description: Print verification copy (Box 7); Info correct? (Box 8); Scan and attach signed copy to record (Box 9)

When the funeral home user has entered the demographic information into the system, the user has the option to either print a verification copy for the informant to review and sign, or to have the informant review and sign the verification form electronically. If the information is not correct, the user edits the record in the system and reprints the verification copy. The informant signs the verification copy, acknowledging that the information is correct, and the form is then scanned and attached to the record. Alternatively, the informant can review the verification form on a screen and sign it electronically if the information is correct.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D300	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
D301	**Display Verification Copy of Demographics**	The system allows a user to display the verification copy with a State-defined watermark such as "For Demographic Verification Only" and/or "Not Legal Copy," for approval by the informant electronically.	E - Exact Match	
D302	**Review and Sign Electronically**	The system provides the option for the informant to review and sign the verification form electronically.	E - Exact Match	
D303	**Print Verification Copy of Demographics**	The system allows a user to print a verification copy with a State-defined watermark such as "For Demographic Verification Only" and/or "Not Legal Copy," for signature and approval by the informant.	E - Exact Match	
D304	**Access Verification Form Multiple Times**	The system allows a user to display or print the verification form multiple times.	E - Exact Match	
D305	**View Records and Documents Only for Cases Funeral Home Owns**	A funeral home user can view records and documents if they are the designated owner or have been granted access rights.	E - Exact Match	
D306	**Print Burial, Cremation, or Disinterment-Reinterment Permits with Authorization**	Funeral home users may print burial, cremation, or disinterment-reinterment permits from the system only if authorized by the State or medical examiner.	E - Exact Match	
D307	**Record Status**	The record status shows the progress of a record and which funeral home it is owned by.	E - Exact Match	
D308	**Attach Electronically-Signed Forms**	Electronically-signed verification forms are attached to the death record.	E - Exact Match	
D309	**Scan and Attach Paper Forms**	Multiple paper forms and documents such as signed verification forms can be scanned and attached to a death record.	E - Exact Match	

Description: Sign certificate electronically with PIN (Box 10); Request screen (Box 11); Order copies (12); Is the medical certification complete?(Box 13); If yes, the record is registered and assigned a SFN/LFN (Box 14); If no, the user selects a medical certifier; a notification is sent that the record is ready for MC (Box 15)

Once the certificate is signed electronically with the user's PIN, the user may access the request screen and order copies of the death certificate. When this happens, the system checks to see if the medical certification is complete. If the medical certification is complete, the record is registered and assigned a State File Number (SFN) and a Local File Number (LFN). If the medical certification is not complete, the user must select a medical certifier to complete the medical information.

The funeral director may request a cremation permit electronically and queue it for the medical examiner to review. All cremation permits must be denied or approved and signed by the medical examiner.

The system prompts the funeral home to enter the number of copies that need to be printed after the record has been registered. Veteran copies can also be ordered online by the funeral home. Funeral homes may request certified copies either from the county of death or from the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D310	**Electronic Signatures**	Please refer to the General Requirements section S - Electronic Signatures for all rules related to electronic signatures.		
D311	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D312	**Ready-to-Sign Queue**	The system provides a queue for all records that are ready to sign at the funeral home.	E - Exact Match	
D313	**Medical Certifier Queue**	Once a medical certifier is assigned, the record is queued for the medical certifier.	E - Exact Match	
D314	**Pending COD/Manner of Death Queue**	The system provides a work queue of all records for a given funeral home that have a "pending COD" and/or "pending manner of death."	E - Exact Match	
D315	**View Status of Medical Information**	After the personal information has been completed, the user can easily see whether the medical portion has been certified.	E - Exact Match	
D316	**Assign Medical Certifier**	The system allows the user to assign a medical certifier, if known.	E - Exact Match	
D317	**Medical Certifier List**	The system provides the user with a State-defined list of medical certifiers.	E - Exact Match	
D318	**Funeral Home Still Tracks Record**	Funeral homes can review all records that have been submitted to a medical certifier which have not yet been completed and submitted to the State.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D319	**Read Receipt for Messages**	The system generates read receipts when the medical certifier has opened a message notifying them of a pending record in their queue.	E - Exact Match	
D320	**Read Receipt for Viewing Records**	The system generates a read receipt when the medical certifier has opened and viewed the death record.	E - Exact Match	
D321	**Update Case Status**	When the case is queued for signature, the case status is updated in the system to "Active - Ready to be Signed" or an equivalent meaning.	E - Exact Match	
D322	**Funeral Director Access**	The system allows any licensed funeral director to electronically sign records for the funeral home(s) with which s/he is associated.	E - Exact Match	
D323	**Funeral Director Attestation Message**	Prior to certification, a State-defined message appears on screen, asking the user to attest to the accuracy of the documents to be signed.	E - Exact Match	
D324	**Display Signature Confirmation**	The system informs the user of the successful completion of the signature.	E - Exact Match	
D325	**Ability to Unsign a Signed Record**	The system provides the ability for the original signatory to unsign the personal information section, correct an error, and resign the record before it is submitted for registration.	E - Exact Match	

D326	Quick Login Process for Signer	In cases where the user logged on is not the certifier, the system provides a method to quickly and easily access the signature login screen by the authorized signer to sign the personal information section.	E - Exact Match	
D327	Once Signed, Revert to Original User	Once the personal information section is signed by an authorized user, the system logs off the signer and reverts back to the login privileges of the user who was originally logged in.	E - Exact Match	
D328	Set Case Status	The systems sets the record status to "Active - Demographics Signed" or its equivalent once the demographic information section has been signed.	E - Exact Match	
D329	Fact of Death File	The record is ready for export as soon as the demographic information is certified by the funeral home.	E - Exact Match	
D330	Submit to State	Once a record has been certified by both the funeral home and medical certifier, the system submits the record to the State.	E - Exact Match	
D331	Confirmation Message	The user receives a confirmation message that the record has been submitted and no further action is required.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D332	Request Certified Copies	The system allows funeral homes to request certified copies of the death certificate from the State or County.	E - Exact Match	
D333	Designate Certified Copies	When requesting certified copies, the funeral home designates a method of delivery (such as mail or a pickup location).	E - Exact Match	
D334	Provide Mailing Address	If the funeral home indicates that certified copies are to be mailed, the funeral home enters the mailing address of the recipient.	E - Exact Match	
D335	Capture Distribution Information	The system allows a funeral home user to select multiple distribution methods within a request for certified copies.	F - Future	Release Spring 2020
D336	Select Location to Pick Up Copies	The system provides the ability for a user to indicate the location of the office they would like to pick up certified copies at.	E - Exact Match	
D337	Apostille at State Only	Certified copies with an apostille may only be requested from the State.	W - Workflow or System Configuration Required	certain certificates/copies based on user authorizations.
D338	Message Funeral Home	A message is sent by the system to the funeral home when the request for certified copies is filled.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D339	Veteran Copies	Veteran copies of death records include the watermark "for government use only."	W - Workflow or System Configuration Required	system allows for easy placement of any custom watermark.
Additional Rules for Cremation Permits				
D340	Submit Request to Medical Examiner	The system includes the ability for a funeral home to submit an electronic request to a State medical examiner for a cremation permit.	E - Exact Match	
D341	Rush to Burial	The system provides a way for death record requests to be rushed for religious reasons. The death record includes a "rush to burial" checkbox, which places the record in the Rush To Burial Queue.	W - Workflow or System Configuration Required	
D342	Rush to Burial Queue	Death certificates that have the "rush to burial" checkbox selected go into the Rush Burial Queue.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D343	Cremation Permit Rush	If the "rush to burial" checkbox is selected and "cremation" is selected as the method for disposition, an alert is sent to the ME to notify them of the rush-approval needed on the cremation permit.	W - Workflow or System Configuration Required	

D344	Alert County ME of Cremation Permit Rush	If the request for a cremation permit within a rush order falls on a weekend (defined as Saturday and Sunday), the system alerts the OCME as well as the ME from the county where the death occurred.	W - Workflow or System Configuration Required	
D345	Non-Contagious Letter for Out-of-Country Transport	The system can generate and print a non-contagious disease letter for transporting bodies out of the country.	W - Workflow or System Configuration Required	
D346	Certify Non-Contagious Letter	The non-contagious disease letter must be certified by a medical examiner, State epidemiologist, county health officer, or other State-defined users.	F - Future	Release Spring 2020
D347	Embalmer's Affidavit for Out-of-Country Transport	The system can generate and print an embalmer's affidavit for transporting bodies out of the country.	W - Workflow or System Configuration Required	
D348	Pending Queue - FH	The system provides a queue, for funeral homes, of cremation permit requests that are pending approval.	E - Exact Match	
D349	Pending Queue - Medical Examiner	The system provides a queue, for medical examiners, of cremation permit requests that are pending approval.	E - Exact Match	
D350	Medical Examiner Refuses Permit	The system provides the ability for medical examiners to refuse a cremation permit request.	E - Exact Match	
D351	Refused Permits	Once a cremation permit has been refused, the system does not allow another OCME or county ME to sign the permit.	E - Exact Match	
D352	Leave Queue	The system removes a record from the pending queue once the cremation permit is approved.	E - Exact Match	
D353	Medical Examiner Views Death Certificate	The system allows the medical examiner to see the death certificate so that s/he can authorize the cremation permit.	E - Exact Match	
D354	Medical Examiner Verifies Death Certificate	Prior to signing the cremation permit, the system must verify the following fields with soft edits: name of decedent, pronouncing physician signature, certifying physician signature, name and title of certifying physician, date certified, date of death, time of death, date pronounced, cause and manner of death, medical examiner referral (if referred).	E - Exact Match	
D355	Medical Examiner Electronically Signs Cremation Permit	The medical examiner electronically signs the cremation permit.	E - Exact Match	
D356	Cremation Permit Fee	The system has the ability to collect a State-defined fee for a cremation permit.	F - Future	Release Spring 2020
D357	Private Autopsy	The system has a manner for indicating that the decedent's family has requested a private autopsy.	E - Exact Match	
D358	Capture Autopsy Information	If "private autopsy" is selected, the system provides fields for an authorized user to enter information regarding the autopsy. Information captured is State defined.	E - Exact Match	
D359	Scan and Attach Autopsy Documents	The system allows an authorized user to scan and attach autopsy documents to a record.	E - Exact Match	
D360	Disallow Cremation Permit if "Private Autopsy" Indicated	If "private autopsy" is selected, the system does not allow the medical examiner to authorize the cremation permit until a funeral director attests to the completion of the autopsy.	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system
D361	Funeral Director Attests to Completion of Private Autopsy	The system provides a method for the funeral director to attest to the completion of a private autopsy.	W - Workflow or System Configuration Required	

D362	**Authorization for Disposition After Autopsy**	Once the autopsy is completed, the system requires the signature of a medical certifier on an Authorization for Disposition.	E - Exact Match	
D363	**Alert to Original Medical Certifier on Record**	If the autopsy was not initiated by the original medical certifier on record, the system sends an alert to the original medical certifier once the autopsy is completed.	W - Workflow or System Configuration Required	[illegible] services in addition to system internal messages to easily convey case information to appropriate parties.
D364	**Medical Examiner Prints Cremation Permit**	The system allows the medical examiner to print cremation permits.	W - Workflow or System Configuration Required	cremation permits set up as a separate document from the Disposition permit.
D365	**Print Cremation Permit**	Once the medical examiner has electronically signed the cremation permit, it is queued for the funeral home to print.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D366	**Turn On and Off Printing Ability**	The system allows the State to turn on and off the ability for a system user to print a cremation permit.	W - Workflow or System Configuration Required	operation system allow for easy configuration of a user's authorizations.
D367	**Authority to Print Cremation Permit**	Cremation permits may be printed by authorized users at any funeral home who owns or has access to the record.	E - Exact Match	
D368	**Permit Includes SFN and LFN**	Cremation permits include the file date and SFN and LFN.	E - Exact Match	
D369	**Leaves Queue**	Once the cremation permit has been printed, it leaves the funeral home's Pending Queue.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D370	**Control Number**	The cremation permit has a unique number assigned by the system to link it to the death certificate. These numbers are different from the case number and the state file number.	E - Exact Match	
D371	**Unlimited Number of Copies**	The system allows an unlimited number of copies of a cremation permit to be printed.	E - Exact Match	
D372	**Link Permit Information to Record**	Printing of the cremation permit may be captured in the document history and linked to the death record.	E - Exact Match	
D373	**Update Death Certificate with Permit Information**	Document history for cremation permits may include key information regarding the printing of the permit such as, but not limited to, number of times it has been printed for this case, who is involved in the print request, and cremation authorization number.	E - Exact Match	

Description: Record queued for MC (Box 16); MC accesses queue (Box 17)

If the medical certifier is a system user, the record is queued for the medical certifier. When the medical certifier logs into the system, the system displays the records queued for review.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D374	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D375	**Query and Rejection Cycle**	Please see Query and Rejection Cycle business rules, regarding rules related to rejection and corrections of the system records.		
Additional Rules for Rejecting				
D376	**Capture Reason for Rejection**	The system requires a user to enter, in a text open field, the reason(s) why a record has been rejected back to a funeral home.	E - Exact Match	
Additional Rules for Notifications				

D377	**"Out-of-Office" Notification with Forwarding Ability**	If the medical certifier is out of the office for an extended period of time (e.g. vacation, illness), s/he has the ability to attach an "out-of-office" notification to his/her system mail box and provide a forwarding authority.	W - Workflow or System Configuration Required	
D378	**Acknowledgement of "Out-of-Office" Notification**	The system acknowledges the "out-of-office" notification and automatically forwards the message to the authority delegated by the absent certifier.	W - Workflow or System Configuration Required	
D379	**Queue for Delegated Authority**	Upon an "out-of-office" delegation, any record that is queued for the absent certifier is forwarded to the delegated authority.	W - Workflow or System Configuration Required	
D380	**Date and Time Stamp When Sent to Delegated Authority**	The system automatically date and time stamps a record that is forwarded to a delegated authority.	W - Workflow or System Configuration Required	
D381	**Notify Funeral Home if Record Not Accessed**	The system notifies the funeral home if the medical certifier does not access the record within a State-defined, pre-established time frame.	W - Workflow or System Configuration Required	
D382	**Indicate That Notification Was Sent**	The system indicates in the death record that a notification was sent to the medical certifier and the date that the message was sent.	W - Workflow or System Configuration Required	

Description: M.C. completes medical information and enters PIN (Box 18) Then the record is registered and assigned SFN (Box 14)

The medical certifier reviews the records in the queue to determine if s/he is the most appropriate person to complete the medical information, including the COD. If the medical certifier determines that s/he is the most appropriate person to complete the medical information, s/he enters that information into the record. While medical staff may be authorized to enter the medical information, only the medical certifier may certify the medical information. The system authenticates that the user is the medical certifier who is authorized to certify the medical information. Once the user has been authenticated, the medical certifier enters the medical information and the system runs the medical edits. Suggested spelling, full spelling of abbreviations, and other suggestions are displayed and the information is corrected. Edit checks are re-ran until there are no errors within the record. The certifier electronically signs the death certificate.

If the medical certifier believes that s/he is not the most appropriate person to certify the medical information, s/he notes the record accordingly. The medical certifier may choose to send the record back to the funeral home or forward it to another medical certifier. The medical certifier may alternatively decide that the case should be reviewed by a medical examiner and to forward the record. The medical certifier is required to submit a case to a medical examiner if the COD is suspected of being non-natural. The record is queued accordingly. The system sends notifications to the appropriate user, indicating that there are records pending for review, and to the funeral home, indicating that the record has been refused by a medical certifier and forwarded to another medical certifier or medical examiner.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D383	**Exports and Imports**	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
D384	**Specific Exports and Imports**	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
D385	**Time Period for Certifying Medical Information Rules**	Please see Time Period for Certifying Medical Information rules in the alternative flow at the end of the Death rules.		
D386	**Registration**	See the Registration business rules for all rules related to the registration of a death record.		
Additional Rules for Entering Medical Information				
D387	**Complete Medical Information Fields**	The user may complete the medical information fields at the time they start the record, if they have the correct role and profile to do so.	E - Exact Match	
D388	**Medical Certifiers Sign for Each Other**	All medical certifiers within the same facility may certify records for one another. The system captures the information for the medical certifier who certifies the record.	E - Exact Match	

D389	**Entering Medical Information**	The medical information may be entered by someone other than the medical certifier, based on roles and profiles.	E - Exact Match	
D390	**Edit Medical Information While Another User is in Record**	The system allows a medical certifier to log into the system, while another user is in the record, to review and edit the medical information.	E - Exact Match	sign in on same session or just two people in separate sessions
D391	**Medical Certifier Access**	The system allows a medical certifier to electronically sign records with which s/he is associated.	E - Exact Match	
D392	**Medical Certifier Attestation Message**	Prior to certification, a State-defined message appears on screen, asking the user to attest to the accuracy of the document being signed.	E - Exact Match	
D393	**Return to Original Profile**	Upon completing the certification and electronically signing the record, the system returns to the original user's profile.	F - Future	Release Spring 2020
D394	**Fields and/or Screens Dynamic Based on Cause**	The medical information fields are dynamic based on the COD. For example, if a medical certifier is logged on and indicates that the cause is "natural," all fields related to "injury" are disabled or not displayed. Conversely, if the medical certifier indicates the cause is "accidental," all fields related to "injury" are available to the user.	E - Exact Match	
D395	**Override Date of Death**	A medical certifier can override the "date of death" entered by the Funeral Home.	E - Exact Match	
D396	**Send Case to Medical Examiner**	When a medical certifier selects certain State-defined manners of death, such as non-natural, suicide, or homicide, the system locks the medical information fields and a message tells the user that the record needs to be assigned to a medical examiner.	W - Workflow or System Configuration Required	GCOM VRMS uses a validation system hard edit to inform the user to request Medical Examiner review. This rule is fully configurable to meet required needs.
D397	**Medical Certifier Cannot Change Medical Examiner Data**	A medical certifier cannot change any medical information entered by a medical examiner.	W - Workflow or System Configuration Required	
D398	**Prompt to Verify Date and Time of Death**	If the date of death or time of death have previously been entered by someone other than the medical certifier, the system prompts the medical certifier to verify the information that was previously entered.	W - Workflow or System Configuration Required	
Additional Rules for Entering COD				
D399	**CDC COD Standards**	The system fires edit checks to ensure that the immediate and underlying COD are compatible and in the correct order, based on CDC COD standards.	E - Exact Match	
D400	**NCHS COD Coding**	The system conforms to NCHS COD coding rules.	E - Exact Match	
D401	**Error Message for COD**	The system alerts the user with a pop-up message when the cause-of-death edits fire, asking the user to correct any errors found.	E - Exact Match	
D402	**COD May NOT be from Pick List**	COD information is NOT entered from a pick list. The medical certifier enters the information by typing the causes associated with the death.	E - Exact Match	
D403	**Link to General Instruction Screen for COD**	When the COD section of the electronic death certificate is open, a link appears for a user to click on to take them to a general instruction screen with information per the NCHS Recommendations for Entry of COD.	E - Exact Match	
D404	**Support Interactive Entry of COD**	The system supports the interactive edits during COD entry that conform to the standards established by NCHS for COD entry in an automated environment.	E - Exact Match	

D405	**Provide Prompts When Abbreviations are Entered**	If the medical certifier enters an abbreviation in a COD field, the system issues a message with the fully written-out cause and allows the medical certifier to select the terminology suggested to clarify the abbreviation, or to enter a new cause.	E - Exact Match	
D406	**"Vague" Causes of Death Rejected**	If a COD entry matches an entry in the "Vague" table as insufficient or too vague, the system generates a prompt indicating that further information is needed.	E - Exact Match	
D407	**Rare Causes**	If a COD entry matches an entry in the "Rare" table, the system displays a message indicating that the State requests verification of the COD entered.	E - Exact Match	
D408	**Unlikely Underlying Causes**	The system includes an edit that flags unlikely underlying causes of death (per the NCHS recommendations for entry of COD), if one is reported on the lowest entered line.	E - Exact Match	
D409	**Flagged Underlying Causes Generates Error Message**	A flagged underlying cause generates an error message box, stating that the underlying cause indicated is normally a complication of a more specific condition, and asking the medical certifier to enter a more specific condition.	E - Exact Match	
D410	**Flag Unacceptable Causes**	The system has an edit that flags unacceptable causes, if they are the only cause reported or are reported on the lowest line of the certification.	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system
Additional Rules for Referring to Medical Examiner				
D411	**Medical Certifier Sends Case to Medical Examiner**	The assigned medical certifier can refer a case to a medical examiner, provided that the case has not previously been reviewed by a medical examiner.	E - Exact Match	
D412	**Note Medical Examiner Refusal in Record**	If the medical examiner refuses a case that is referred, the system documents in the record that the medical examiner was contacted and refused the case.	E - Exact Match	
D413	**Refer to Medical Examiner**	If a record has been referred to a medical examiner, any medical information previously entered by a medical certifier will be removed from the record but saved in the document history.	E - Exact Match	
D414	**Refer Registered Record to Medical Examiner**	Once a death record has been registered, it may only released to a medical examiner by an authorized State user.	E - Exact Match	

D415	**Medical Examiner Cases**	Medical examiner cases include all unnatural deaths, deaths outside a facility, or from an injury, in addition to all of the following circumstances: 1) A person dies without benefit of having a pre-existing patient relationship to a treating physician; 2) A person who is in apparent good health and dies suddenly when there is no history or other reliable evidence of serious natural disease, or other circumstance, so as to be able to reasonably assume death due to natural causes; 3) Any death of an inmate in a public institution such as a jail dies while in the institution, or while in police custody, during police intervention, during court-ordered hospitalization, or when the death is believed to be due to, or in association with failure to receive code mandated public services provided by county, state or federal social service agencies; 4) A person dies due to, or in association with, environmental conditions suspected to pose a hazard to public health or safety; 5) A person dies due to, or in association with, violence, suspected violence, or by any suspected external cause, regardless of the interval between the injury and death; or 6) A person dies under any suspicious conditions, or in any unusual or unnatural manner.	E - Exact Match	
D416	**Medical Examiner Status Code**	If the case is referred to the medical examiner, the case status is updated to "Active-Assigned to medical examiner " or equivalent.	W - Workflow or System Configuration Required	GCOM VRMS' status system is quickly configurable to add new statuses.
D417	**Medical Certifier Assists Medical Examiner with Review**	The medical certifier referring the case can enter information in a text field to assist the medical examiner in making a determination as to whether the medical examiner takes jurisdiction of the case.	E - Exact Match	
D418	**Ownership Change**	In the event that the medical examiner takes the case, the ownership of the medical information changes to the medical examiner.	E - Exact Match	
D419	**Notification of Case Referral**	If a medical certifier refers a case to a medical examiner, a notification is sent to the medical examiner and the funeral home, and the record is queued for the indicated person (e.g., medical examiner).	W - Workflow or System Configuration Required	GCOM VRMS does Twilio messaging services in addition to system internal messages to easily convey case information to appropriate parties.
D420	**Capture Date and Time Sent to Medical Examiner**	The system automatically captures the time and date that a record is sent to a medical examiner who is a system user.	E - Exact Match	
Additional Rules for Declining to Certify				
D421	**Decline to Certify**	If the medical certifier declines to certify, the system does not allow the user to enter any information into the medical information section.	E - Exact Match	
D422	**Decline to Certify - Reason Pick List**	If the medical certifier declines to certify, the system provides the user with a State-defined selectable list of reasons, including "other," as to why s/he is declining to certify; the user selects a reason prior to forwarding the record. If "other" is selected, a text box opens for the medical certifier to explain why s/he has declined.	F - Future	Release Spring 2020
D423	**Reassign Medical Certifier**	If a medical certifier declines to certify a record, s/he may reassign the case to another medical certifier.	E - Exact Match	
D424	**Capture Date and Time of Reassignment to Another Medical Certifier**	The system automatically captures the time and date that a record is reassigned to another medical certifier.	F - Future	Release Spring 2020

Additional Rules for Edits				
D425	**Interfaces**	Please see the General Requirements section J - User Interface for all rules related to interfaces.		
D426	**Identify and Correct Errors**	Hard edit errors are identified and corrected prior to certifying the COD.	E - Exact Match	
D427	**Run NCHS Edits**	Once the medical data is entered, the system automatically runs the NCHS edits against the record.	W - Workflow or System Configuration Required	validation on the COD when the user selects the validate COD button.
D428	**COD Edits Run Against SuperMICAR Dictionary**	The COD edits include running the data against the SuperMICAR dictionary for checking spelling and terminology.	E - Exact Match	
D429	**Manner and Cause**	There are cross-field edits between the manner of death and the cause of death.	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system
D430	**Immediate and Underlying**	There are cross-field edits between the immediate cause of death and the underlying cause of death.	W - Workflow or System Configuration Required	GCOM VRMS uses a configurable validation rule system
D431	**Ability to De-Select NCHS Edits**	The system provides the functionality for the State to de-select one or multiple NCHS edits.	E - Exact Match	
D432	**Allow for State-Specific Edits**	The system edit checks allow for the incorporation of State-specific edits.	E - Exact Match	
D433	**Edit Sets Depend on Type of Entry**	The system accommodates differences in the edit sets that run when a record is entered by a medical certifier (potentially more strict), versus edits that run when medical information is typed at the State after the medical certifier has completed a form (drop-to-paper or fully-paper methods, where only a few types of edits would cause a rejection).	E - Exact Match	
D434	**Soft Edits on COD**	If a soft edit is displayed on the COD field and the user does not change the response after the message, the user enters an explanation in a comment field.	E - Exact Match	
D435	**Spell-Check for Medical Terms**	The system interfaces with Views 2 to check spelling of medical terms.	E - Exact Match	
D436	**Record Status**	When the record has completed the edit check, the status of the record changes to "Active - ready to certify" or equivalent.	E - Exact Match	
Additional Rules for Signatures				
D437	**Electronic Signatures**	Please refer to the General Requirements section S - Electronic Signatures for all rules related to electronic signatures.		
D438	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D439	**Ready-to-Sign Queue**	The system provides a queue for all records that are ready to sign.	E - Exact Match	
D440	**Auto-Populate Medical Certifier Information**	The system auto-populates the medical certifier information (name, address, license number and other State-defined data) and date certified once the user has electronically signed the record.	W - Workflow or System Configuration Required	GCOM VRMS currently autopopulates the information as soon as the certifier is selected.
D441	**Update Case Status**	When the case is queued for signature, the case status is updated in the system to "Active - Ready to be Signed" or equivalent meaning.	E - Exact Match	

D442	**Medical Examiner May Sign**	The system allows any licensed medical examiner to electronically sign records for the facility with which s/he is associated.	E - Exact Match	
D443	**Display Signature Confirmation**	The system informs the user of the successful completion of a signature.	E - Exact Match	
D444	**Ability to Unsign Signed Record**	The system provides the ability for the original signatory to unsign the medical information section, correct an error, and resign the record before it is submitted for registration.	E - Exact Match	
D445	**Once Signed, Revert to the Original User**	Once the medical information section is signed by an authorized user, the system logs off the signer and reverts back to the login privileges of the user who was originally logged in.	E - Exact Match	
D446	**Set Case Status**	Set case status to "Active - Certified" or equivalent once the COD has been certified.	E - Exact Match	
D447	**Display Confirmation Screen**	The system requests a positive confirmation that the medical certifier wishes to certify the medical information prior to signing the record.	E - Exact Match	

Description: COD rapid reporting or violent death? (Box 19); Message sent to the State and county (Box 20)

If the COD needs rapid reporting, a message is sent to the addresses on file for that COD.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D448	**Reportable COD**	If the COD is considered a reportable condition, the system sends a notification to the appropriate location/registry. The notification contains the necessary decedent information to automatically update the location/registry.	E - Exact Match	
D449	**State-Defined Reportable Causes in Rapid Reporting**	The causes of death that are reportable using the rapid reporting feature are defined and managed by the State.	F - Future	Release Spring 2020
D450	**Occurrences Over Threshold**	The system allows designated users to indicate additional causes of death which are reportable, based on a State-defined number of occurrences within a specified time period.	F - Future	Release Spring 2020
D451	**Multiple Locations**	Each COD notification may be reported to multiple locations, users and/or registries at the State.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case

END OF START A DEATH RECORD AT A FUNERAL HOME

BUSINESS PROCESS: MEDICAL CERTIFIER STARTS THE RECORD

A death occurs, the medical certifier logs into the system and enters the minimal demographic information to start the record. The medical certifier completes the medical information and certifies the record. If the medical certifier knows the funeral home s/he may select the funeral home and the record is queued for the funeral home. If in the time it took for the medical certifier to complete his/her portion of the record the funeral home completed the demographic information, the record is released to the state for registration.

If the medical certifier knows the funeral home the record will be queued for the funeral home. The funeral home will complete the demographic portion of the record and certify it.

If the medical certifier does not know the funeral home s/he may leave the demographic portion blank and only the medical portion of the record is certified and submitted. Once the funeral home has been chosen, the funeral home can search for the record and complete the demographic portion.

Description: Death occurs (Box 1); M.C. logs into EVRS (Box 2); Complete minimal demographic information (Box 3)

A medical certifier may start a record in the system. S/he logs in and completes the minimal demographic information in order to start the record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D452	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D453	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D454	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D455	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D456	**Medical Certifier Completes Minimal Demographic Information Rules**	Please see the Start a Death Record at a Facility rules above, Box 3, for all rules related to completing minimal demographic information.		

Description: M.C. completes medical information and certifies (Box 4)

Medical information and cause of death are completed by the medical certifier.

Please note: All the rules regarding entering, editing and certifying medical information and cause of death as defined in previous flows apply to this

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D457	**Medical Certifier Completes Medical Information Rules**	Please see the Start a Death Record at a Facility rules, Box 6, and Start a Death record at a Funeral Home rules, Box 17, for all rules related to the Medical Certifier completing medical information and cause of death.		

Description: Demographic certification complete? (Box 5); If yes, Record is registered and assigned SFN (Box 6).

The medical certifier completes the medical information and submits to State. If the medial certifier does not know the funeral home the medical section is the only portion of the record that submits to State. The demographic information for the record is completed by the funeral home once one is assigned.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D458	**Demographics Complete**	If the demographic has already been signed by the funeral home, certification of the record automatically submits the record.	E - Exact Match	
D459	**Notice of Submission**	The system sends a message to the user that the record has been submitted that requires no action.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case

Description: Funeral Home known? (Box 7); If the funeral home is not known, Queue record as pending for facility (Box 8); If the Funeral Home is known, Queue the record for the Funeral Home (Box 9)

If the funeral home is known, the medical certifier will select the proper location. For funeral home system users the record will be found in the appropriate queue when the funeral home user logs on.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D460	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D461	**Assign Funeral Establishment**	The user may assign a funeral home, if one is known when the record is started.	E - Exact Match	
D462	**Funeral Home Queue**	Once a funeral home is assigned the record should queue for the funeral home.	E - Exact Match	

END OF MEDICAL CERTIFIER STARTS THE RECORD

BUSINESS PROCESS: MEDICAL EXAMINER STARTS A DEATH RECORD

A death occurs. The medical examiner is contacted to investigate the death. Once the Authorization for Disposition is completed, the medical examiner decides whether or not to investigate the death. If the medical examiner decides that an investigation is not warranted, s/he must state why. The facility is notified that the record can be signed by a medical certifier.

If the medical examiner decides to investigate the case, s/he will log into the system and start the record with minimal information (if that has not already been done to start the Authorization for Disposition). The medical examiner has a two options from here:

1. The medical examiner completes the entire record;
2. The medical examiner completes the medical portion of the record and queues the record for the funeral home;

Description: Death occurs (Box 1); Requires medical examiner? (Box 2); Contact medical examiner (Box 3)

For deaths that must be referred to the medical examiner, the medical examiner is contacted.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D463	**Medical Examiner May Start Record**	Medical Examiners may start a record.	E - Exact Match	
D464	**Medical Examiner Notified of Death**	(usually a physician or facility) requests that a medical examiner investigate a death.	E - Exact Match	
D465	**Medical Examiner Changes Demographics**	The medical examiner can change demographic information entered by the owner of the demographic portion of the record.	W - Workflow or System Configuration Required	Examiners from updating the personal information if they are not responsible
D466	**Name for Presumptive Deaths**	The State or the medical examiner enters names on death records for presumptive deaths.	E - Exact Match	

Description: Death outside facility? (Box 4); Print and/or complete Authorization for Disposition (Box 5)

If death occurs outside of a facility, the medical examiner may be responsible for the Authorization for Disposition. The medical examiner logs into the system, starts a record by entering the required minimal demographic information, and completes and prints the Authorization for Disposition. The Authorization for Disposition is queued for the medical examiner and the funeral home, once a funeral home has been identified.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D467	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D468	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D469	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D470	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D471	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		

D472	**Medical Examiner Completes Minimal Demographic Information Rules**	Please see the Start a Death Record at a Facility rules above, Box 3, for all rules related to completing minimal demographic information.		
D473	**Funeral Home Prints Authorization for Disposition**	Please see the Start a Death Record at a Funeral Home rules above, Box 1, for all rules related to the funeral home printing the Authorization for Disposition.		
D474	**Allow Funeral Home to Print Authorization for Disposition**	The system allows an assigned funeral home the ability to print a Authorization for Disposition.	E - Exact Match	
D475	**Medical Examiner Electronically Signs Authorization for Disposition**	The system allows the medical examiner to electronically sign the Authorization for Disposition.	E - Exact Match	
D476	**Scan and Attach Signed Authorization for Disposition**	The system allows a medical examiner to scan and attach the Authorization for Disposition to the record once a computer is available.	E - Exact Match	

Description: Investigate case? (Box 6); If investigation is not needed, notify facility (Box 7); Facility or funeral home starts record (Box 8)

If no investigation is required, the medical examiner notifies the facility or funeral home so that they may start the case as described above.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D477	**Medical Examiner Refuses Case**	If the medical examiner is informed about a death but chooses not to accept the case, it is noted in the record and the system sends a message to the system user that requested the investigation.	E - Exact Match	
D478	**Reason Code When Medical Examiner Refuses Case**	The system ensures that the medical examiner selects a reason from a pre-defined list that includes "other" when s/he chooses not to accept a case that has been referred.	W - Workflow or System Configuration Required	With GCOM VRMS new fields can easily be added or removed from the individual form pages.
D479	**State-Defined Reason Codes**	The reason that the medical examiner selects when refusing a case is from a State-defined list.	E - Exact Match	
D480	**Explanation Text Field**	The system provides the ability for the medical examiner to enter notes in an explanation text field before refusing a case.	E - Exact Match	
D481	**Select Medical Certifier**	The system allows a medical examiner to select a medical certifier when s/he refuses a case.	E - Exact Match	
D482	**Redirect Case Refused by Medical Examiner**	When a record is not accepted by the medical examiner but also not forwarded to another medical certifier, the record is queued for the funeral home director to redirect it to another medical certifier.	F - Future	Release Spring 2020
D483	**Queue for Records Sent to Medical Examiner**	The system provides work queues for facilities for records that have been referred to the medical examiner.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.

Description: Medical examiner logs into EVRS and starts record (Box 9); Complete minimal demographic information (Box 10)

The Medical examiner logs into the system and enters the minimal demographic information required to start a record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D484	**Medical Examiner Completes Minimal Demographic Information Rules**	Please see the Start a Death Record at a Facility rules above, Box 3, for all rules related to completing minimal demographic information.		
D485	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
D486	**Complete Pending Authorization for Disposition**	The system allows role-defined users to access an incomplete Authorization for Disposition and fill in remaining the information.	E - Exact Match	

D487	Active Record Queue	The system provides work queues for medical examiners for active records.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D488	Pending COD Queue	The system provides work queues for medical examiners for records that have a pending COD.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D489	Cremation Permit Queue	The system provides work queues for medical examiners for cremations that are awaiting approval.	E - Exact Match	
D490	Medical Examiner Views Death Certificate	The system allows the Office of Chief Medical Examiner to see the death certificate so that the medical examiner can authorize the cremation.	E - Exact Match	
D491	Medical Examiner Can View All Records	The system allows a medical examiner to view all records for his/her county, records where his/her office is listed as the medical certifier, and records where his/her county is listed as the county of injury in a death record.	E - Exact Match	
D492	County Medical Examiner Restricted View	The system allows role-defined users to access an incomplete Authorization for Disposition and fill in remaining the information.	E - Exact Match	

Description: Medical Examiner completes entire record (Box 11); Certifies and submits to State (Box 12)

In some cases, the medical examiner will complete both the demographic and medical portions of the record.

Please note: All the rules regarding entering, editing and certifying the demographic and medical information as defined in previous flows apply to this process.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D493	Medical Certifier Completes Medical Information Rules	Please see the Start a Death Record at a Facility rules above, Box 4, for all rules related to the Medical Certifier completing medical information.		
D494	Medical Examiner May View Entire Record	The system allows a medical examiner to view the entire death record, regardless of his/her role in filing it.	W - Workflow or System Configuration Required	Examiners to only viewing the medical information if they are not responsible
D495	Medical Examiner Acting as Funeral Home	If the medical examiner is acting as the funeral home, s/he can edit any part of the record.	E - Exact Match	
D496	Medical Examiner Can Edit All Fields	A medical examiner can edit any information in the medical portion of the death record.	E - Exact Match	
D497	No Funeral Home Involved in Case	If there is no funeral home involved in the case and the medical examiner is acting as such (e.g. in the case of an indigent person), s/he will complete and sign both the demographic and medical portions of the record and submit it to the State.	E - Exact Match	
D498	Protect Medical Information and Signature Fields	If a medical examiner or deputy medical examiner is assigned to a case, the system prevents anyone else from entering the cause(s) of death and signing the record as the certifier.	E - Exact Match	
D499	Medical Examiner Accepts Case	When a medical examiner accepts the case, the record ownership transfers to the medical examiner.	E - Exact Match	
D500	Medical Examiner Acceptance Comments	Upon accepting a case, the system provides an optional text field for the medical examiner to enter any acceptance comments.	W - Workflow or System Configuration Required	easily be added or removed from the individual form pages.
D501	Medical Examiner Requests Control of Case	Medical examiners may request control of a case at any time from the State.	E - Exact Match	
D502	Notify Medical Certifier if Medical Examiner Takes Control of Case	If a medical examiner takes control of a case, the system notifies the previous medical certifier that s/he is being removed from the record.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case

D503	**Lock Personal Information Section for Cases Completed by Medical Examiner**	When a medical examiner chooses to complete an entire death record, the personal information section is locked and not accessible to other users.	E - Exact Match	
D504	**Notify Funeral Director if Medical Examiner Takes Control of Case**	If a medical examiner takes control of a case, the system notifies the funeral director.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D505	**Update Death Certificate Ownership Information if Medical Examiner Takes Control of Case**	The system replaces the prior medical certifier's information with that of the medical examiner, and the medical examiner becomes the owner of the case.	E - Exact Match	
D506	**Update Case Status if Medical Examiner Takes Control of Case**	The system updates the case status to: "Active - Under Medical Examiner Review."	W - Workflow or System Configuration Required	GCOM VRMS' status system is quickly configurable to add new statuses.
D507	**Forward to Medical Examiner**	If a record is certified by the medical certifier but has not been registered, the State can forward the record to the medical examiner.	E - Exact Match	
D508	**Clear Fields**	In cases where the State has forwarded a record to a medical examiner, the original field entries are maintained in the history but the fields are cleared for the medical examiner.	E - Exact Match	
D509	**Provide Field to Enter Medical Examiner Case Number**	The system provides the user with a field to enter the medical examiner case number that corresponds to the decedent record.	E - Exact Match	
D510	**State-Defined Fields for Medical Examiners**	Medical Examiner records have State-defined fields.	E - Exact Match	

Description: Medical Examiner completes medical information and certifies (Box 13); Queue record for funeral home (Box 14)

The medical examiner (or authorized staff) enters the medical information in the electronic record. While authorized users may enter the medical information, only the medical examiner may certify the medical information. The system authenticates that the user is the medical examiner who is authorized to certify the medical information. Once s/he has been authenticated, the medical examiner certifies the medical information and electronically signs the death record. The record is then queued for the funeral home.

Please note: All the rules regarding entering, editing and certifying medical information as defined in previous flows apply to this process.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
D511	**Medical Examiner Completes Medical Information Rules**	Please see the Start a Death Record at a Funeral Home rules above, Box 17, for all rules related to the Medical Examiner completing medical information.		
D512	**Pending COD**	A medical examiner may designate "Pending COD" in a record if the COD is unknown or pending investigation.	E - Exact Match	
D513	**Pending Manner of Death**	A medical examiner may designate "Pending Manner of Death" in a record if the COD is unknown or pending investigation.	E - Exact Match	
D514	**Medical Examiner Overrides Previous Medical Information**	A Medical Examiner may override medical information previously entered by a medical certifier.	E - Exact Match	
D515	**Medical Examiner Report on Manners of Death**	The system provides the medical examiner the ability to view/print, for a specified date range, a report of all cases with State-specified manners of death.	W - Workflow or System Configuration Required	GCOM VRMS features ad-hoc reports that can be set up for the desired requirements.
D516	**Send Notification to Funeral Home**	If the case was started in the system, an automatic notification is sent to the funeral home indicating that a record is in the pending queue.	W - Workflow or System Configuration Required	services in addition to system internal messages to easily convey case
D517	**Extract File from System**	The medical examiner can extract a file of State-defined information for medical examiner death records from the system for import into the medical examiner system, in order to avoid duplicate data entry.	E - Exact Match	

D518	**Deputy Medical Examiners**	A medical examiner can designate another medical examiner (ex: deputy medical examiners or assistant medical examiners) to temporarily serve as backup for reviewing and signing cases.	E - Exact Match	
D519	**Mobile Device**	The system allows an authorized user (ex: medical examiner) to send an Authorization for Disposition to a mobile device or Smartphone.	E - Exact Match	

Description: Medical Examiner queues record for MC and/or funeral home (Box 15)

The medical examiner also has the option of starting the record with minimal demographic information and queuing the record for the medical certifier and/or funeral home.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D520	**Medical Examiner Forwards Case to Another Medical Certifier**	If the medical examiner decides to forward the case to another medical certifier, the record is queued for the new medical certifier, and a notification is sent to the new medical certifier and the funeral home.	E - Exact Match	

END OF MEDICAL EXAMINER STARTS A RECORD

BUSINESS PROCESS: TIME PERIOD FOR CERTIFYING MEDICAL INFORMATION

The system must calculate the time it takes for the medical information in a death record to be certified. This time limit is State-defined and is reported on a regular basis to the medical certifier. Currently, the time limit for certifying a death record **is 24 hours after physician notification of the case.**

The system standard for reporting time will be in military time. An option exists in the system to avoid confusion by choosing midnight or noon instead of 0:00 or 12:00 hours. Military time is also used for approximate time of injury.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D521	**Calculate Time for Death Certification**	The system needs to calculate the time that it takes for a medical certifier to certify the medical portion of a death record.	E - Exact Match	
D522	**Calculate Time for Death Certification by User**	The calculation is based on the user.	E - Exact Match	
D523	**Time Period State-Defined**	The time period is State-defined.	E - Exact Match	
D524	**Military Time**	Time, for the purpose of tracking timeliness, is stored in military time.	W - Workflow or System Configuration Required	in military time but the UI is set to display as 12 hour time.
D525	**Calculate and Provide Notification**	The system will calculate and provide notification "X" amount of time prior to expiration.	E - Exact Match	
D526	**Time Period State-Defined by User Group**	The calculation for determining if certification of medical information is within the time period is State-defined by user group.	E - Exact Match	
D527	**Late Records**	The system highlights in the pending queue, in a color defined by the State, records that have not been certified within the State-defined time period. Example color is red.	E - Exact Match	

D528	**Calculating Time for Certifying Medical Information**	The calculation for the 24 hours to certify the medical information begins from the moment the certifier is notified of the record to the moment the medical information is signed and submitted by the certifier. This formula necessitates accommodating various workflow scenarios. For example: a. Facility starts a record and then queues record for the MC. Notification = record in MC queue b. medical examiner starts the record. Notification = medical examiner starting record c. Funeral home starts the record. Notification = Funeral home submitting record to MC electronically.	E - Exact Match	
D529	**Medical Certifier Queue Filter**	The medical certifier queue has a filter to allow the user to see new records that are assigned to them.	E - Exact Match	
D530	**Filter Queue - State**	The system allows an authorized State user to filter the pending queue to show only records that are late for medical certification based on State-defined fields.	W - Workflow or System Configuration Required	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
D531	**Filter Queue - Medical Certifier**	The system allows a medical certifier to filter the pending queue to show only records that are late for medical certification based on State-defined fields.	W - Workflow or System Configuration Required	configurations allow for quick set up of any desired queue.
D532	**Notify Funeral Home if Record Not Accessed**	The system notifies the funeral home if the medical certifier does not access the record within a State-defined, pre-established time frame.	E - Exact Match	

END OF TIME PERIOD FOR CERTIFYING MEDICAL INFORMATION

BUSINESS PROCESS: NOT A MEDICAL EXAMINER CASE (NAMEC) - EMS PRONOUNCING ON SCENE

A death occurs. The Emergency Medical Services (EMS) are contacted to attend a patient outside of a facility. Once on scene, EMS determines that an individual has died and pronounce death. EMS user logs into the EVRS and enters minimal demographic information to start the death record and the pronouncement information into the cause of death section. EMS certifies the pronouncement of death. The record is assigned to the medical examiner.

Description: Death occurs (Box 1); EMS pronounces death (Box 2); EMS logs into EVRS (Box 3); Complete minimal demographic information and pronouncement information (Box 4); Assigns record to medical examiner (Box 5); Go to ME Flow

For deaths that occur once EMS is on scene, or if EMS is the first to arrive after a death has occurred outside of a facility, they are allowed to pronounce the date and time of death. The EMS user logs into the EVRS and enters minimal demographic information for the decedent. They also enter the pronouncement information in the cause of death section. After the record has that information, the EMS user will assign the record to the OCME. Go to ME flow.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
D533	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
D534	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
D535	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
D536	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
D537	**EMS Completes Minimal Demographic Information Rules**	Please see the Start a Death Record at a Facility rules above, Box 3, for all rules related to completing minimal demographic information.		

D538	**EMS User Access to EVRS**	EMS has limited roles in the EVRS. They can enter minimal demographic information and enter pronouncement information. They cannot certify COD. Those functions are locked to them.	W - Workflow or System Configuration Required	operation system allows for easy configuration of access and permissions.
D539	**Assign Record to ME**	An EMS user can assign a record to the medical examiner.	E - Exact Match	
D540	**Edits Around Pronouncing Death**	There are State-defined soft edits around entering the pronouncement information (e.g. date of death cannot occur after to the date of entry).	E - Exact Match	

END OF NOT A MEDICAL EXAMINER CASE (NAMEC) - EMS PRONOUNCING ON SCENCE

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E - Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: REGISTRATION OF VITAL RECORDS - Overview

All event records, with the exception of paternities and unattended home births, are registered upon submission of a complete record. A local file number (LFN) corresponding to the county of the event is applied to the record as is the state file number (SFN). Registered records are immediately available to the State and the county of the event; remaining counties have read-only access. The system must have the ability to register records automatically or queue them for review of exceptions prior to registration. The system must also provide the ability to turn on/off the automatic registration feature. Until such time as WV is ready to turn on the automatic registration of records, all records will be queued for review prior to registration. This ability must be configurable by the State and must be individual to each event and location.

Until such time as e-notary is recognized by WV, all birth records with a paternity must be reviewed by the State prior to registration. These records are queued for the State to review, accept and register or reject. Please see the paternity flow for the rules related to paternities.

All event records that are registered with soft edit exception flags are queued at the State by type of event and exception. These queues will be State defined. State staff will review and query these records as appropriate.

The user has the ability to electronically message a user through the system to query a record. The system will have the ability to reject records back to the author of the record; this function will be turned off when the automatic registration is turned on by event.

State users must have the ability to data enter any event record and then register the record.

BUSINESS PROCESS: STATE REVIEW OF REGISTERED RECORDS WITH EXCEPTIONS

The following flow is based on automatic registration of all birth, fetal death and death records. There are several exceptions to the automatic registration of records and those include births and fetal deaths with paternities, unattended home births, and foreign-born births. The process flow and rules for these records are included in the next business process flow.

Description: Registration user logs into EVRS (Box 1); Select queue to work from (Box 2)

The system user logs onto the system. The system authenticates the user and the privileges for the user. The main menu appears and allows the user to select the queue of work that s/he wishes to perform.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R1	**Registering a Record**	Please see the General Requirements section O - State File Numbers and Registration. All rules apply here.		
R2	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
R3	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
R4	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
R5	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
R6	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
R7	**Automatic Registration**	The system automatically registers a record with an exception.	***E - Exact match***	
R8	**Automatically Queue a Record**	The system will automatically queue a record into the appropriate exception queue after registration.	***E - Exact match***	
R9	**Queues Sortable**	All queues are sortable by State defined criteria, which will include originator (individual or facility), county, and submission date.	***E - Exact match***	
R10	**Incomplete Records Visible to State**	Any record that has been initiated by a user, facility, or a county may be viewed by the State.	***E - Exact match***	
R11	**Edit Incomplete Records**	The system allows authorized State users to take control of a user, facility, or a county's incomplete record if assistance is requested by the author.	***W - Workflow or System Configuration Required***	
List of Registration Queues for Births				
R12	**Birth Demographic Exceptions Queue**	All birth records submitted with demographic exceptions.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R13	**Birth Medical Exceptions Queue**	All birth records submitted with medical exceptions.	***E - Exact match***	
R14	**Past Due Queue**	The system provides a queue for birth records entered but not submitted for registration within a State defined number of days past due.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R15	**Generate Pop-Up Message**	In addition to the actual messages, the screen includes the number of records that need attention.	***E - Exact match***	
R16	**Queue Child Alive, "No"**	System creates a queue for records where "No" is selected for Child Alive and no matching death certificate is found in the system.	***E - Exact match***	
R17	**Birth Queue Conversion Option**	The system allows all birth post-registration queues to be converted to pre-registration queues if deemed necessary by the State users configuring the system after implementation	***F - Future***	Release Spring 2020
List of Registration Queues for Fetal Death				
R18	**Fetal Death Demographic Exceptions Queue**	All fetal death records submitted with demographic exceptions.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R19	**Fetal Death Medical Exceptions Queue**	All fetal death records submitted with medical exceptions.	***E - Exact match***	

R20	Past Due Queue Fetal Death	The system provides a queue for Fetal Death records entered but not submitted for registration within a State defined number of days past.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R21	Fetal Death Late Queue	The system provides a queue for all fetal death records that are submitted after a State defined period of time.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
List of Registration Queues for Death				
R22	Pending COD Queue	The system allows the user to clear pending COD queue based on State defined timeframe if COD is not obtained.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R23	Filter COD Queue	The system allows the user to filter the COD queue by State defined parameters.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R24	Edit COD Filters	COD filters may be added and/or turned on and off by authorized State users.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R25	Death Demographic Exceptions Queue	All death records submitted with demographic exceptions are queued for State review AFTER registering the record if auto-registration is turned on. If auto-registration is turned off, the records are reviewed prior to registration.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R26	Death Medical Exceptions Queue	All death records submitted with medical exceptions are queued for State review AFTER the record has been registered if auto-registration is turned on. If auto-registration is turned off, the records are reviewed prior to registration.	*E - Exact match*	
R27	Death Queue Conversion Option	The system should allow all death post-registration queues to be converted to pre-registration queues if deemed necessary by the State users configuring the system after implementation	*F - Future*	Release Spring 2020
R28	Full Paper Records Queue	The system provides a queue for full paper records, OOS records, and International Records.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R29	No Authorization for Disposition Issued Queue	The system provides a queue for records that do not have an Authorization for Disposition.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R30	Medical Certification Outstanding Query Letter Queue	The system provides a queue for records awaiting replies to Medical Certifier Query Letters.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.

Description: Review exceptions (Box 3)

For records with exceptions, the State will review these records to determine if further validation of the data is required. The user has the ability to electronically message a user through the system to ask a question or the user may query the record through the system. The State user may determine, based on the answer provided, that one of the following actions need to be taken:

1. A statistical correction needs to be made to the record. The State user would make this correction and release the record from the queue.
2. An amendment is required to correct the record. The State user would flag the record as "do not issue" and reject the record back to the author of the record to initiate the amendment. The record retains both the SFN and LFN.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R31	Messaging	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
R32	Display Comment Fields on Records "Submitted With Exceptions"	When a record is submitted with exceptions, a comment field displays the highlighted fields with the exceptions (i.e., Accepted out-of-range) on the record for the system user to review.	*E - Exact match*	
R33	Demographic Review	The demographic section of the record may be reviewed separately from the medical section.	*E - Exact match*	
R34	Medical Review	The medical section of the record may be reviewed separately from the demographic section.	*E - Exact match*	
R35	Separate Reviews	The demographic portion may be reviewed by a user with a different set of privileges than a user reviewing the medical portion.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R36	Access to Health Exchange	An authorized user can access the Health Exchange while reviewing the record.	*W - Workflow or System Configuration Required*	

R37	Side-by-Side Viewing	The system presents Health Exchange information side by side with the record information.	*W - Workflow or System Configuration Required*	
R38	Print Side-by-Side Comparison	The system allows the user to print the side-by-side comparison of the record and Health Exchange information.	*W - Workflow or System Configuration Required*	
R39	Attach Side-by-Side Comparison	The system allows the user to attach the side-by-side comparison to a query.	*W - Workflow or System Configuration Required*	
R40	Legal Fields Locked	All legal fields are locked.	*E - Exact match*	
R41	Statistical Fields Open	All statistical fields are unlocked for authorized users.	*E - Exact match*	
R42	View Worksheet	The system allows the user to view the worksheet while viewing the record to confirm certain State defined data fields, such as the spelling of names.	*E - Exact match*	
R43	Obvious Errors	Obvious typographical errors to demographic information may be fixed by the user as long as they are validated by viewing the worksheet.	*E - Exact match*	
Additional Rules for Death				
R44	Allow Review and Recoding of Literal Entries	The system allows the user to review the literal entries (such as "Other") and recode them as appropriate.	*E - Exact match*	
R45	Maintain Literal and Code	If an authorized user recodes a literal, both the original literal and the State code are maintained in the system database along with the user ID of the person who corrected it and the reason for the change.	*E - Exact match*	
Additional Rules for Birth				
R46	CPS Flag	If the record is a CPS case, the record will be flagged for review by the State. Flag indicates that the child's name will be changed at the time of adoption.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R47	Remove CPS Flag	The system allows authorized users to remove CPS flags on birth records.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R48	Court Order to Remove CPS Flag	In order to remove a CPS flag, the authorized user must enter in a court order number and scan and attach the court order to the record.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.

Description: Accept record? (Box 4); If yes, release record (Box 6)

The user must take an actionable step to accept and review the record. Once the record is accepted, it is removed from the queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R49	Accept Exceptions	The system requires the user to take a specific action to indicate that all exceptions have been reviewed and accepted.	*E - Exact match*	
R50	Remove Exception Flags	Upon taking the action to indicate that all exceptions have been accepted, the corresponding exception flag is removed from the record.	*E - Exact match*	
R51	Demographic Exceptions	Demographic exceptions may be accepted separately from medical exceptions.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.
R52	Medical Exceptions	Medical exceptions may be accepted separately from demographic exceptions.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.
R53	Alert NCHS of Out-of-Range Entries	The system allows the State to note that they have verified out-of-range entries in such a way that these entries are accepted by NCHS without generating an error.	*W - Workflow or System Configuration Required*	GCOM VRMS extraction workflow are configurable
R54	Update Status of Corresponding Section and Record	The system automatically updates the status of records and moves them to the appropriate queue.	*E - Exact match*	

Description: Query record? (Box 5); If yes, go to Query Cycle; If no, go to Post Registration Rejection Cycle Flow

If the system user or State user determines that the record cannot be accepted, they have two options:

(1) The user can choose to query some specific data item(s). Utilizing the Query Cycle Flow, the user will message the record author with the query. The record is flagged accordingly and placed in the appropriate pending queue. The vital records system automatically notifies the record author that further information to the record is required.
(2) The user may choose to reject the record back to the original author. All rules for the Post Registration Rejection Flow and the Amendment Process Flow apply to these records.

Please note: All the rules regarding the query cycle and rejection of a registered record are defined in the Rejection and Correction Cycle flow apply to this process and are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R55	**Query Message**	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
R56	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
R57	**Query Cycle**	See Query and Rejection cycle, Query Cycle section for rules regarding queries.		
R58	**Amendments**	Please see the Amendments business rules, regarding rules related to corrections of system records.		
R59	**Query and Rejection Cycle**	Please see Query and Rejection Cycle business rules, regarding rules related to query and rejection of System records.		

BUSINESS PROCESS: STATE REVIEW OF EXCEPTIONS PRIOR TO REGISTRATION OF RECORDS

The current vision of the State is that all types of birth and death records will be reviewed prior to registration, until such time as the auto-registration feature is turned on by the State. At that time, only certain types of records will be reviewed prior to registration. Records that require State review prior to registration include:

- paternities
- unattended home births
- court order surrogacy
- safe haven and foundling birth records

Certain types of registrations such as foreign birth and judicial determination of death require that the State enter the data to create the record and then register the record. This process should be seamless for the State user.

Note: All Post-Registration Review Rules apply to this flow and are not repeated here.

Description: Registration user logs into EVRS (Box 1); Select queue to work from or create a new record (Box 2)

The system user logs onto the system. The system authenticates the user and the privileges for the user. The main menu appears and allows the user to select the queue of work that s/he wishes to perform.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R60	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
R61	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
R62	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
List of Registration Queues				
R63	**Pending Records**	This queue contains any records that are in progress and are not contained in any of the other queues such as foreign births.	***E - Exact match***	
List of Registration Queues for Birth				
R64	**Demographic Exception Queues**	The system provides birth queue for all unregistered records with a demographic exception.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R65	**Medical Exception Queues**	The system provides birth queue for all unregistered records with a medical exception.	***E - Exact match***	

R66	Unattended Birth Queue	All unattended births are queued for State review PRIOR to registering the record.	*E - Exact match*	
R67	Paper Midwife Queue	All birth records submitted by midwife using a paper record are queued for State review PRIOR to registering the record.	*E - Exact match*	
R68	Paternity Queue	The system provides a queue for birth records with paternity awaiting registration.	*E - Exact match*	
R69	Paternity Pending Queue	The system provides a queue for records waiting for paternities to be received from the facility or midwife.	*E - Exact match*	
R70	Abandoned/Safe Haven Infant Queue	Abandoned/Safe Haven Infant records are queued for State review PRIOR to registering the record.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R71	Foreign Birth Queue	The system provides a queue for foreign births.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R72	Court-Ordered Surrogacy Queue	The system provides a queue for court-ordered surrogacy.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R73	Birth Queue Conversion Option	The system allows all birth post-registration queues to be converted to pre-registration queues if deemed necessary by the State users configuring the system after implementation.	*F - Future*	Release Spring 2020
R74	Drug-Related Deaths	System provides a queue for all records with a drug-related death.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R75	Rare Cause of Death	System provides a queue for all records with a rare cause of death.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R76	List of Drugs	The list of drugs will be user defined and table driven.	*W - Workflow or System Configuration Required*	GCOM VRMS gets data from VRMS DB, modification needed to add more DB tables.
List of Registration Queues for International Death				
R77	International Death Queue	The system provides for a queue for international death of a WV resident or WV birth.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
List of Registration Queues for Judicial Determination of Death				
R78	Judicial Determination of Death Filter	The system provides an ability to filter death records in the queue by Judicial Determination of Death.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R79	Judicial Determination of Death Queue	The system provides for a queue for Judicial Determination of Death records.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.

Description: Select and review record to be registered (Box 3); Exceptions on record? (Box 4); If no, system registers record and assigns SFN and LFN (Box 5);

The user reviews the record for completeness and accuracy. Depending on the queue selected the user may batch register records in a queue or may review each record individually. All hard edit fields are locked. An authorized user may make corrections on typos if they are validated by review of the attached worksheet. If there is no exception on the record, the user electronically signs the record. The system automatically assigns the record a SFN and LFN. The record is now released from the queue and is available for issuance or amendments.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R80	Registering a Record	Please see the General Requirements section O - State File Numbers and Registration. All rules apply here.		
R81	State File Number	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
R82	Point of Sale and Event Modules	Please see the General Requirements, section A - User Technical Environment, for rules regarding the POS and event modules.		
Additional Rules for Registrations				
R83	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		

R84	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
R85	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
R86	Unique Screens	Each special registration type will have their own unique screens.	*E - Exact match*	
R87	Screen Layout	The screen layout for each special registration will be State defined.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R88	Minimal Information	The minimum information required to start a special registration record are State defined.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R89	Duplicate Check	When a new record is started the system performs a duplicate check.	*E - Exact match*	
R90	Edits	The edits for each special registration are State defined.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.

Additional Rules for Court Order Births

R91	Court Order	The system provides the user with a method of indicating that a court order has been received.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R92	Surrogacy Documentation	If a surrogacy court order is indicated in the birth record, the court order must be attached to the record if the record was created at a facility.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.
R93	Surrogacy Flag	If a surrogacy court order is indicated in the birth record, the record must be flagged for review by the State.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R94	Original Court Order	The system requires the user to indicate that the original court order was received at State before the record can be registered.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R95	Supporting Documents	Supporting documents for home births that are submitted on paper are scanned and associated with the system birth record.	*E - Exact match*	
R96	Identify Supporting Documents	The user selects, from a State defined list, which supporting documents were presented and attached to the record.	*E - Exact match*	

Additional Rules for Foreign Births

A system user may begin a Report of Foreign Birth record once a court order is received. The user enters the information and scans and attaches all supporting documentation. Reports of Foreign Births are sealed by the system once complete. Certificates of Foreign Birth can only be issued by the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R97	Certificate of Foreign Birth	The system provides a data entry screen unique to the Report of Foreign Birth record.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R98	Foreign Birth at the State Only	The system only allows the State to access the foreign birth screen.	*E - Exact match*	
R99	Screen Matches Report	The foreign birth screen matches the layout of the Certificate of Foreign Birth.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R100	Country of Foreign Birth	The system allows the country of birth to be other than "US" for Reports of Foreign Birth.	*E - Exact match*	
R101	Create New Record	Reports of Foreign Birth creates an original birth record.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.
R102	Scan Supporting Documentation	The system allows the user to scan and attach State defined supporting documentation to a Certificate of Foreign Birth record.	*E - Exact match*	
R103	No SSN Enumeration Request	The system does not run the SSA enumeration request for a foreign born record.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.

R104	**Scan Forms**	Forms must be scanned and attached to the record.	***E - Exact match***	
R105	**Seal File**	Original file may be sealed.	***E - Exact match***	
R106	**Special Statement on Certificate of Foreign Birth**	The system provides the ability to print a special statement on the bottom of the Certificate of Foreign Birth, similar to "This is not proof of US Citizenship" or other State defined statements.	***W - Workflow or System Configuration Required***	GCOM VRMS certificate layout is configurable.
Additional Rules for International Death of a WV Resident or a WV Birth				
R107	**International Data Entry**	When notified of a death in a foreign country of a WV resident or someone born in WV, the user can data enter the information into the system.	***E - Exact match***	
R108	**No Authorization for Disposition**	The system does not assign an Authorization for Disposition for international deaths.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R109	**Do Not Issue Flag**	The system automatically flags all international death records as "Do not issue."	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
Additional Rules for Death				
R110	**Notify Medical Certifier**	The system allows a user to send a notification at any time to any medical certifier who uses the system to request that s/he complete the COD.	***W - Workflow or System Configuration Required***	GCOM VRMS messages is configurable.
R111	**Date Medical Certifier Notified to Complete Record**	The system captures the date when the medical certifier is notified to complete a death record. The medical certifier is automatically notified by a system message or an email from the system.	***W - Workflow or System Configuration Required***	GCOM VRMS messages is configurable.
R112	**Calculate 24-hour Window**	The system calculates 24-hours from when the medical certifier is notified to complete a death record.	***E - Exact match***	
R113	**Provide List of Late Certificates to System User**	The user may display, on demand, a list of death certificates that have passed the 24-hour mark for certifying the cause of death.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R114	**Select Queue from List**	The user selects from the list of queues for which s/he is authorized.	***E - Exact match***	
Additional Rules for Judicial Determination of Deaths				
R115	**Judicial Determination of Death Easily Identified**	Judicial Determination of Death records are clearly identified by a code in the record.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R116	**Presumptive Death Easily Identified**	Presumptive Death records have a unique identifier as part of their SFN.	***W - Workflow or System Configuration Required***	
R117	**Notation of Court Order**	The death record indicates that it is a Judicial Determination of Death and captures the court order number.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R118	**Judicial Determination of Death Indicator**	A Judicial Determination of Death indicator alerts the user that the record is a Judicial Determination of Death.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R119	**Screen Matches Form**	The Judicial Determination of Death screen matches the layout of the appropriate death form.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R120	**Supporting Documentation**	The supporting documentation for a Judicial Determination of Death registration is scanned and attached to the electronic death record in the system database.	***E - Exact match***	
R121	**Judicial Determination of Death Certificate**	Judicial Determination of Death records have a State defined format.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R122	**Abstract of Court Order Information**	Judicial Determination of Death records include fields to abstract the court order information.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R123	**Print Abstract on Certified Copy**	Abstracted information entered in the record prints on the certified copy of the death record.	***W - Workflow or System Configuration Required***	GCOM VRMS certificate layout is configurable.

Description: If there is an exception on record, review exceptions (Box 6); Can fix? (Box 7); If yes, edit record (Box 8); System registers record and assigns SFN and LFN (Box 5); If record cannot be fixed, reject record (Box 9); Go to Post Registration Rejection Cycle Flow

If there is an exception on the record, the user will review the record. As needed, the system user may choose to correct an obvious error/exception; alternatively, the user may reject a record back to the original owner. If rejected, the record is flagged and queued for the appropriate record owner. A message is sent to the record owner indicating that rejected records are pending review.

Please note: All the rules defined in the Query and Rejection Cycle flow apply to this process and are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R124	**Registering a Record**	Please see the General Requirements section O - State File Numbers and Registration. All rules apply here.		
R125	**State File Number**	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
R126	**Query and Rejection Cycle**	Please see Query and Rejection Cycle business rules, regarding rules related to rejection and corrections of the system records.		
R127	**Query Message**	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
R128	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
R129	**Check Pending Status**	Upon registration, the system checks pending requests to see is there is a request for certificate.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R130	**Ready to Issue**	After errors are corrected the system changes "pending" status on order to "ready to issue".	***E - Exact match***	
R131	**Update Record with ME COD**	Once a record goes to a medical examiner and the ME later submits a COD, the original record is updated with the ME information while retaining the original information.	***W - Workflow or System Configuration Required***	
R132	**Access Record as Many Times as Necessary**	The system allows access to the record as many times as necessary to allow the system user to validate the information and ensure the completeness and accuracy of the record post-registration.	***W - Workflow or System Configuration Required***	
R133	**Uncertified Recalled Record**	If a record is recalled by a funeral establishment or medical certifier and has not yet been registered, the record is "uncertified" in the appropriate section and the status changed to "active" or equivalent.	***E - Exact match***	
R134	**Display Comment Fields on Records "Submitted with Exceptions"**	When a record is submitted with exceptions, a comment field displays the highlighted fields with the exceptions (i.e., Accepted out-of-range) on the record for the system user to review.	***E - Exact match***	
R135	**Obvious Error**	An authorized system user can override values for obvious errors without an affidavit or amendment (e.g., incorrect spelling of Charleston).	***E - Exact match***	
R136	**Re-Send SSA Verification**	If any of the SSA SSN verification fields are changed, the system automatically resends the SSN for verification purposes on those fields.	***W - Workflow or System Configuration Required***	
R137	**Track Changes Made to Record**	The system tracks changes made by the system user for each record.	***E - Exact match***	
R138	**Highlight Use of "Other" or "Unknown"**	The display highlights the use of "other" or "unknown" to determine if a more specific value can be selected.	***W - Workflow or System Configuration Required***	GCOM VRMS validation rules are configurable.
R139	**Comment for "Other" Fields**	All "other" fields provide the option for an explanation in the comment field.	***E - Exact match***	
R140	**Integrate VIEWS**	The system uses tables from VIEWS to check spelling.	***E - Exact match***	
R141	**Allow Review and Recoding of Literal Entries**	The system allows the user to review the literal entries (such as "Other") and recode them as appropriate.	***E - Exact match***	

R142	Maintain Literal and Code	If an authorized user recodes a literal, both the original literal and the State code are maintained in the system database along with the user id of the person who corrected it and the reason for the change.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R143	Scan Supporting Documents	The system provides the ability to scan all supporting documents transmitted to the State in support of a death record.	***E - Exact match***	
R144	Put Record on Hold	The system user may choose to maintain control of the record and simply request further information from the medical certifier or funeral establishment. In this case, the system user marks the record "on hold" or equivalent.	***E - Exact match***	
R145	Update Status of Corresponding Section and Record	The system automatically updates the status of records and moves them to the appropriate queue.	***E - Exact match***	
R146	Populate Jurisdictional Defined Entry Fields	The system automatically populates jurisdictional defined entry fields such as "State File Number", "System user", "Name" and "Date Registered" when the record is registered.	***E - Exact match***	

Additional Rules For Birth Records With Paternity Affidavit Forms

The signed and notarized Paternity Affidavit Form is scanned and attached to the birth record when it is submitted for registration. These records are queued for State review prior to registration. Please see the Paternity Flow for rules related to paternity creation and submission. If a PAF is sitting the Paternity Pending Queue and is not completed within 30 days of the child's DOB, the PAF is filed with no father listed.

Paternities are checked visually against the record to ensure a match. Paternities are checked for completeness. If the form is not complete, the user may message the original owner of the record or generate a letter regarding corrections or missing information as needed. A unique indicator in the record designates receipt of a Paternity Affidavit Form at the State. If the information from the Paternity is not already in the record, it is entered into the record and edit checks are run against the record. All Paternities are scanned so there is a record in the system that shows the physical signatures. The system links the scanned record to the birth record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R147	Query Message	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
R148	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
R149	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
R150	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
R151	Record Receipt of Paternity Form at State	For the State to retain the original copy of the PAF, the system provides a field in the record to record receipt of the PAF.	***W - Workflow or System Configuration Required***	GCOM VRMS forms design is configurable.
R152	Update Status to "Paternity Received"	The system updates the status of the record with "Paternity Received" once the record passes the edit checks.	***W - Workflow or System Configuration Required***	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R153	Review Paternity from Queue	The scanned PAF can be viewed from the corresponding birth record.	***E - Exact match***	
R154	Display List of Birth Records Awaiting Paternity Affidavit Forms	The system displays a list of birth records for which paternity forms have not been received.	***E - Exact match***	
R155	Incomplete Paternity Letter	The system allows a user to select a letter from a set of letter templates depending on problem, time, etc. and send it to the non-system user facility indicating the received paternity is incomplete.	***E - Exact match***	
R156	Template Letter Updates	The system allows the user to update and customize template letters.	***E - Exact match***	
R157	Scan Paternity Affidavit Form	The Paternity Affidavit Form can be scanned at the State if it was received in paper.	***E - Exact match***	
R158	Court-Ordered Paternity Rescission	The system allows for court-ordered rescission of paternity and retains the court order number with the Paternity Affidavit Form and birth record.	***W - Workflow or System Configuration Required***	

R159	Rescinding of Paternity	They system allows role defined users to mark a record as a having a "Paternity Rescission."	*W - Workflow or System Configuration Required*	
R160	No Change to Record	The system does not allow a State user to change a record after a rescission without a new PAF.	*W - Workflow or System Configuration Required*	
R161	Pending Paternity Hold	The system will not issue a record if it is in the "Paternity Pending" queue.	*E - Exact match*	
R162	Court-Ordered Change	The system allows a State user to make changes to a record when a court order has been received for a rescission.	*W - Workflow or System Configuration Required*	
R163	Paternity Edit Check for Status	The system automatically checks the paternity status of the record to determine if there is a pending Paternity Affidavit Form. These records are displayed in the Paternity queue. The system will timestamp the completion of the paternity.	*E - Exact match*	
R164	Paternity Affidavit Form Required Info	For Paternity Affidavit Forms, the system checks the record for a State defined list of information.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.

BUSINESS PROCESS: POST REGISTRATION PROCESS

Once an event record is assigned a SFN and LFN, a number of post registration processes may occur:

- Birth/Death Cross Match
- Issuance
- Amendments
- SSA Fact of Death
- NCHS Transmission
- Extracts for Vital Statistics
- Imaging
- Reports
- Data Quality Assurance
- Registry Reporting

Description: Record has been registered (Box 1)

Please note: All rules that relate to registering records are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R165	Registered Records	Please see the registration rules above for all rules related to registering records within the system.		

Description: Records available for Issuance, Amendments, and Birth Death Cross Match (Box 2)

Please note: All rules that relate to issuance, amendments and birth/death cross match that apply to registering records are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R166	Record Available for Amendments	Please see the amendment section of the business rules, for all rules related to Amendments within the system.		
R167	Record Available for Issuance	Please see the Issuance section of the business rules, for all rules related to Issuance within the system.		
R168	Record Available for Birth/Death Cross Match	Please see the Birth/Death Cross Match section of the business rules, for all rules related to Birth/Death Cross match within the system.		

Description: Record included in NCHS transmission (new and changed) (Box 3); Receive error report (Box 4); Correct errors in EVRS (Box 5)

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R169	Exports and Imports	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
R170	Specific Exports and Imports	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		

Additional Rules Regarding Death Records				
R171	**Notify Registry of Reportable Cause of Death if Cause Changes**	If, after registration, the cause of death changes, the system sends a notification to any stakeholder who received notification of the original cause of death through rapid reporting.	***E - Exact match***	
R172	**Medical Portion Complete Prior to Extraction**	The medical portion of the record must be complete, even if it is pending, prior to extracting a file to NCHS.	***E - Exact match***	

Description: SSA Transmission [Birth and Death] (Box 6); Update EVRS with SSN information (Box 7)

For Birth:
The system queues registered records marked for submission to transmit to SSA to request SSN numbers for the births. Records are transmitted to SSA on a State defined basis. When the file is returned from SSA, the system is updated with the SSNs of each birth record.

For Death:
The system queues registered records marked for submission to transmit. Records are transmitted to SSA on a State defined basis. When the file is returned from SSA, the system is updated with the SSNs of each death record.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
R173	**Exports and Imports**	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
R174	**Specific Exports and Imports**	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
R175	**Enumeration Transmissions**	The file produced complies with the standard SSA format for enumeration.	***E - Exact match***	
R176	**Import Results from SSA**	When SSA returns the file with the SSN's, the data is imported into the system to update each birth record.	***E - Exact match***	
Additional Rules Regarding Birth				
R177	**Send Records with SSA Requested by Parent(s)**	Only records where the parent has indicated a request for a SSA for baby will be sent to SSA.	***E - Exact match***	

Description: Create extract for backup (Box 8)

The system automatically generates a backup of files and images. On a regularly scheduled basis, the system transmits the backup to the State.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
R178	**Microfilm**	For microfilm rules please reference General Requirements section CC.		
R179	**Backup of Files and Images**	The EVRS system can be backed up on a State defined schedule using standard database backup tools and techniques.	***E - Exact match***	
R180	**Send Backup to State**	System sends backup of files and images to the State on a State defined interval.	***W - Workflow or System Configuration Required***	GCOM VRMS back up plan can be configurable

Description: Scheduled and ad hoc reporting (Box 9)

The system runs any needed reports ad hoc or at a scheduled interval. After registration, ad hoc reports can be created by system users with the appropriate authority as defined by the State.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
R181	**Reports**	Please see Reports - Appendix C for rules on reports.		
R182	**Ad Hoc Reporting**	Please See Rules for Ad Hoc Reporting.		
R183	**New Reports**	The system allows the State the ability to define and format new reports in the system as needed.	***E - Exact match***	

R184	Reporting Database	The system allows the State to generate and refresh the statistical reporting database on a State defined interval.	*W - Workflow or System Configuration Required*	GCOM VRMS reports are configurable
Additional Rules Regarding Fetal Death				
R185	Report Indicating Births Matching Fetal Deaths	The user is able to generate a report that lists any birth certificate for which a fetal death record is found.	*W - Workflow or System Configuration Required*	
R186	Report Indicating Death Matching Fetal Deaths	The user is able to generate a report that lists any death certificate for which a fetal death record is found.	*W - Workflow or System Configuration Required*	

Description: QA registered records (Box 10)

The registered records are reviewed by Quality Assurance personnel to ensure data quality.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R187	Query Message	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
R188	Query and Rejection Cycle	Please see Query and Rejection Cycle business rules, regarding rules related to rejection and corrections of the system records.		
R189	Amendments	Please see the Amendments business rules, regarding rules related to corrections of the system records.		
R190	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		-
R191	Void Event Records Filed in Error	Based on the user authority, a user can void records created in error. Users who created the record will be notified via flags/notifications to inform them that a record they created was voided.	*E - Exact match*	
R192	Merge Records	Based on the user authority, a user can merge record(s) that do not have a state file number to the record with a state file number. Users who created the record will be notified via flags/notifications to inform them that a record they created was merged.	*F - Future*	Release Spring 2020
R193	Low Birth Weight Baby Queue	The system provides the ability to send the birth records with the birthweight less than 500 grams or unknown and more than 60 days after birth and no death certificate matched to it to a queue.	*W - Workflow or System Configuration Required*	GCOM VRMS provided standard queues , workflow allows to create new queues if needed.
R194	Message Facility for More Information	The system allows the State to message a facility for more information for records with the birthweight less than 500 grams or unknown and more than 60 days after birth and no death certificate matched to it If the infant was transferred from one medical Facility to another, the survey is sent to the "transferred to" Facility.	*W - Workflow or System Configuration Required*	
R195	Mark Record "Response Has Been Received"	The system indicates when a response has been received from a facility for requests from the State for more information on the birthweight less than 500 grams or unknown and more than 60 days after birth and no death certificate matched to it.	*W - Workflow or System Configuration Required*	
R196	Low Birth Weight Baby Soft Edit	System provides soft edits upon birth data entry if baby weight is less than 500 grams.	*W - Workflow or System Configuration Required*	GCOM VRMS validation rules are configurable.
R197	Compare Births to Fetal Death	The system provides the ability to compare records across events such as birth to fetal death in order to identify potential errors in the event type. If, for example, a death was labeled fetal but wasn't, the system should void and transfer over to death. This should be a dynamic report.	*E - Exact match*	
R198	High-Risk Babies	For birth records which indicate a high-risk baby, an indicator shows that a matching death certificate is likely to be received. Medical indicators of high-risk may include low Apgar scores, low birthweight, transfer of baby or specific medical conditions found at birth. This should be viewed by group, such as by user or SFN, not by individual records.	*E - Exact match*	GCOM VRMS report design allows to create and plug in new reports

R199	Deceased Birth	The system provides the ability to review birth records that have been marked deceased.	*W - Workflow or System Configuration Required*	GCOM VRMS report design allows to create and plug in new reports
R200	Errors in Records	If errors are encountered during the quality assurance process, the system determines if certified copies have been issued.	*F - Future*	Release Spring 2020
R201	Lock Records with Recalled Copies	For records with errors that have had certified copies issued, the system locks the record so that no additional copies can be issued until all errors have been corrected or the State does an override.	*F - Future*	Release Spring 2020
R202	Certified Copies Not Been Issued	If, during the quality assurance process, a record is found with errors that are legal issues (not statistical) and certified copies have not been issued, the record is locked and flagged so that certified copies cannot be issued until the correction is made or the State does an override.	*F - Future*	Release Spring 2020
R203	Records with Errors Placed in Queue for Corrections	Records with errors are placed in a queue for correction and/or amendment.	*F - Future*	Release Spring 2020
R204	Allow System User to Input Notes Into Notification	The notification of record errors is in the form of a template that allows the system user to input any remarks or questions regarding the record prior to sending it to the originator of the record.	*E - Exact match*	
R205	Re-direct Record or Entire Queue	The system allows a system user to re-direct an individual record or an entire queue if necessary.	*F - Future*	Release Spring 2020
R206	Reason Code for Re-Directing Record or Queue	Prior to allowing a record or queue to be re-directed, the system prompts the user to enter a reason code which explains why the user felt the need to re-direct the record or queue.	*F - Future*	Release Spring 2020
R207	Notification of Pending Queue	If a record or queue is re-directed, a notification is sent to the recipient of the record or queue.	*F - Future*	Release Spring 2020

Description: Imports and extracts for Vital Statistics/NCHS/STEVE (Box 11)

Out-of-state births can be received as an extract from STEVE or entered at the State for records received on paper. State staff will import the extract into the system received via STEVE. Data is available for Vital Statistics extracts.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
R208	Exports and Imports	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
R209	Specific Exports and Imports	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
R210	Statistical Extracts	The system allows the State the ability to define and format new statistical extracts in the system as needed.	*W - Workflow or System Configuration Required*	GCOM Extracts can be configured as needed
R211	Flag Record Once Extracted	The system sets a flag to indicate a record was included in an NCHS or STEVE extract and prevents record from being re-sent.	*W - Workflow or System Configuration Required*	GCOM Extracts can be configured as needed
R212	Enter Paper Records	The system allows the State the ability to enter an out-of-state record received on paper.	*E - Exact match*	
R213	Correct Records	The system allows the State the ability to correct out-of-state records that were entered from paper.	*E - Exact match*	
R214	Fields State Defined	The fields for out-of-state paper records are State defined.	*W - Workflow or System Configuration Required*	GCOM VRMS forms design is configurable.

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: DEATH EXTRACT TO NCHS

The NCHS Death Extract (formerly two files: Death Demographics and SuperMICAR) needs to be extracted in the NCHS/IJE format and sent via STEVE and/or SAMS as one file. NCHS then processes the file.

Once NCHS processes the files, they are uploaded to an FTP site (CDC SAMS portal, Secure Access Management Services) for the State. The State retrieves the files and downloads them into EVRS. This file contains the ICD codes that correspond to records in the database. The system automatically runs the updated records through user-defined filters (examples: pending cause, alcohol-related) and any that match the filters are flagged for review. The records are placed in queues and the system notifies Authorized Personnel that records are pending review.

The flagged records are reviewed by Authorized Personnel to determine if any changes are needed on the ICD 10 coding. If changes are needed, discussions will be held with the medical certifier or NCHS. The medical certifier is notified via a query letter sent to the physician. After a response is received from the medical certifier, it is reviewed to determine if the ICD 10 coding is correct or if it needs to be edited. If the code needs to be changed, then Authorized Personnel will contact NCHS to determine the best method for changing the record.

If NCHS does not agree with Authorized Personnel's coding, no change is made to the system data. If NCHS agrees with the change, the change is made in one of three ways: (1) NCHS makes the change in their record and a new file is sent to the State for uploading in EVRS; (2) the Nosologist will change the record in EVRS and resend to NCHS; (3) NCHS will provide the corrected codes for the State to correct in the system. The system maintains a history of the codes and the replacement codes used on a record. Changes to cause of death codes after NCHS processing are flagged accordingly and periodically exported to NCHS. ICD codes that are changed by State are not resent to NCHS.

Description: Export files from EVRS to NCHS specified format (Box 1); Flag record sent date (Box 2); Send files to NCHS (Box 3); NCHS processes file (Box 4)

Records are exported from the system into the NCHS Death Extract specified file format on a regular basis (formerly two files: Death Extract and SuperMICAR). The records pulled for the export are flagged as "Sent to NCHS." The exported files are sent through SAMS or STEVE to NCHS, and NCHS receives the files and processes them.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DE1	**Exports and Imports**	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
DE2	**Specific Exports and Imports**	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
DE3	**Occupation and Industry**	Please see General Requirements, section II - Occupation and Industry Capability, for rules on occupation and industry.		
DE4	**NCHS Specified Format**	The output conforms to NCHS specification.	***E - Exact match***	
DE5	**Changeable Format**	The format can be modified by the user as NCHS changes the format.	***E - Exact match***	
DE6	**Interface with Any System That Replaces Current NCHS Coding System**	If NCHS replaces the current MICAR and ACME-style coding systems, EVRS will be modified to properly interact with the replacement system.	***E - Exact match***	
DE7	**Real Time Interface with "WebMICAR"**	When available, WebMICAR is integrated with the system, allowing the immediate exchange of literals from the entry of cause of death information in the system at the State and the returned codes from the NCHS server.	***F - Future***	Release Spring 2020
DE8	**Flag Records for NCHS**	Once the records are selected for NCHS, the "sent to NCHS" flag is set.	***E - Exact match***	
DE9	**Select Only Registered Records**	Only records that contain the State File Number and do not have the "sent to NCHS" flag are selected.	***E - Exact match***	
DE10	**File Contains Certificates and West-Virginia-Specific Information**	The NCHS death file contains both certificate information and State defined, West-Virginia-specific information in the same file.	***W - Workflow or System Configuration Required***	
DE11	**West-Virginia-Specific Information Replaces Literal Cause of Death in Extract**	If a record contains both the literal cause of death from the death certificate and West -Virginia specific information, the system replaces the cause of death from the certificate with the West-Virginia-specific information fields in the extract of the record.	***W - Workflow or System Configuration Required***	
DE12	**West-Virginia-Specific Information and Cause of Death Information Maintained in System Record**	Both the cause of death information and West-Virginia-specific information are maintained in the death record.	***W - Workflow or System Configuration Required***	
DE13	**Do Not Send State-Assigned Codes**	The system does not send codes assigned by the State to NCHS.	***E - Exact match***	
DE14	**Separate Files for Multiple Years**	Records included in the NCHS death extract files contain data for the calendar year. Additional years require separate files.	***E - Exact match***	
DE15	**Undo Flag - Batch**	The flag for a specific batch of records can be reset so that the file can be re-extracted.	***E - Exact match***	
DE16	**Undo Flag - Individual Record**	The flag for a specific record can be reset so that the record can be re-extracted.	***E - Exact match***	
DE17	**Out-of-State Deaths**	Out-of-state deaths are not included in the extract file.	***E - Exact match***	
DE18	**Extraction of Files**	The extraction program can also generate files on demand for a specific set of dates or certificate numbers.	***E - Exact match***	

DE19	View Records with Changed COD by State	The system provides the ability to display records for review by Vital Statistics in which the COD (ICD Codes) was changed by the State and there is additional information data.	*W - Workflow or System Configuration Required*	
DE20	Reset 'Sent to NCHS' Flag for Changes to COD Literals or Other Data	The system automatically removes the "sent to NCHS" flag for any record within the reporting period that has had the COD literals or other data revised after it has been sent to NCHS so that it can be sent again.	*W - Workflow or System Configuration Required*	
DE21	Reset 'Sent to NCHS' Flag for Changes to Demographic Fields	The system automatically removes the "sent to NCHS" flag for any record within the reporting period that has had any changes made to the demographic fields after it has been sent to NCHS so that it can be sent again.	*W - Workflow or System Configuration Required*	

Description: Receive file from NCHS via CDC/SDN website (Box 5); Download file to EVRS (Box 6); Update database with cause of death codes (Box 7)

Once NCHS has processed the West Virginia Vital Statistics file, they place the processed file on their FTP site for West Virginia to retrieve. Vital Statistics retrieves the processed file and downloads it into the system. The cause of death codes and race codes contained in the file update the corresponding records in the database.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DE22	Update Death Records	Each death record is updated with the corresponding ICD or race codes, as appropriate, that are returned from NCHS in the import file.	*F - Future*	Release Spring 2020
DE23	All Codes Viewable	All codes returned from NCHS are viewable to the user.	*E - Exact match*	

Description: Vital Records run State defined filters (Box 8); Queue updated record (Box 9)

The system automatically runs the updated records through user-defined filters. Any records that match the filters are flagged for review by Authorized Personnel. The records are placed in the appropriate queue and a message is sent to Authorized Personnel notifying them that records are pending their review. Examples of types of filters include: pending cause, alcohol-related, and cancer with unspecified primary site.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DE24	Filters	Filters for record selection are based on the ICD 10 codes.	*W - Workflow or System Configuration Required*	
DE25	Changes to Filters	Filters can be changed by the user for a single run or for all subsequent runs.	*W - Workflow or System Configuration Required*	
DE26	Cross-Field Filters	Filters may cross fields and test the contents of multiple fields in combination to determine if the record meets the criteria.	*W - Workflow or System Configuration Required*	
DE27	Filters Run Automatically	The filter program can be ran automatically after the NCHS codes are updated.	*W - Workflow or System Configuration Required*	
DE28	Filters Run on Demand	The filter program can be ran on demand.	*W - Workflow or System Configuration Required*	
DE29	Filters State Defined	Filters for record selection are State defined.	*W - Workflow or System Configuration Required*	

Description: Authorized Personnel accesses queue to review NCHS coding (Box 10); Change required? (Box 11); M.C. or NCHS? (Box 12); If NCHS, correspond with NCHS (Box 13); Agree to change code? (Box 14); NCHS sends new file (Box 15)

Authorized Personnel logs onto the system and access the queue of records waiting for review. S/he reviews the NCHS coding on each record and makes a determination regarding whether they are in agreement with the ICD code applied by NCHS. The system provides additional specific sections for the State to enter ICD codes that are in addition to the those supplied by NCHS. It is also possible that changes are needed to the ICD 10 coding provided by NCHS. Often times, Authorized Personnel needs to discuss the coding with NCHS. If NCHS does not agree with Authorized Personnel's coding, no change is made to the system data in the NCHS returned ICD fields; additions may be made in the State ICD fields. If NCHS agrees with the change, it may be made in one of three ways: (1) NCHS makes the change in their records and a new file is sent to the State for uploading into the system; (2) Authorized Personnel will change the literal COD on record in the system and resend the record to NCHS; (3) NCHS will informally provide the correct codes, and Authorized Personnel enters those codes into the record. The system may maintain a history of records for which the ICD 10 value was replaced with a new value, including the original NCHS value and the replacement value. All records with changes to the literal cause of death (or ICD code) after NCHS processing are flagged accordingly and exported on a periodic basis to be sent to NCHS. The process for exporting and sending files to NCHS is the same as that described earlier.

State ICD codes that are added to the record are not resent to NCHS.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DE30	NCHS ICD Codes	The system provides the corresponding number of fields to receive all ICD codes provided by NCHS.	*W - Workflow or System Configuration Required*	
DE31	State ICD Codes	The system provides sufficient fields which correspond in position to the NCHS ICD codes for the State to add their own ICD codes.	*W - Workflow or System Configuration Required*	
DE32	Sort Queue	The queue can be sorted by the reason that the record was selected by the filter.	*W - Workflow or System Configuration Required*	
DE33	Remove Record from Queue	Authorized Personnel can remove a record from the queue without making changes.	*W - Workflow or System Configuration Required*	
DE34	Link Directly to Entry Screen	If Authorized Personnel determines that a specific code or literal needs to be changed, the program links directly to the entry screen without having to select another program from the menu; the program then returns to process the next record in the queue.	*W - Workflow or System Configuration Required*	
DE35	Access to Query Function	The system provides the ability to generate a query letter regarding the cause of death from within the death record screen.	*W - Workflow or System Configuration Required*	

Description: M.C. or NCHS? (Box 12); If M.C., send a query letter (Box 16); Receive response (Box 17); Review response (Box 18)

If the medical certifier needs to be consulted, a query letter is sent to the physician. When the response is received from the medical certifier, it is reviewed to determine whether the original ICD 10 coding is appropriate or if the coding needs to be changed. If Authorized Personnel determines that the code needs to be changed, the State corresponds with NCHS to determine the best method for achieving the change to the record. The record is amended and the flags are reset so that the record is resent to NCHS.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DE36	Query Letter	The query letter will be sent to the system-specified medical certifier directly through the system, abiding by all user-specific messaging options, or may be printed from the system either digitally (i.e. PDF format) or physically.	*W - Workflow or System Configuration Required*	
DE37	New Value Does Not Overwrite NCHS Value	The new value is entered in a specific amended code field and does not overwrite the NCHS values.	*F - Future*	Release Spring 2020
DE38	Identify Responses to Query Letters	The system identifies changes in ICD 10 codes that were responses to query letters.	*F - Future*	Release Spring 2020
DE39	Resend Flag	A "resend to NCHS" flag is set to send the record to NCHS when the next change file is sent. This is different from the "sent to NCHS" flag.	*E - Exact match*	
DE40	Report on NCHS and New Values	Reports can be ran to show both NCHS and new specific values.	*W - Workflow or System Configuration Required*	
DE41	Analyze History	The system provides the functionality to analyze changes in codes between NCHS and the Bureau of Vital Statistics.	*W - Workflow or System Configuration Required*	

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E - Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: DELAYED BIRTH REGISTRATION

A delayed birth certificate may be initiated through the mail, walk-in, or by way of a judicial determination of birth. Once the initial request is received, the record is created in EVRS and minimal information is entered into the system. The system user reviews the record to be registered and the supporting documentation. If there is missing information, the user generates a letter and sends the letter to the requestor to provide the additional required information. If the information is complete, the record is reviewed to determine if it will be accepted or denied. If the form is accepted, the form is printed and forwarded to the requestor to notarize. Once the form is notarized, reviewed and accepted, the delayed birth certificate is registered, a SFN is assigned, and the record is ready for issuance. If the system user determines the request should be denied, the user generates a denial letter, sends it to the requestor, scans the submitted documentation, and closes the case.

The timeframe for a delayed birth certificate request to remain open is State defined. Closed request do not expire from the system; they are simply closed until such time as the requestor reinitiates that request.

When a delayed birth certificate is registered, the system moves the request from the Pending Queue to the Ready to Issue Queue.

Please note: All rules that relate to starting a birth record, record edits, electronic signatures, queues, registration and issuance apply to delayed birth records and are not repeated here. The business rules in this section are specific to delayed birth registration.

Description: Receive request for Delayed Birth Certificate (Box 1); Create record in EVRS w/minimal information, data enter the record's information (Box 2),

The State may start a case from a paper document that has been submitted by the parents, legal guardian, or a child over 18 years of age through the mail. Additionally, the State may start a case if a court order is received. The record is created in EVRS by data entering the minimal information needed to start the record. The record is checked to see if it has sufficient information to complete the record. A delayed certificate cannot be created for an individual that is deceased.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DB-1	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
DB-2	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
DB-3	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
DB-4	**Point of Sale and Event Modules**	Please see the General Requirements, section A - User Technical Environment, for rules regarding the POS and event modules.		
DB-5	**Paternity Rules**	All rules related to Paternities apply to this section.		
DB-6	**365-Day Deadline**	The system provides a 365-day deadline for processing a delayed birth certificate.	**E - Exact Match**	
DB-7	**365-Day Alert**	The system provides an alert that the 365-day deadline is approaching at a State define number of days before the deadline.	**W - Workflow or System Configuration Required**	GCOM VRMS allows configuration to build alerts/notifications across all record types
DB-8	**Judicial Determination of Birth**	A Judicial Determination of Birth only requires court documents, ID and payments to process. No additional documentation or notarization is needed.	**W - Workflow or System Configuration Required**	GCOM VRMS allows to configure the documents types for each Birth Type
DB-9	**Delayed Birth Queue**	The system provides a queue for records entered in to the system for a delayed birth. All delayed birth records are placed in the queue for review prior to registration.	**W - Workflow or System Configuration Required**	queue logic creiteria (Business Rules) across all record types
DB-10	**Minimal Information**	The minimum information required to create a delayed birth record are State defined and may include, but are not limited to, person's full name, date of birth, state of birth, mother's full maiden name, father's full name, and mother's and father's places of birth.	**F - Future**	Release Spring 2020
DB-11	**Paternity Screens**	If paternity is part of the delayed birth process, paternity screens are available for the State user.	**F - Future**	Release Spring 2020
DB-12	**Check for Duplicates Across All Birth, Death, and Fetal Death Record Types**	When a new delayed birth certificate case is created, the system checks for an existing birth, death or fetal death records across all record types (home birth, facility, delayed, death, or fetal death) including denied requests.	**F - Future**	GCOM VRMS could allow checking for existing birth, death or fetal death record across all record types
DB-13	**Check for Duplicates on Any Mandatory Field**	The system checks for duplicates for a delayed birth based on State defined matching criteria.	**W - Workflow or System Configuration Required**	GCOM VRMS will be configured for Duplicate Check Criteria across all record types
DB-14	**No Delayed Certificate for Deceased**	If during the duplicate check it is determined that the individual applying for the delayed certificate is deceased, the application is denied. The request is added to the record history.	**W - Workflow or System Configuration Required**	GCOM VRMS will be configured for Deceased Flag for appopriate record types
DB-15	**Delayed Birth Fields**	The fields for a delayed birth certificate are State defined.	**F - Future**	Release Spring 2020
DB-16	**Age of Applicant**	The system checks the age of the person applying for a delayed birth certificate. The person requesting the delayed birth certificate must be over 18 years of age or an emancipated teen with a court order.	**W - Workflow or System Configuration Required**	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
DB-17	**Under-18 Review by Registrar**	If applicant is under 18 years of age and parents SSN's are required, the record has a flag placed on it for Registrar's review and approval. Once reviewed and approved by Registrar, the flag is removed.	**W - Workflow or System Configuration Required**	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
DB-18	**Notation of "Delayed" Made in Birth Record**	The birth record indicates that this is a delayed birth.	**W - Workflow or System Configuration Required**	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

DB-19	Screen Matches Form	The delayed birth screen matches the layout of the appropriate Delayed Certificate of Birth Form.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
DB-20	No Medical Information	Delayed birth certificates contain no medical information.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules

Description: Complete? (Box 3); If no, send Letter of Instruction to requestor (Box 4); Receive information from requestor or judicial determination of birth (Box 5); Access record from delayed registration queue and enter data (Box 6);

If the information received for the delayed birth certificate is not sufficient to complete the record, the record is placed in a pending queue and the system generates a Letter of Instruction indicating what information is needed to complete the delayed registration of birth. The letter is given or sent to the requestor. When the additional information is received from the requestor or a court order is received, the State user accesses the record from the delayed registration queue. The additional information is added to the record. Edits applied are unique to delayed registration and the rules that apply are found below.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DB-21	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
DB-22	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
DB-23	Delayed Birth Pending Queue	The system provides a queue for delayed births that are awaiting the return of additional information.	E - Exact Match	
DB-24	Requestor Review Queue	The system provides for a queue for delayed birth records that are pending receipt of the notarized form from the requestor.	W - Workflow or System Configuration Required	GCOM VRMS Dynamic Queue Configuration allows configuration of Queues based on Business Rules
DB-25	Delayed Birth 1st Letter Queue	The system provides a queue for delayed births requiring a first letter for follow up. The timeframe for the first letter is State defined.	W - Workflow or System Configuration Required	GCOM VRMS Dynamic Queue Configuration allows configuration of Queues based on Business Rules
DB-26	Delayed Birth 2nd Letter Queue	The system provides a queue for delayed births requiring a second letter for follow up on the original request. The timeframe for the second letter is State defined.	W - Workflow or System Configuration Required	GCOM VRMS Dynamic Queue Configuration allows configuration of Queues based on Business Rules
DB-27	Delayed Birth 3rd Letter Queue	The system provides a queue for delayed births requiring a third letter for follow up on the original request. The timeframe for the third letter is State defined.	W - Workflow or System Configuration Required	GCOM VRMS Dynamic Queue Configuration allows configuration of Queues based on Business Rules
DB-28	Judicial Determination of Birth Required After 3rd Attempt	If an applicant has been unsuccessful in their delayed birth certificate application after their third attempt, a box is checked which generates a denial letter informing the applicant that in order to continue the application, they will need a Judicial Determination of Birth.	W - Workflow or System Configuration Required	GCOM VRMS allows to set up corespondences across all record types based on BusinessRules
DB-29	Judicial Determination of Birth Alert	When a Judicial Determination of Birth is initiated at the court, an alert is sent to the State informing them that an applicant has initiated a Judicial Determination of Birth and the day of their court hearing. This alert stays in the system for 20 days.	W - Workflow or System Configuration Required	GCOM VRMS allows configuration to build alerts/notifications across all record types
DB-30	Documents Used as Evidence	The system collects State defined information for each document used for evidence in a delayed birth certificate request. Information may include document type, date filed, birth fact it supports, and more.	W - Workflow or System Configuration Required	GCOM VRMS allows to configure the documents types for each Birth Type
DB-31	Delayed Birth Certificates Collect Proof of Birthdate	The user selects, from a State defined list, the type of proof that was submitted for birthdate. Multiple document selections are possible.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-32	Delayed Birth Certificates Collect Place of Birth	The user selects, from a State defined list, the type of proof that was submitted for place of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-33	Delayed Birth Certificates Collect Parents' Information	The user selects, from a State defined list, the type of proof that was submitted for parents' names and their birthplaces.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-34	Delayed Birth Certificate	A birth record registered one (1) year or more after the date of birth is registered as a delayed certificate.	E - Exact Match	
DB-35	Documentation if Filed Within 10 Years After Date of Birth	The system requires a minimum of a hospital record created at time of birth or two forms of proof of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items

DB-36	Two Documents Must Prove Place of Birth of Applicant	If there are no hospital records available and applicant is under 10 years of age, the system requires the user to select two documents from a State-defined list that prove the applicant's place of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-37	Exact Date of Birth	The system requires the user to select two (2) documents from a State-define list that proves the exact date of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-38	Documentation if Filed 10 Years or More After Date of Birth	The system requires a minimum of three forms of proof of birth if applicant is ten (10) years of age or more from their date of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-39	Documentation for Persons Under 10 Years of Age	Documents must have been established at least one year prior to the date of application or within the first year of life.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-40	Documentation for Persons 10 Years of Age or Over	Documents must have been established at least 10 years prior to the date of application, or within 3 years of the date of birth.	W - Workflow or System Configuration Required	GCOM VRMS allows selection of each specified document type as per Configurable List Items
DB-41	Receipt Number	The system links the receipt number associated with delayed birth record request.	W - Workflow or System Configuration Required	GCOM VRMS allows an order to be generated from the records and provide Receipt Number to link them
DB-42	Parents' Information	The system provides the user with a drop down menu with State defined options showing proof of the full name of the registrant's mother prior to any marriage and the full name of the father. Examples include but are not limited to: parent's marriage license, birth certificate of the applicant's sibling.	W - Workflow or System Configuration Required	GCOM VRMS Form allows configuration of Data Fields based on Business Rules
DB-43	"Closed" Status After One Year	The system automatically changes the status to "closed" after one year from the date of the original receipt. A letter is sent to the applicant informing them of the "closed" status.	W - Workflow or System Configuration Required	GCOM VRMS allows configuration to build alerts/notifications across all record types
DB-44	Re-Open "Closed" Case	The system allows an authorized user to re-open a closed case.	W - Workflow or System Configuration Required	GCOM VRMS contains workflow to Reopen (Reinstate) application.
DB-45	SSN EAB for Delayed Births	The system does not run the SSA EAB for a delayed birth record.	W - Workflow or System Configuration Required	GCOM VRMS has feature to flag records types which could be excluded for SSA EAB

Description: Denied? (Box 7); If Yes, print letter of denial (Box 8); Scan documents and attach to record (Box 9); Close record (Box 10); Mail documents and denial letter to requestor (Box 11);

In the case where a delayed registration is denied, a letter of denial is printed. Supporting documents are scanned and attached to the electronic record, and the State closes the record in the system. The documents and denial letter are mailed to the requestor.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DB-46	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
DB-47	Registration Denied	The system provides the ability to deny the registration of a delayed birth record.	E - Exact Match	
DB-48	Reason for Denial	The system provides the user with a State defined list of reasons why the record was denied registration.	E - Exact Match	
DB-49	Close Denied Record	The system allows the user to close a denied record.	W - Workflow or System Configuration Required	GCOM VRMS contains workflow to Approve/Reject application.
DB-50	Denied Delayed Birth Certificate	A delayed birth that is denied is retained in system with a status of "denied" and a message that the record can only be opened with a court order.	W - Workflow or System Configuration Required	GCOM VRMS contains workflow feature to keep records in sealed status (Denied)
DB-51	Open Denied Record	Upon receipt of a court order, an authorized user can open a denied record, then edit and prepare the record for registration.	W - Workflow or System Configuration Required	GCOM VRMS contains workflow feature to allow only certain users to Preview such sealed records (Denied)

Description: If not denied, print form and forward to requestor (Box 12); Received notarized form from requestor (Box 13); Review form (Box 14); OK? (Box 15); If no, send letter of instruction to requestor (Box 4);

Once the birth record passes all edit checks, the record is accepted and the paper form is printed and forwarded to the requestor. The requestor reviews the delayed birth certificate verification form. If the information is correct, the record is notarized and returned to the State. If not correct, changes are noted on the form and the form is returned to the State to make changes as needed. When the State receives the completed notarized form, the State performs a final review of the certificate. If the record is okay, it is moved to the queue for registration.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*

DB-52	State User Keys Record	The system prevents the same user that keyed the record from being the user that approves the record for registration.	E - Exact Match	
DB-53	State User Approves Keyed Record	A second user must access the Delayed Birth Registration Queue to review the delayed birth record and approve it for registration.	E - Exact Match	
DB-54	Delayed Birth Registration Queue	The system provides a queue for Delayed Birth records that have been entered and are awaiting approval for registration.	E - Exact Match	
DB-55	Signature Portion of Certificate	The system generates a delayed birth certificate form containing the birth information, signature portions, and an abstract of supporting documentation.	E - Exact Match	
DB-56	Certificate Marked "Delayed"	The system-generated delayed birth certificate form is noted with "Delayed" by the SFN.	E - Exact Match	
DB-57	Form Options	The system allows the user to select which type of form printed. The format for the delayed birth certificate is state defined.	W - Workflow or System Configuration Required	GCOM VRMS allows User to select the Form Type (Configurable)
DB-58	Abstract Evidence	The system allows evidence to be abstracted from the system and includes the title or description of the document, the name and address of the custodian of the document, and the date of the original filing of the document.	E - Exact Match	
DB-59	List Evidence	The system allows abstracted evidence to be printed on the certificate.	E - Exact Match	
DB-60	Print Delayed Certificate of Birth	The system allows the user to print a Delayed Certificate of Birth.	E - Exact Match	
DB-61	Reprint Certificate	The system allows an authorized user to reprint a Delayed Certificate of Birth as needed, such as in the instance of a paper jam or low ink.	E - Exact Match	

Description: If OK, registrar record and assign SFN (Box 16); Scan certificate and supporting documentation (Box 17); Go to Issuance Flow

If the requestor confirms that all of the information is correct, the system user registers the delayed birth record and a State File Number is assigned. All business rules regarding registering a record apply to delayed records. The paper certificate and any supporting documentation are scanned and attached to the electronic record. The record is ready for issuance of certified copies.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
DB-62	State File Number	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
DB-63	Point of Sale and Event Modules	Please see the General Requirements, section A - User Technical Environment, for rules regarding the POS and event modules.		
DB-64	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
DB-65	Supporting Documentation	The supporting documentation for delayed birth registrations is scanned and attached to the electronic birth record in the system database.	E - Exact Match	
DB-66	Not Included in NCHS Extract	Delayed birth certificates are not sent to NCHS.	W - Workflow or System Configuration Required	GCOM VRMS has feature to flag records types which could be excluded from NCHS Extract

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: RECORD A BIRTH, FETAL DEATH OR DEATH OF A WEST VIRGINIA RESIDENT IN ANOTHER STATE

This process gathers all required information for recording births, fetal deaths, and deaths of West Virginia residents in other states for statistical and informational purposes.

Description: An out-of-state vital event occurs to a WV resident (Box 1); Other State provides WV with record (Box 2); Electronic file? (Box 3); If yes, upload and unencrypt, import/edit (Box 4) Record OK? (Box 5); If yes, EVRS assigns out-of-state file number (Box 8); If no, preview queue of error records (Box 6); Print report for follow-up if required (Box 7), Go to Step 8.

Information regarding West Virginia residents who give birth or die in another state may be received from the other states either through STEVE or in a paper format. In addition, for non-WV residents who were born in WV but die out of state, information can be received in the same manner as above (roster records).

The system retains the state file number assigned by another state for all out-of-state births, deaths, ITOP, and fetal deaths - a unique West Virginia state file number is not assigned by the system. All out-of-state events are for statistical purposes only and can only be viewed or printed by Vital Statistics. No West Virginia facility may issue copies of out-of-state certificates or supply information about these records other than the state in which the event occurred. Out-of-state birth, fetal death, ITOP, and death records may be viewed by authorized staff once they are loaded into the system.

There are currently no NAPHSIS use cases for receiving and recording out-of-state birth, fetal death, ITOP, or death records. The system conforms to and interfaces with STEVE.

If the information is received in an electronic file through STEVE, the user uploads the data and imports it into the database. If a duplicate record is found during the import, the new record will replace the old record in the system. The records are then ready for the Birth Death Cross Match process. An error report is produced from any records that do not import correctly.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
O1	**Accept All STEVE and IJE Imports**	The system is able to accept all STEVE and IJE imports.	***E - Exact Match***	
O2	**Upload Report**	The system produces a report that confirms the total number of records contained in the file, the total number of records that were successfully uploaded, and the total number of records that failed the edit checks.	***E - Exact Match***	

O3	**Upload Detailed Information**	The system provides the user with the option of reviewing, either on screen or in the form of a print out, an itemization of the results of the processing of each of the records from the upload of a given file.	***E - Exact Match***	
O4	**Error Report**	The system generates an error report for any records that do not import correctly into the system.	***E - Exact Match***	
O5	**Duplicate Records**	The system checks for duplicate records upon import.	***E - Exact Match***	
O6	**Updated Record Replaces Duplicate**	If the system finds a duplicate record and the record has an "updated" indicator in STEVE file format, the new file replaces the existing record.	***E - Exact Match***	
O7	**Report of Duplicates**	The system allows the user to create a report of duplicate records.	***F - Future***	Release Spring 2020
O8	**IJE Format**	The system is able to accept files in the IJE format.	***E - Exact Match***	
O9	**STEVE Interface**	The system is able to interface with STEVE.	***E - Exact Match***	
O10	**Keep OOS SFN**	The system keeps the original SFN assigned by the state where the birth, death, ITOP, or fetal death occurred. A West Virginia SFN is not assigned.	***E - Exact Match***	
O11	**Out-of-State Records Receive System Assigned Number**	The system applies a system-assigned tracking number to out-of-state records and does not remove/replace the out-of-state file number.	***E - Exact Match***	

Description: Electronic file? (Box 3); If no, log into EVRS at State in Vital Statistics (Box 10); Input information (Box 11)

Out-of-state records received on paper will be entered in the system at the State. These records will follow the same steps as paper records received at the State. The State user will select the OOS status/record type and enter the information in the system. For OOS records entered from paper, the system allows data entry of the OOS SFN and has relaxed edit rules and checks for existing record with same state of event occurrence (birth, death, fetal death or ITOP), event year and OOS SFN.

	Please note: All rules that relate to entering a birth record, death record, fetal death records, ITOP records, record edits, electronic signatures, queues, registration apply in this process and are not repeated here.			
	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
O12	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
O13	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
O14	**Record Type**	The data entry screens for the entry of an out-of-state birth, fetal death, ITOP, and death are by record type and match screens for an in-state birth, fetal death, ITOP, and death.	***E - Exact Match***	
O15	**Relaxed Edits**	The system allows for relaxed edits for OOS records entered from paper.	***E - Exact Match***	
O16	**OOS SFN**	The system allows the user to enter the original SFN assigned by the state where the birth, death, ITOP, or fetal death occurred. An West Virginia SFN is not assigned.	***E - Exact Match***	
O17	**Maintain List for Select Institutions**	The system allows the State to maintain a table of select out-of-state institutions to facilitate data entry. These are only institutions that are commonly used, such as funeral homes in a neighboring State.	***E - Exact Match***	
O18	**Unknown Data**	Fields for which there is no data are marked "unknown."	***E - Exact Match***	
O19	**Duplicate Record Data Entry Error**	The system does not allow data entry of a duplicate record and displays an error message.	***E - Exact Match***	

Additional Rules Regarding Running Edit Checks and Printing an Uploaded Report

Once the information is entered into the system, an error check runs. The user has the option to print a report of the records that were uploaded from another state. If the error is one the user is authorized to correct, the error is corrected.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***

O20	Edit Set	The edit set used on out-of-state records is different than those used for in-state records.	*W - Workflow or System Configuration Required*	
O21	West Virginia Residency	The system has a soft edit to check that residency is West Virginia.	*W - Workflow or System Configuration Required*	
O22	West Virginia Birth	The system has a soft edit to check for a West Virginia resident birth.	*W - Workflow or System Configuration Required*	
O23	Correct Errors	The system allows a designated user to correct obvious errors.	*E - Exact Match*	

Description: Birth (for infants) or Death Record? (Box 9); Go to Birth Death Cross Match Flow

Each out-of-state event type keeps the SFN number assigned by the state where the birth, death, ITOP, or fetal death occurred. OOS birth and death records are later matched against in-state birth and death records through the Birth Death Cross Match Flow.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
O24	Birth Death Cross Match Rules Apply	Please see Birth Death Cross Match for all rules related to Birth Death Cross Match.		
O25	Enter OOS SFN	The system allows the user to enter the SFN assigned by the state in which the out-of-state birth, death, ITOP, or fetal death occurred. A West Virginia SFN is not assigned.	*E - Exact Match*	
O26	Record Type "Out-of-State"	The system marks an OOS record as an "Out-of-State" record type. Record type is clearly visible to the user.	*F - Future*	Release Spring 2020
O27	Provide Fields for Both NCHS and West Virginia ICD Codes	At this time, the State may wish to change an ICD code provided by NCHS. The system maintains the ICD codes provided by NCHS while allowing the State to indicate their preferred ICD codes.	*E - Exact Match*	
O28	Does Not Print Out-of-State Certificates	The system does not allow the printing of certified or uncertified copies or abstracts of certificates based on out-of-state records.	*W - Workflow or System Configuration Required*	
O29	Users May Print Working Copies	The system allows a user, based on system roles and profiles, to print working copies of OOS records. They are clearly marked as such.	*E - Exact Match*	
O30	OOS Records Not Included in SSA Transmissions	Out-of-state records are not included in SSA transmissions.	*E - Exact Match*	
O31	OOS Records Not Included in NCHS Transmissions	Out-of-state records are not included in NCHS transmissions.	*E - Exact Match*	

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR BIRTH/DEATH CROSS MATCH

NAPHSIS use case models associated with death registration:
EDRS UC 064 v. 1.2 - Register a Case
EDRS UC 042 v. 2.1 - Match Death Case to Birth Record
MVRS UC 011 v. 1.5 - Void Registered Record

BUSINESS PROCESS: BIRTH/DEATH CROSS MATCH

Birth Death Cross Match works in 2 distinct ways: 1. It runs each time a death record is registered in the system and if a match is found that meets the State defined threshold, the birth and death records are automatically linked and the appropriate information is automatically placed on each record without human intervention. Potential matches within a state defined range are queued for a user to review and determine if the system-generated match is truly a match. All infant deaths (under 12 months of age) are placed in an Infant Death Queue. 2. It can be initiated and ran at anytime through manual intervention. Birth Death Cross Match includes out-of-state death records.

Queues: A user will review the records in the queue, true matches will be linked, and the system will automatically apply the appropriate information on each record. No matches may be released back into the database for later cross match or marked as "no match." Records marked as "no match" will not be included in the next cross matching activity.

THE FOLLOWING RULES APPLY BOTH OPTIONS DEFINED ABOVE FOR CONDUCTING CROSS MATCH

Description: The Death Record is registered (Box 1); Birth Death Cross Match runs automatically (Box 2); Match? (Box 3); If there is a match, the system automatically links and marks the records (Box 4)

Once the death record is registered, the system automatically runs a Birth Death Cross Match. The users do not need to initiate the function. The system performs a search for potential matching records based on fields such as name, date of birth, location of birth, father's name, mother's name, and mother's maiden name for review by the user. If a match is found initially, the system will automatically link and mark the records.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
BD1	**Threshold Percentages State Defined**	The threshold percentages are State defined.	***E - Exact Match***	

BD2	**Matching Criteria**	Matching criteria are State defined.	***E - Exact Match***	
BD3	**Bi-Directional Option**	The Birth Death Cross Match may be performed either through the system's birth or death module.	***E - Exact Match***	
BD4	**Instant Cross Match on Death**	The system automatically searches for a birth record when a death record is registered in the system.	***E - Exact Match***	
BD5	**State Defined Schedule**	The Birth Death Cross Match may be scheduled to run on a State defined schedule.	***F - Future***	Release Spring 2020
BD6	**Mask Images for Cross Match**	The system will be able to mask images for Birth Death Cross Match	***W - Workflow or System Configuration Required***	
BD7	**Back Data Entry**	The system allows indexed records to be back-data-entered in the moment without leaving the module so that the user may continue with Birth Death Cross Match.	***W - Workflow or System Configuration Required***	
BD8	**Extract for County BDCM**	The system allows counties to extract data from the system on a periodic basis to import into their individual data bases for BDCM purposes.	***W - Workflow or System Configuration Required***	GCOM VRMS has a number of extracts that can be modified to meet requirements.
BD9	**Extract Format**	The extract will be in a standard format for all counties and is State defined.	***E - Exact Match***	
BD10	**Shared Events County to County**	The export should include records in which one event occurred in the county, but the other occurred in a different county (for example, born in one county but died in another).	***W - Workflow or System Configuration Required***	GCOM VRMS has a number of extracts that can be modified to meet requirements.
BD11	**Shared Events County to State**	The export should include records in which one event occurred in the county, but the other occurred in a different state (for example, born in one county but died in a different state).	***W - Workflow or System Configuration Required***	GCOM VRMS has a number of extracts that can be modified to meet requirements.
BD12	**Export Flag**	The system will flag the record as "exported" to the county.	***F - Future***	Release Spring 2020
BD13	**Flag Records**	A record that has an "exported" flag cannot be re-exported.	***E - Exact Match***	
BD14	**Data to be Exported**	The export only has enough information to identify the records that are matched. Information exported is State defined. Information that could be included is decedent's name, date of birth, date of death, death SFN, birth SFN, county of birth, county of death, and state of death.	***W - Workflow or System Configuration Required***	GCOM VRMS a number of extracts and reports that can be modified to meet requirements.
BD15	**Export Queue**	The exported data can be viewed in a queue.	***F - Future***	Release Spring 2020
BD16	**Export Report**	The exported data can be viewed in a report.	***W - Workflow or System Configuration Required***	GCOM VRMS a number of extracts and reports that can be modified to meet requirements.
BD17	**Infant Deaths Under 12 Months of Age**	Deaths under 12 months of age are considered to be an infant death.	***E - Exact Match***	
BD18	**Review Queue for Infant Deaths**	The system provides a queue for infant deaths.	***E - Exact Match***	
BD19	**Queue of Death Records for Infants with No Corresponding Birth Record**	The system displays a queue of infant death records that have been received for which there are no matching birth records.	***W - Workflow or System Configuration Required***	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
BD20	**Real Time Option**	The user has the option to perform a Birth Death Cross Match immediately after a record is registered in either the birth or death module.	***E - Exact Match***	
BD21	**Birth Records**	For birth records, the Birth Death Cross Match runs against both in-state and out-of-state death records.	***E - Exact Match***	
BD22	**Death Records**	For death records, the Birth Death Cross Match runs against both in-state and out-of-state birth records.	***E - Exact Match***	
BD23	**Instant Cross Match on Fetal Death**	The system automatically searches for a birth record on fetal death records.	***E - Exact Match***	
BD24	**Queue Matched Fetal Death**	The system will queue any fetal death records that are found to have a corresponding birth record for action by the State.	***W - Workflow or System Configuration Required***	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.

BD25	Display Cases Based on User Selected Criteria	The system searches and displays cases according to State defined searches for cross matching.	*E - Exact Match*	
BD26	Display Enough Information to Determine Match	The system displays enough information for the user to be able to determine if the records match.	*E - Exact Match*	
BD27	Probabilistic Matches	The system provides the functionality to do probabilistic matches.	*E - Exact Match*	
BD28	Threshold for Possible Match	The system contains the ability to define thresholds for what is considered an exact match, a probable match, a possible match, or a non-match when using probabilistic matching.	*E - Exact Match*	
BD29	OOS SFN	The system recognizes OOS SFN numbers on a OOS record as correct.	*E - Exact Match*	
BD30	Instant Cross Match on OOS	The system automatically searches for a match for OOS birth and OOS death records when imported into the system.	*F - Future*	Release Spring 2020
BD31	Queue for OOS In-State Resident Birth	The system provides a queue that displays OOS birth and death records that do not match to a record in the system.	*W - Workflow or System Configuration Required*	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.

Description: Probability Match? (Box 5); If no match, record remains in database for future cross-referencing (Box 6); If there is a Probability Match, queue records for review (Box 7); Accept match? (Box 8); If yes, automatically link and mark records through system (Box 12); If no, place in pending queue (Box 9); Research and resolve (Box 10)

The user views the potential match and determines whether to accept the match. If there is no matching record found or if the system-suggested match is not correct, the death record is moved to a pending queue. Each record is researched to resolve the error causing the matching record not to be found. A query is used wherever appropriate. Any necessary data is keyed for records missing a matched record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
BD32	Review Queue for "Probabilistic Match"	The system provides a queue that displays matches with a threshold percentage indicating a probabilistic match.	*E - Exact Match*	
BD33	Manual Searches, Birth	The system provides the ability for the user to manually search the birth file for a record and, if the record is located, create a link between the birth and death records.	*E - Exact Match*	
BD34	Manual Searches, Death	The system provides the ability for the user to manually search the death file for a record and, if the record is located, create a link between the death and birth records.	*E - Exact Match*	
BD35	Update Automatically Once Matched	The system automatically updates both records with the appropriate State defined information once a birth and/or death record is manually matched.	*E - Exact Match*	
BD36	Birth Record Associated with Death Record	The system allows a user to easily navigate from a birth record containing a deceased indicator to view the associated death record.	*E - Exact Match*	
BD37	Death Record Associated with In -State Birth Record	The system allows a user to easily navigate from a death record for a state-born person to view the associated birth record.	*E - Exact Match*	
BD38	Birth Place Listed as "In-State" but Birth Record Not Found"	If the birth place is listed as "in-state" but a birth record is not found, the system may allow the State to select an indicator accepting the lack of a birth certificate and the system may not display this record again in cross match.	*F - Future*	Release Spring 2020
BD39	View Matches Side by Side	The system provides the ability to view the demographic portion of each record that is a potential match side by side for comparison purposes.	*E - Exact Match*	
BD40	Highlight Differences Between Records	When displaying records side by side, the system highlights the fields that do not match.	*E - Exact Match*	
BD41	Periodically Re-Run Cross Match Against Unmatched Records	Flagged records (no match found) are periodically re-ran against the birth database in case of an addition or change in the content of the birth records. The State sets the length of the period where a record is in queue for automatic re-matches.	*F - Future*	Release Spring 2020
BD42	Reject Birth/Death Match	The system provides the functionality to decline a birth/death match, despite a successful electronic match, and replace it with a selection of a record from the queue by the user.	*F - Future*	Release Spring 2020
BD43	Refuse Birth/Death Match	The system provides the functionality to decline the birth/death match, despite a successful electronic match, and refuse a match with any record.	*F - Future*	Release Spring 2020

Description: Update selected fields on birth record and death record (Box 14)

Once potential matches are confirmed, the system links the corresponding birth and death records. Any needed data fields are updated between the birth and death records (e.g. infant death data, cross-matched state file numbers). The birth record is updated with a "Deceased" flag, and the death record is updated with a "Matched to Birth Record" indicator.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	Comments
BD44	Exact Matches	Exact matches between the system's birth and death records are automatically linked.	*E - Exact Match*	
BD45	Positive Acceptance	The system asks the user to acknowledge acceptance of each cross match in a queue of records that may contain "no match" records.	*E - Exact Match*	
BD46	Update Birth Record	Upon completion of the cross match, the system adds the State defined information to the record. Traditionally, this includes adding the death certificate number, year of death, and state of death to the birth record.	*E - Exact Match*	
BD47	Manually Add Information	The system allows a user to manually add the death certificate number, year of death, and state of death to a birth record upon completion of the cross match.	*E - Exact Match*	
BD48	Match Record Manually	The system provides the State user the ability to match a close-matching record manually in a queue of records that may contain "no match" records.	*E - Exact Match*	
BD49	Place Records in Pending Queue	Records that the user chooses to research further are placed in a pending queue. The "no match" flag is not removed from the record.	*W - Workflow or System Configuration Required*	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
BD50	Apply "Deceased" Indicator to Birth Record	If a match is found, the system applies a "Deceased" indicator to the birth record.	*E - Exact Match*	
BD51	"Matched to Birth Record" Status on Death Record	If a match is found, the system updates the status of the death record to "Matched to Birth Record"	*W - Workflow or System Configuration Required*	GCOM VRMS status system can be quickly configured to add any necessary status to a record.
BD52	Update Death Certificate with Birth State File Number	The system updates the death certificate with the birth state file number.	*E - Exact Match*	
BD53	Manually Add Information	The system allows a user to manually add the birth state file number to a death record upon completion of the cross match.	*E - Exact Match*	
BD54	Allow User to Remove Cross Match	If a birth and death record have been linked in error, the State user is able to remove the link. The birth record number is removed from the death record and the death record number is removed from the birth record. The associated flags are removed.	*E - Exact Match*	
BD55	"Deceased" Printed Across Record on All System Records	If a match is found and the record is in the system, the system prints "Deceased" in a State defined place on any copy of the certificate that is printed.	*E - Exact Match*	

Description: Match found? (Box 11); If yes, automatically mark and link the records through the system (Box 12); If not matched, remove from queue (Box 13);
Records that do not have a match are removed from the pending queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
BD56	Review Queue for "No Match"	The system provides a queue that displays matches with a threshold percentage indicating "not a match."	*W - Workflow or System Configuration Required*	is currently no queue that has potential matches and no matches combined.
BD57	Allow User to Remove Unmatched Record from Queue	If a record has been found to not match another record, the system allows the user to remove the record from the queue.	*W - Workflow or System Configuration Required*	is currently no queue that has potential matches and no matches combined.
BD58	"No Match" Indicator	The system provides a "no link"/"no match" filter so older deaths are removed from the Birth Death Cross Match process.	*F - Future*	Release Spring 2020
BD59	Print Statistical Copies without Impacting Copy Limit	The system allows for printing of statistical copies for inter-jurisdictional birth and death matching and other statistical needs.	*E - Exact Match*	???

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR ENTERING AND PROCESSING ISSUANCE

The Issuance process allows the State and County to provide the public with certified birth, death, and record information about births and deaths in the State. The Issuance process is also the manner in which the State fulfills requests for non-certified copies from other agencies and eligible entities, as well as no-cost certified for eligible entities. Requestors are not charged for the request until eligibility has been determined; all requestors are charged for the request at the State, regardless of eligibility or availability. Events for State residents that have been registered by other states may not be issued by the State.

Vital event information is sensitive and may only be given to those entitled to the information. The Issuance process may be initiated in a variety of ways:

1. Through a walk-in request by a customer at the State or county
2. Through a mail request by a customer
3. Through the Vital Records system by an authorized user
4. Through phone or the Internet order website by a customer (VitalChek)

The steps for processing the request are the same once the request is entered into the system. The initial steps of receiving the request and corresponding fees vary depending on the method used for initiating the request. The system user reviews the paper request form to determine the eligibility of the requestor. If deemed eligible to receive the information being requested, the State fulfills the request utilizing the system. For certified copies, requests may be mailed to the requestor or delivered in person.

The public may initiate a request through VitalChek or the State website. These requests are reviewed for eligibility and routed directly to the State for processing.

NAPHSIS use case models associated with this flow include:
MVRS UC 009 v. 13 - Request for Information
MVRS UC 010 v. 1.4 - Responder Responds to RFI
MVRS UC 012 v. 1.5 - Search
POS UC 001 v. 1.3 - Enter a Request
POS UC 002 v. 1.4 - Produce a Copy
POS UC 003 v. 1.3 - Update a Request
POS UC 004 v. 1.3 - Auto Print
MVRS Certification/Point of Sale white paper
POS System Specifications & Business Rules v. 4.0

BUSINESS PROCESS ISSUANCE - COUNTER

Customers requesting certified copies of records or other types of transactions may complete a paper application and submit the application at the counter. The State reviews the application and any supporting documentation to determine the customer's eligibility for the request. If the customer is not eligible, (s)he is denied and the process is done.

If the customer is found to be eligible, the paper application for the request is entered into the system. The customer is charged any associated fees and a receipt is issued through the system. The system creates a PDF of the receipt and attaches it to the request record. Any supporting documentation for the request is scanned and attached to the request.

The system user searches for the record. If the customer does not have all of the appropriate documentation, the electronic application and request are held in a pending queue until the appropriate documentation is produced. A letter describing what is needed is printed and handed to the customer and (s)he is informed of the needed documentation. If the record is not available for issuance, the electronic application and request are held in a pending queue until the record is available in the system. A letter is printed and handed to the customer and (s)he is informed that the record is not yet available.

Once the customer returns with the appropriate documentation or the record becomes available, the request is filled. The system user searches for the record and scans and attaches any additional documentation that may have been provided. The system user completes and QA's the order. The system user reviews the order to check for any issues prior to printing certified copies. If there are issues with the order once the certified copy is printed, the certified copy is voided and re-issued. If there are no issues with the order, the certified copy is released. At this point, any additional requests that the customer has requested are processed.

Description: Customer presents paper application (Box 1); State checks eligibility (Box 2); Eligible? (Box 3); If no, print rejection letter (Box 4)

The system user reviews the application and the documentation presented by the requestor to determine eligibility for the request. If it is determined that the requestor is ineligible for the record, the system user provides the requestor with a rejection letter printed from the system and informs the requestor that they are ineligible. If the requestor is eligible for the request, the system user will begin to enter the request in the system (see Box 5).

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS1	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
ISS2	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
ISS3	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
ISS4	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
ISS5	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
ISS6	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
ISS7	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
ISS8	**Provide Eligibility Prompts**	The system displays the State defined documentation required by type of request to substantiate the request under consideration.	***W - Workflow or System Configuration Required***	GCOM VRMS will allow configure State Defined Document list for eligible event
ISS9	**State Issuance**	The State can issue for all West Virginia events.	***E - Exact match***	
ISS10	**State Cannot Issue Record Without SFN**	Records with no state file numbers cannot be issued at the State.	***E - Exact match***	
ISS11	**Request with No State File Number**	The State can enter a request into the system for a record with no state file number.	***E - Exact match***	
ISS12	**Forward Request**	A request for a record with no state file number is automatically forwarded to the county's queue in which the event occurred.	***W - Workflow or System Configuration Required***	
ISS13	**Remove Records from County Queue**	Records in the county queue will be removed from the queue after a State defined period of time.	***W - Workflow or System Configuration Required***	
ISS14	**Eligibility Prompts Options**	The system allows eligibility prompts to be turned on and off based on user roles and abilities.	***W - Workflow or System Configuration Required***	GCOM VRMS allows configurations to turn on /off eligibility prompts
ISS15	**Generate Letter**	A letter is generated by the system informing the customer of the additional eligibility requirements. The letter includes the request tracking number.	***W - Workflow or System Configuration Required***	Template configuration required
ISS16	**Denial Reasons May be Confidential**	The denial reason may be confidential and, as such, is not revealed to the customer. In these cases, the denial reason is not printed on the letter.	***W - Workflow or System Configuration Required***	GCOM VRMS Print Module configures to display / hide items based on business rule.
ISS17	**Update Order Record Status and Send to Pending Queue**	If the eligibility of requestor is uncertain, the system updates the record status and sends to a "pending" queue for a State determined period of time in order to allow the requestor to provide additional information demonstrating eligibility.	***E - Exact match***	
ISS18	**Reason Code**	The user selects a reason code for placing the request in the pending eligibility queue.	***W - Workflow or System Configuration Required***	GCOM VRMS handles as part of the Queue Configuration bases on the defined business rules
ISS19	**Update Eligibility**	The system provides the ability to update the request with additional documents and/or information received from the requestor to support eligibility.	***W - Workflow or System Configuration Required***	GCOM VRMS handles as part of the Queue Configuration bases on the defined business rules
ISS20	**Close Request**	The system allows a system user to close a request if it is apparent the requestor is not eligible for the record.	***W - Workflow or System Configuration Required***	GCOM VRMS worflow allows the user to the close the request based on the defined business rules
ISS21	**Update Status When Eligibility is Established**	The system updates the status of the request to "validated" or equivalent when eligibility is established so that the request can be processed.	***W - Workflow or System Configuration Required***	GCOM VRMS workflow to accomdate the user to the process the request based on the defined business rules
ISS22	**Scan Multiple Documents**	The system allows the user to scan any amount of documentation associated with a record and attach them to a request record.	***E - Exact match***	
ISS23	**Notes in Request**	The system provides the ability to make notes within the requested record.	***E - Exact match***	

Description: User creates application and request in EVRS and scans supporting documents (Box 5)

If the requestor is eligible, the system user enters the application and creates the request in the system. The system user selects the type of request in the system (e.g. certified copies, amendment, delayed birth) and completes the request by entering the requestor and requested information. If the system user determines that this is not a new request, the system user accesses the pending request to complete the transaction.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
General Rules				
ISS24	**User Log In**	Please see the General Requirements section B - User Authentication for rules related to user log in.		
ISS25	**User Profiles**	Please see the General Requirements section C - Roles, Profiles and Institutional Affiliations for rules related to user log in.		
ISS26	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
ISS27	**E-Notary**	Please see General Requirements T - Electronic signature and E-Notary for rules related to e-notary and electronic signature.		
ISS28	**Scanning**	Please see General Requirements A - User Technical Environment, regarding rules related to scanning.		
ISS29	**Search Rules**	Please see the General Requirements, section M - Searching and Matching, for search and duplicate checking rules.		
ISS30	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
ISS31	**Sorting and Filtering**	Please see the General Requirements section N - Sorting and Filtering for rules regarding sorting and filtering.		
ISS32	**Read Magnetic Stripe**	The system allows integration with software that reads a driver's license three-dimensional barcode, and also magnetic stripe to document identity verification.	***W - Workflow or System Configuration Required***	
ISS33	**Provide Method of Indicating Documentation Submitted**	The system provides the user with a method of indicating the State defined documents that have been submitted with the request, including document number if appropriate.	***E - Exact match***	
ISS34	**Edit Check**	The system edits the request based on State defined edits.	***E - Exact match***	EDIT Checks are Configurable in GCOM VRMS
ISS35	**Option to Process Immediately**	The system provides the option to process a request as soon as it is entered into the system or to send it to a queue for later processing.	***W - Workflow or System Configuration Required***	GCOM VRMS handles request for issuance based on business rules defined
ISS36	**Supervisory Override**	If the system user believes that the system evaluation of acceptability of the request should be overridden, there is a function to allow a supervisor to enter an approval code for the override. This includes "one time issue."	***E - Exact match***	
ISS37	**Supervisory Override for "Do Not Issue"**	A supervisory override is required for changes to "do not issue" flags.	***E - Exact match***	
ISS38	**Temporary Supervisor**	Temporary supervisors can be defined in the system and provided with the same privileges as a full-time supervisor.	***E - Exact match***	
ISS39	**Supervisory Override - Comment Box**	The system provides a comment box for the supervisor to enter the reason for the override.	***E - Exact match***	
ISS40	**Audit Trail for Use of Override**	The system provides a daily audit trail that details the use of the "fee override" by employee.	***E - Exact match***	
List of Queues				
ISS41	**Pending Queue**	The system provides a queue for certificate requests that have been previously started.	***E - Exact match***	Queue logic to be configured as per the business rule provided by state
ISS42	**Ready to Issue Queue**	The system provides a queue for certificate requests that are ready to be issued.	***E - Exact match***	Queue logic to be configured as per the business rule provided by state
ISS43	**Counter Orders Queue**	The system provides a work queue for counter orders.	***E - Exact match***	Queue logic to be configured as per the business rule provided by state
General Request Rules				
ISS44	**Check Payment Amount Against Total Due**	If the total amount due and the payment amount are not equal, the system prompts the system user to resolve issue.	***E - Exact match***	
ISS45	**Payment on Account**	The system user has a mechanism for marking that the request is being invoiced to the requestor at a later date.	***W - Workflow or System Configuration Required***	GCOM VRMS workflow configuration for Order Payment
ISS46	**Quick Data Entry**	The screens to enter in request and requestor information are designed in such a way as to make data entry at the counter as fast as possible.	***W - Workflow or System Configuration Required***	GCOM VRMS Quick Data entry to defiend as per State specifications
ISS47	**Display List of Request Types**	The system displays a list of items that can be requested.	***E - Exact match***	
ISS48	**Multiple Transactions for One Applicant**	The system will allow one applicant multiple transactions if requested.	***E - Exact match***	
ISS49	**Track Applicant**	The system will track information on applicants and application information.	***E - Exact match***	
ISS50	**State Defined List**	The list of items to be requested is defined by the State.	***W - Workflow or System Configuration Required***	GCOM VRMS configuration to be as updated as per State
ISS51	**State Defined Request Types**	The list of request types is defined by the State.	***W - Workflow or System Configuration Required***	GCOM VRMS configuration to be as updated as per State
ISS52	**Source of Request**	The system provides a State defined list for the clerk to specify the source of the request (e.g. counter, mail).	***E - Exact match***	

ISS53	Request Number	The system assigns a State defined unique system-generated sequential number to each request.	*E - Exact match*	
ISS54	Allow Multiple Selections	The user may select more than one item in a single request.	*E - Exact match*	
ISS55	Specify Issuance Type and Quantity	The system may prompt the user to specify the issuance type and quantity of items requested.	*E - Exact match*	
ISS56	Display Appropriate Request Form	Different information may be entered for different request selections. The display may be specific to the type of request selected.	*W - Workflow or System Configuration Required*	GCOM VRMS is configurable to handle different request
ISS57	Purpose of Request Options	Certificate request requires the user to enter the purpose of the request from a drop down menu, with a list of State defined options such as personal records, legal purposes, inheritance/estate settlement, government assistance/benefits, insurance/pension, or retirement, and the option of selecting "other."	*E - Exact match*	
ISS58	System Fields	If "other" is selected for the purpose of the request, a mandatory description field is provided for entry of the purpose.	*E - Exact match*	
ISS59	Enter Requestor Information	The system provides fields to store information entered about the requestor and the request including name and address information of the requestor and State defined delivery options.	*E - Exact match*	
ISS60	List of Frequent Requestors	The system maintains a list of frequent requestors that the system user may access to auto-populate the requestor information (such as funeral homes).	*E - Exact match*	
ISS61	Requestor Address Field Mandatory	The Requestor address fields require mandatory entry.	*E - Exact match*	
ISS62	Different Mailing Address	The system allows the user to enter a mailing address that is different from the address of the requestor.	*E - Exact match*	
ISS63	Foreign Address	The system allows entry of a foreign address for the requestor address.	*E - Exact match*	
ISS64	Requestor Email Address	The system allows the entry of the requestor's email.	*E - Exact match*	
ISS65	Multiple Addresses	The system provides the ability for the user to enter multiple mailing addresses for an order and associates the addresses with each transaction; so certified copies and other documentation can be mailed to more than one place.	*F - Future*	Release Spring 2020
ISS66	Requestor Relationship	The field for the relationship of the requestor to the records being requested is a pre-defined, State-managed list that includes "other."	*E - Exact match*	
ISS67	"Other" Requestor Relationship	The system opens a text field when "other" is selected for the Requestor Relationship field.	*E - Exact match*	
ISS68	"Other" Requestor Relationship Scan Option	Additional documentation supporting the relationship of the requestor may be scanned and attached to the request. Examples of additional documentation include Power of Attorney or Guardianship.	*W - Workflow or System Configuration Required*	
ISS69	In Care Of	The system provides an address field marked "in care of" for requests when the requestor is not the person on the certificate.	*W - Workflow or System Configuration Required*	
ISS70	Docket Number	The system provides a place to enter the docket number for court-ordered requests.	*E - Exact match*	GCOM VRMS to include the data element to capture docket number
ISS71	"Other" Relationship	For all request types, if "other" is selected for relationship, the description is mandatory.	*E - Exact match*	
ISS72	Comment Field	The system provides a comment field for users to enter notes or comments that can be viewed by other system users.	*E - Exact match*	
ISS73	Order Items Other Than Certified Copies	The system allows items other than certified copies (e.g. "No Record Found" letters) to be ordered.	*E - Exact match*	
ISS74	Designate Fee Split	The system includes the capability for the State to designate a fee split with other entities (e.g. Jurisdiction 1 and Jurisdiction 2).	*F - Future*	Release Spring 2020
ISS75	Funds Allocated into Separate Accounts	The system provides the ability to distribute State defined funds from each transaction into separate accounts (e.g. certified copies are distributed into three (3) separate accounts).	*F - Future*	Release Spring 2020
ISS76	Fees into Multiple Accounts	The system allows for fees associated with certified copies of records to be split and allocated into multiple separate accounts at the State.	*F - Future*	Release Spring 2020
ISS77	County Fees	For county issuance off of the EVRS, fees will be allocated at the State.	*F - Future*	Release Spring 2020
ISS78	Override Charges	The system allows a designated user, based on user role, to override or waive a charge for a transaction that normally has a fee, if, for some reason, the office chooses not to charge the requestor.	*E - Exact match*	
ISS79	Waived Fee Comment Field	If a fee is waived, the system displays a comment field for the user to enter an explanation regarding why the fee was waived.	*E - Exact match*	
ISS80	Refund Charges	The system allows a designated user, based on user role, to refund a charge for a transaction.	*E - Exact match*	
ISS81	Unique Identifier	Each type of request in the system has a unique identifier.	*E - Exact match*	
ISS82	Indicator for Replacement Copies	Replacement copies have an indicator in the record to indicate that the certified copies are replacements.	*W - Workflow or System Configuration Required*	GCOM VRMS handles as part of exchange service types

ISS83	Count Replacement Copies	The system will record a count of replacement copies retrieved.	W - Workflow or System Configuration Required	GCOM VRMS tracks based on exchange service types
ISS84	Indicator for Free Copies	Free copies have an indicator in the record to indicate that the certified copies are free.	W - Workflow or System Configuration Required	GCOM VRMS handles as part of exchange service types or as fee waived at service level
ISS85	Count Free Copies	The system will record a count of free copies issued per certificate.	W - Workflow or System Configuration Required	GCOM VRMS derives the count based on exchange certificates / fee waived certificates
ISS86	Limit Free Copies	The system will place a State-defined limit on how many free copies each certificate is eligible for. A flag is raised when a certificate has reached its limit.	W - Workflow or System Configuration Required	Validates based on defined business rule
ISS87	Eligibility for Free Copies	The list of customers eligible for free copies is defined by the State.	E - Exact match	
ISS88	Supervisory Approval Needed	With the exception of funeral home requests, the system requires supervisor approval for replacement copies.	W - Workflow or System Configuration Required	GCOM VRMS will allow supervisor approval as per defined buisness rules
ISS89	Fee for Replacement Copy	The system includes a fee for replacement copies. This is a feature the State can turn on or off.	W - Workflow or System Configuration Required	GCOM VRMS will as per defined buisness rules
ISS90	Limit on Replacement Copies	The system will place a State-defined limit on how many replacement copies each customer is eligible to order within a State-defined period of time. A flag is placed on the record when a limit is reached.	W - Workflow or System Configuration Required	GCOM VRMS works as per will as per defined buisness rules
ISS91	Alter Requests	The clerk can alter the request as long as it has not been completed and closed.	E - Exact match	
ISS92	Reopen Closed Request	An authorized user can reopen a closed request.	W - Workflow or System Configuration Required	
ISS93	ID Number	The system prompts the user to enter the ID number for an applicant.	W - Workflow or System Configuration Required	GCOM VRMS to configure a field to capture the ID
ISS94	ID Verification	The system provides an indicator for a system user to indicate on the request that the applicant's ID has been verified.	W - Workflow or System Configuration Required	
ISS95	Signature for Request Verification	The system provides an indicator for a system user to indicate that a signature has been applied to a request form.	W - Workflow or System Configuration Required	
ISS96	Issue Bulk	Request for bulk information or records are linked to the records that are printed.	W - Workflow or System Configuration Required	
Issuance Rules by Event				
ISS97	Death Certificate Fields State Defined	The fields for a death certificate request are State defined.	W - Workflow or System Configuration Required	Configure the field
ISS98	Cause of Death Documentation	The system includes fields to designate the relationship of the requestor to the decedent.	W - Workflow or System Configuration Required	Configure the relationship
ISS99	Birth Certificate Fields State Defined	The fields for a birth certificate request are State defined.	W - Workflow or System Configuration Required	GCOM VRMS to change the configuration as per STATE definition
ISS100	Birth Certificate Printing	The system allows the user to assign the record to a specific County office for printing of the birth certificate.	W - Workflow or System Configuration Required	
Request Rules for Amendments				
ISS101	Specific Requests for Amendments	All amendments begin with a request and the request is linked to the amended record.	W - Workflow or System Configuration Required	GCOM VRMS captures the request for every amendment recorded
ISS102	Search Fee Includes Copy	The search fee includes one certified copy.	W - Workflow or System Configuration Required	GCOM VRMS configuration need to be updated to include certified copy
ISS103	Make Correction Without Creating Amendment Request	The system allows an authorized user to make a correction to a registered record without creating an amendment request. Example of such a correction is a typo or misspelling of a name. The correction must be verifiable through the attached documentation from the facility.	W - Workflow or System Configuration Required	Administrative Amendments are configured to handle the correction without a request
ISS104	Birth Amendment Types	Birth amendments types are State defined. The system will provide a method of selecting the type of amendment request. The list is State defined and examples include: *Corrections *Paternity Affidavit *Adoptions *Legitimations	W - Workflow or System Configuration Required	Can be configured
ISS105	Death Amendment Types	Death amendments types are State defined. The system will provide a method of selecting the type of amendment request. The list is State defined and examples include: • Corrections • Court Orders • Pending Cause of Death	W - Workflow or System Configuration Required	Can be configured
Additional Amendment Request Rules				
ISS106	Role Determines List User Sees	The specific list of amendment types available to a user is based on the authorities granted by his or her assigned role.	E - Exact match	
ISS107	Include Original Document Number	The amendment request record includes the state file number of the original document being amended.	E - Exact match	
ISS108	Search for Amendment Request	A user may search for an amendment request by State defined fields such as mother's maiden name.	W - Workflow or System Configuration Required	Can be configured as per State specifications
ISS109	Amendment Request Record	The system creates a record with details about the requestor and the amendment request.	W - Workflow or System Configuration Required	GCOM VRMS Amendment Application will facilitate the details of requestor

ISS110	Record Amendment Type and Relationship	The system records the amendment type and the relationship of the requestor to the person named in the record for each amendment.	*E - Exact match*	
ISS111	Assign Amendment Tracking Number	The system assigns an amendment request tracking number to each amendment request.	*E - Exact match*	
ISS112	Amendment Numbers Sequential	Amendment request tracking numbers are assigned sequentially by the system as a way of making each amendment request unique. Numbering resets at the beginning of each year.	*E - Exact match*	
ISS113	Time Stamp Requests	All amendment requests are time stamped by the system when initiated.	*E - Exact match*	
ISS114	Fee for Amendment	Amendment fees are table driven and State defined.	*E - Exact match*	
ISS115	Read-Only	Amendment screen auto-populates with current data in read-only format.	*W - Workflow or System Configuration Required*	
ISS116	Enter Amendment Type	The system provides a State defined list that allows the user to select the amendment type.	*E - Exact match*	
ISS117	"Customer Waiting" Flag	The system provides a method by which the user can indicate that the request is for a correction AND the customer is waiting. This is only applicable to corrections	*W - Workflow or System Configuration Required*	System can be configured to indicate the flag
ISS118	Affidavit Pre-Populated	If an affidavit is required; the system will auto-populate the necessary information from the request application.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to store the Affidavit Format and populate the same based on business rules.
ISS119	Affidavit	Any fields on the affidavit that could not be auto-populated are open for the user to complete the data entry of the information.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to store the Affidavit Format and populate the same based on business rules.
ISS120	Affidavit Attached to Request	The affidavit is linked to the original request.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to be attach the record to the Request
ISS121	Print Affidavit	The user may print the affidavit directly from the system once the record is registered.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to be give the print functionality of the affidavit
ISS122	Scan Signed Affidavit	The signed affidavit is scanned and attached to the record.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to scanned the signed copyto the record.
ISS123	Flag Record to be Amended	Amendment requests automatically flag the record to be amended to prevent certified copies from being printed on the associated record.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured the busines rules to flag records
ISS124	Partial Fee Paid	Amendment requests automatically flag the record to be amended to prevent certified copies from being printed on the associated record even if there is money due on the request.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured the busines rules to flag records
ISS125	Cannot Process Amendment Without Recording Fee	The Amendment Process and the Request Process are tied in such a way as to prevent amendments from being processed without going through the Request Module first. This is not the case for corrections.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured in the simialr way as with rRequest and AMD processes
ISS126	Certified Copies	Certified copies for the amended record may be requested at the same time as the request is made for the amendment and will be part of the same request.	*E - Exact match*	
ISS127	Pending Request Queue	Certified copies for the amended record remain in the pending request queue until amendments are completed.	*E - Exact match*	
ISS128	Link to Original	Certified copies for the amended record in the pending request queue are linked to the original record to ensure that issuance occurs after the request is completed.	*E - Exact match*	
ISS129	Amendment Fee Waived	The fee for an amendment may be waived by an authorized user.	*W - Workflow or System Configuration Required*	Business Rules and Roles need to be defined for Amendment Fee waived users
ISS130	Reason for Fee Waiver	The system provides a list of options for the user to choose from to indicate the reason the amendment fee was waived (i.e. fee waived for veterans or the department of Veterans Affairs).	*W - Workflow or System Configuration Required*	Reasons need to be defined as part of Configurations
ISS131	Insufficient Fees	The system allows an authorized user to process an amendment even though the full amount of the fee has not yet been received.	*W - Workflow or System Configuration Required*	Business Rules and Roles need to be defined for Amendment Fee waived users
ISS132	Apply "Money Owed" Flag	If an amendment is processed without collecting the full fee, the record is flagged to prevent issuance of certified copies of that record until such time as the remaining money is collected through the system.	*W - Workflow or System Configuration Required*	Business Rules to be defined for Flags
ISS133	Dollar Field Tied to "Money Owed" Flag	A dollar amount field is tied to the "money owed" flag, which is cumulative based on the amount of fees associated with the record; the field provides the user the ability to enter the amount due.	*W - Workflow or System Configuration Required*	Business Rules to be defined for Flags
ISS134	Additional Payments	When additional monies are received for an amendment, they are added to the request record.	*W - Workflow or System Configuration Required*	Will be handled part of configuration
ISS135	Remove "Money Owed" Flag	Once the full fee has been collected, the "money owed" flag is removed and the printing of certified copies is allowed.	*W - Workflow or System Configuration Required*	Will be handled part of configuration
ISS136	Scan Documentation to Request	State defined forms and supporting documentation must be scanned and attached to the request (e.g. an application).	*E - Exact match*	
ISS137	Scan Documentation to Record	State defined forms and supporting documentation must be scanned and attached to the record (e.g. an affidavit).	*E - Exact match*	
ISS138	Additional Information Required	The system allows the user to print a letter requesting additional information/documentation from the requestor.	*W - Workflow or System Configuration Required*	Letters can be configured as per state requirements
ISS139	Message to State	As soon as an amendment request is started at the county office, the system sends a message to the State informing them of the pending amendment request.	*F - Future*	Release Spring 2020

Description: Receipt money? (Box 6); System generates invoices (Box 7); Money receipted in the State or County system (Box 8); Print receipt (Box 9); Go to Issuance Flow

Most requests have fees associated with them. The fee amount is determined when the system user selects the requested service from a list of options. The fee is collected from the requestor and the payment may be receipted in the EVRS system.. In either case, the payment must be recorded in the EVRS in order to complete the transaction. Customer receipts may be printed or emailed to the customer. Once complete, the user will proceed to the Issuance: Fulfillment flow.

For requestors who have a charge account, charging is an acceptable form of payment. If the request is a charge transaction (generally for interagency or funeral home transactions), the charge is recorded in the system. The system computes the total fee and may provide the option to indicate that the amount due will be invoiced to the requestor at a later date. Alternatively, the payment may be receipted at the time of the request.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS140	Payment Information	The user enters payment information.	*E - Exact match*	
ISS141	Payment Types	Forms of payment are State defined.	*W - Workflow or System Configuration Required*	Payment methods can be defined
ISS142	"Money Owed" Flag	If a billable account request is processed on a record with a "money owed" flag, the request is processed without resetting the flag.	*W - Workflow or System Configuration Required*	Business Rules need to be defined as per State need
ISS143	Receipt Number	The receipt number is automatically assigned by the system.	*W - Workflow or System Configuration Required*	Based on Request the Receipt numbers are generated
ISS144	Receipt Date	The receipt date is automatically assigned by the system.	*E - Exact match*	
ISS145	Determine if Fee is Correct	The system determines if the payment entered is sufficient to pay for the services requested.	*E - Exact match*	
ISS146	Itemized Receipt	The system allows a user to print an itemized receipt for a requestor at the time the payment is entered in the system.	*W - Workflow or System Configuration Required*	
ISS147	Always Print Receipt	The system allows printing of a receipt regardless of completion of the order.	*W - Workflow or System Configuration Required*	System can be configured to indicate the flag
ISS148	Receipt - State Defined	The format of the receipt is State defined.	*W - Workflow or System Configuration Required*	Receipts Format can be configured
ISS149	Receipt Format	The receipt prints in such a way that the requestor information shows through a window envelope for mailing.	*W - Workflow or System Configuration Required*	Receipts Format can be configured
ISS150	Email Receipt	The system allows the user to email a receipt to the recipient.	*W - Workflow or System Configuration Required*	GCOM VRMS can be configured to send receipt notifications
ISS151	Accommodate Different Fees	Fees are table driven to allow the accommodation of different fee structures for different items.	*E - Exact match*	
ISS152	Fee May be Zero	The system allows some items with supervisor approval (such as replacement copies) to have a fee of zero.	*E - Exact match*	
ISS153	Compute Total Amount Due	The system computes the total amount due for all items requested plus special handling fees.	*E - Exact match*	
ISS154	Enter Reference Information	The system provides a location to enter reference information about the payment.	*W - Workflow or System Configuration Required*	System can be configured to include a new data element to capture the reference information
ISS155	Multiple Requests Totaled	If a customer has requested multiple records, certificates, and/or other items, the total cost of all items is calculated by the system.	*E - Exact match*	
ISS156	Search Fee	There is a charge for a record search, regardless of the outcome.	*E - Exact match*	
ISS157	Refund Search Fee	The system allows authorized users, based on user role, to issue a refund for search fees.	*E - Exact match*	
ISS158	Fee Determined by State	The record search fee at the State and County is determined by the jurisdiction State.	*E - Exact match*	
ISS159	Record Check Number	If a payment is by check or money order, the user records the check number in the request record.	*E - Exact match*	
ISS160	Check "Bad Check" Indicator	The system checks to see if any previous request records for the customer in question include a "bad check" indicator. If so, this information and the amount of the bad check(s) are displayed for the user.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS161	"Bad Check" Designation	The system allows an authorized user to designate that a bad check was received from a requestor.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS162	Bad Check Debt Cleared Before Another Order	If a requestor has tendered a bad check and requests another order, the system requires the requestor to use another form of payment.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS163	Supervisory Override for "Bad Check" Indicator	The "bad check" indicator will remain on until it is removed by a supervisor.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS164	"Bad Check" Indicator - Credit Card or Money Order	If a "bad check" indicator has been detected, the system may allow the user to only accept funds in the form of cash, credit card, or money order.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS165	Bad Check Information from Finance	The system can import a list of "bad check" requestors from Finance.	*W - Workflow or System Configuration Required*	Define Bad Check Buisness Rules in GCOM VRMS
ISS166	Multiple Payment Types	The system provides the functionality for the user to accept multiple forms of payment from the customer at the counter.	*E - Exact match*	
ISS167	Mailing Fees Associated with Collection Code	Special handling fees and mailing charges are associated with specific collection codes for distribution reporting.	*W - Workflow or System Configuration Required*	
ISS168	State Credit Card Merchant Integration	The system integrates with the State's Treasury system for credit card transactions, providing charge transaction capabilities and transaction information to the system.	*W - Workflow or System Configuration Required*	

ISS169	County Credit Card Merchant Integration	At the counties, the system integrates with the State's Treasury system for credit card transactions, providing charge transaction capabilities and transaction information to the system.	*W - Workflow or System Configuration Required*	
ISS170	Receipt	The system provides the ability to print out a credit card receipt as part of, or in addition to, the EVRS receipt.	*W - Workflow or System Configuration Required*	
ISS171	Print Credit Card Receipt from System	The system allows the user to print a credit card receipt for the customer to sign.	*W - Workflow or System Configuration Required*	
ISS172	Change Due	If the amount paid is more than the fee, the system will display the change due.	*W - Workflow or System Configuration Required*	
ISS173	Move to Fulfillment Queue or Complete in Current Queue	Once the fees have been collected, the user may either move the request to the Fulfillment Queue or complete the request from the current queue.	*W - Workflow or System Configuration Required*	
Billable Accounts				
ISS174	Billable Accounts	For billable accounts, money may be receipted at the State or county. Pay-down accounts are allowed and will have a billable account.	*F - Future*	Release Spring 2020
ISS175	Billable Account Payment Options	For requestors with a billable account, the request can be billed to the account or paid for in cash upon pickup.	*F - Future*	Release Spring 2020
ISS176	Duplicate Receipt Numbers	For billable funeral home accounts being paid for at the State, the system automatically applies the same receipt number to all requests being paid for.	*F - Future*	Release Spring 2020
ISS177	Multiple Payment Types	For billable accounts, the system allows the user to accept multiple forms of payment from the customer at the State.	*F - Future*	Release Spring 2020
ISS178	"Overdue" Billable Account Flags	Billable accounts noted as "overdue" will be flagged.	*F - Future*	Release Spring 2020
ISS179	Remove "Overdue" Billable Account Flags	The system removes "overdue" flags from billable accounts once the account is current on payments.	*F - Future*	Release Spring 2020
ISS180	Email Invoices	The system will email invoices to accounts; otherwise it will print a paper copy.	*W - Workflow or System Configuration Required*	Define Notificaton Rules in GCOM VRMS

END OF ISSUANCE - COUNTER

BUSINESS PROCESS: ISSUANCE - MAIL

Customers may order certified copies by mail. The State opens the envelopes and reviews the order for eligibility and completeness. An application and request are started in the system.

If the customer is not eligible or supporting documents are not included, a rejection letter is generated through the system that can be sent via email or postal mail. The supporting documentation and payment are returned to the customer with the letter. If the customer has sent cash but the order is not eligible, a note is made in the system regarding the amount of cash received, date received, amount returned to customer, date returned, and other State defined information.

If the request is acceptable, the money is receipted in the EVRS. Money receipting options are the same as with a counter transaction. Any supporting documentation for the request and the application are scanned and attached to the request record. The user handling mail transactions may search for the event record and complete the transaction, if authorized to do so. If the record is not found, the system generates a letter stating that the record was not found. Mailing labels are printed from the system.

Please note: The rules for reviewing eligibility, entering data, and payment processing described above apply here and are not repeated.

Description: State opens orders by mail and reviews request for eligibility (Box 1)

Customers may submit requests for certified copies through the US Mail or a special pre-paid couriers (i.e. FedEx, UPS). The State opens the letter upon receipt. The State reviews the request to determine if the basic information needed to process the request and associated fees have been provided. If not, the State enters minimal information into the system to track the request. If the request is accompanied by a cash payment, a note is made in the system regarding the amount of cash received, date received, amount returned to customer, date returned, and other State defined information. All payment forms are returned to the requestor. A letter is generated from the system, pre-populated with information from the request. The State prints the letter and can mail or email it to the requestor with any submitted fees and documentation.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS181	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
ISS182	State Defined Minimum Fields	The fields required to begin a new request are State defined.	*W - Workflow or System Configuration Required*	
ISS183	Rejection Letter	The user may print a rejection letter if an order cannot be processed.	*E - Exact match*	
ISS184	Returned Request Record for Tracking Purposes	Mail-in requests that are returned to a requestor stay active for a State-defined period of time.	*W - Workflow or System Configuration Required*	
ISS185	Archive Records	The system allows a designated user to archive request records over a State-defined period of time.	*W - Workflow or System Configuration Required*	
ISS186	Note for Cash Returned	If cash is the payment type received on an ineligible order, the user enters a note within the request stating the amount of cash received, date received, amount returned, date returned, and other State defined information.	*W - Workflow or System Configuration Required*	

Description: Complete application? (Box 2); If yes, type request and application into EVRS, select service(s) and scan documents (Box 3); State receipts money, prints or emails receipt (Box 4)

When a request is determined to be complete, the requestor and order information are entered into the system. The fee is calculated in the system for the order, and the user receipts the money received.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS187	E-Notary	Please see General Requirements T - Electronic signature and E-Notary for rules related to e-notary and electronic signature.		
ISS188	Mail Request Queue	The system provides a work queue for all mail requests.	*E - Exact match*	

ISS189	Mail Request Queue Sortable Criteria	The mail request queue is sortable by State-defined fields such as the date of the request.	E - Exact match	
ISS190	Quick Entry of Mail Requests	The system screens are optimized for rapid entry of requests received by mail.	W - Workflow or System Configuration Required	
ISS191	Enter Request Information	The rules for entering the request are the same as those for a counter transaction.	E - Exact match	
ISS192	Enter Payment Information	The rules for entering the payment information are the same as those for a counter transaction.	E - Exact match	

Description: Start application in EVRS, scan documentation and attach to application (Box 5); Print letter and return original documents to customer (Box 6); Save request and/or application in appropriate pending queue (Box 7)

If the application is found to be incomplete, the requestor and order information is entered into the system and the request is saved in a Pending Queue. Any documentation is scanned and attached to the request. If cash was received as payment, the user receipts the money received.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
ISS193	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
ISS194	Attach Documents to Pending Queue	The system allows the user to scan documents and attach them to an incomplete request in the Pending Queue.	E - Exact match	
ISS195	Incomplete Request Queue	The system provides a pending queue for incomplete requests.	E - Exact match	
ISS196	Incomplete Request	The system allows the user to receipt a payment on an incomplete request.	E - Exact match	
ISS197	State Letter Return	The system allows user to designate that a State letter was returned, the date it was returned, and the reason it was returned.	E - Exact match	
ISS198	Record Refund	The system allows the user to set an indicator that a refund is required.	E - Exact match	
ISS199	Close Incomplete Requests	The system allows a user to close incomplete requests.	E - Exact match	
ISS200	Records Not Registered Queue	The system provides a queue, viewable by authorized staff, for requests received for a record which has not been registered and is over a State-specified number of days after the event date.	W - Workflow or System Configuration Required	Queues logic can be configured as per State needs
ISS201	Receipt Cash	Requests accompanied by cash payments are recorded in the system and a receipt is created.	E - Exact match	
ISS202	Incorrect Payment Letter	The system can generate a letter to the customer indicating that the amount paid is incorrect; they are given the option of sending a new payment or generating a return of payment.	W - Workflow or System Configuration Required	GCOM VRMS to configure business rules to generate the letter
ISS203	Money Order "Overage" Flag	If a money order accompanies a mail order and the amount received is more than the amount due, the user may flag the order for review by an authorized user before issuance.	W - Workflow or System Configuration Required	GCOM VRMS Adjustments
ISS204	Authorized User Override for Money Order Overage	If the overage amount is within the State-defined limit, an authorized user may receipt the overage and make note of the overage amount in the system. This action removes the flag.	W - Workflow or System Configuration Required	
ISS205	Money Order Overage Fund Allocation	When the money order overage is receipted and flag removed, the overage funds are allocated into specific accounts, as defined by the State.	W - Workflow or System Configuration Required	
ISS206	Money Order Overage Tracked in Order	When the money order overage flag is removed, the details of that transaction are tracked within the customer's order in a way so that the State Supervisor can track the amount of the overage, and where the funds were distributed.	W - Workflow or System Configuration Required	
ISS207	Money Order Overage Notes	The system allows the State user to add a note in the Customer's order when the Money Order Overage flag is placed on the record.	W - Workflow or System Configuration Required	

Description: Customer mails in missing information (Box 8); Access request and/or application in pending queue, enter missing information (Box 9)

After the request is determined to be incomplete and the requestor and order information is entered into the system, a letter of rejection with needed information is printed and the request is saved in a Pending Queue until the requestor returns with the missing information, or the request expires.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
ISS208	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
ISS209	Select Reasons Why	The system allows the user to personalize the letter by selecting the reason why the person is not entitled.	E - Exact match	
ISS210	Denied Status on Record	The system allows an authorized user to change status of a request to "not entitled."	W - Workflow or System Configuration Required	Denied Status to be defined
ISS211	Denial Letter	The system allows users to generate a denial letter which is pre-populated with data from the "not entitled" electronic request.	W - Workflow or System Configuration Required	
ISS212	Convert Denied Request to Open Request	The system allows an authorized user to open a denied request and convert it to an open request, which can be processed once missing information is received.	W - Workflow or System Configuration Required	
ISS213	Letter Auto-Generated	The system allows a user to auto-generate a letter from the record so that it is personalized with the correct personal information and the information needed to complete the record.	E - Exact match	

END OF ISSUANCE - MAIL

The VitalChek application is used to process online and phone requests for certified copies of records. The customer can submit their order through the VitalChek website or through VitalChek's toll free phone number. The customer's order is uploaded to the VitalChek server. The State logs into VitalChek, extracts orders from VitalChek, and uploads them to the system. VitalChek remits payment to the State through the system by check, which the State prints on perforated check stock. The system generates a receipt and the State includes the check in their daily deposit. Orders are fulfilled and mailed out to the customer.

Description: Customer enters order with VitalChek (Box 1); Order is uploaded to VitalChek server (Box 2); Extract orders from VitalChek and upload to EVRS (Box 3); Generate check and print receipt (Box 4); Go to Issuance Flow

If the customer enters their order online through the VitalChek website, the website directs the user through a series of screens to select the appropriate request and to enter the request information. The fees associated with the request are calculated and the requestor is asked to enter credit card information. If the credit card is denied on the VitalChek site, the requestor is asked to enter another credit card. VitalChek confirms that an order is complete before releasing it to the State. VitalChek remits payment to the State through the system by check, which the State prints on perforated check stock. The system generates a receipt, and the State includes the check in their daily deposit. Orders are fulfilled and mailed out to the customer.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS214	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
ISS215	**Same Rules As**	Please see the Issuance - Counter (Box 6) section above for rules related to receipting.		
ISS216	**Upload File from State VR Internet Order System**	The system can accept a batch file from VitalChek multiple times per day.	***E - Exact match***	
ISS217	**VitalChek Import**	The system allows the import of VitalChek requests and generates requests in the system.	***E - Exact match***	
ISS218	**Populate System Immediately**	The system can accept one request at a time from VitalChek.	***E - Exact match***	
ISS219	**Track Source of Request**	The Internet Order request passes the source of the request to the system.	***E - Exact match***	
ISS220	**Display Fee for Services**	Orders extracted from VitalChek display the fee for services, and not what the requestor actually paid.	***E - Exact match***	
ISS221	**Import Check Information**	The system allows the import of checks from VitalChek.	***W - Workflow or System Configuration Required***	
ISS222	**Print Checks**	The system allows authorized users to print the checks on check stock. Format of checks are State define.	***W - Workflow or System Configuration Required***	
ISS223	**Receipt Payment**	The system can generate receipts for payments received from VitalCheck.	***E - Exact match***	
ISS224	**Interface with Any System That Replaces Current VitalChek System**	If Vitalchek replaces the current payment process with an EFT system, EVRS will be modified to properly interact with the replacement system.	***E - Exact match***	
ISS225	**VitalChek Requests Marked "Paid"**	All requests queued from VitalChek site are marked "paid," as the customer's card has already been charged.	***E - Exact match***	
ISS226	**VitalChek Refund Fees**	If the requestor is not eligible, fees may be refunded through VitalChek.	***E - Exact match***	
ISS227	**VitalChek Refunds**	On VitalChek orders, refunds may be processed if the request included payment for multiple copies.	***E - Exact match***	
ISS228	**Refund Through VitalChek**	On VitalChek orders, the remainder is refunded through VitalChek and the request in the system is marked by the user to indicate that the request has been processed.	***E - Exact match***	
ISS229	**VitalChek Orders - "No Record Found" Letter**	The system generates a letter to the customer, by jurisdiction, indicating that the record was not found; the letter may contain a refund in the amount the customer paid for the search/record.	***E - Exact match***	
ISS230	**Refund Option**	The system allows the option to process a refund to be turned off.	***W - Workflow or System Configuration Required***	

Additional Information

END OF ISSUANCE - VITALCHEK

BUSINESS PROCESS: FULFILLMENT OF ORDERS FOR CERTIFIED COPIES (County and State)

The user can go immediately from entering and validating a request at the counter, from mail, or from VitalChek to the Fulfillment of Orders Flow. Alternatively, users can select requests that are ready to be filled from a queue. While the request is open, the user retrieves the record(s) requested. If the record is found, the user determines whether or not it can be issued (e.g. contains a "hold" code). If the record can be issued, the user prints the certified copy and reviews the document for errors. If there are no errors, the user prepares it for delivery to the customer. If there are errors, the user will void the document, state the reason for the void, and then re-print document.

If the requested record is not found, the user determines whether or not the event is recent enough that it might not yet be registered. If so, the request is placed in a pending queue until the record is registered. If the event is an older event, the user generates a "No Record Found" letter, updates the request with the "No Record Found" result, and issues the letter to the customer.

There are several types of "No Record Found" letters. Three (3) are non-certified letters and one (1) is certified. There are two (2) formats for the letter depending on whether it is certified or not-certified. The user will indicate that a "No Record Found" letter is needed by checking a box, which generates a drop-down pick list where the user will select which type of "No Record Found" letter to issue. The following are the different types of "No Record Found" Letters:

1.) The applicant was born outside of West Virginia - They are issued a "No Record Found" letter stating that the requestor was born in a different state. These are not printed on certified paper. The letter provides bullet points for the applicant regarding next steps in their process;
2.) Genealogy request - In this case, the State provides a genealogy packet that goes along with the "No Record Found" letter. This letter is not printed on certified paper;
3.) No record inquiry letter - The customer provides proof of birth, proving that they were born in WV but do not have a birth certificate;
4.) Certified "Letter of No Record" --This is the only "No Record Found Letter" printed on certified paper.

Description: Search for the record (Box 1); Found? (Box 2) If no, letter generated for requestor that record is not found (Box 3); If yes, record can be issued? (Box 4); If no, letter printed and customer informed of next steps (Box 5)

The system user accesses the appropriate request queue. The user selects the first item on the request and searches the system database for the record. If the record is not found, it is placed in the pending queue. The user checks to see if the record is new and has yet to be registered. If record is still awaiting registration, the user starts the process once the record is registered. If the record is not awaiting registration, a letter is generated for the requestor stating that the record was not found.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS231	**User Log In**	Please see the General Requirements section B - User Authentication for rules related to user log in.		
ISS232	**User Profiles**	Please see the General Requirements section C - Roles, Profiles and Institutional Affiliations for rules related to user log in.		
ISS233	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
ISS234	**E-Notary**	Please see General Requirements T - Electronic signature and E-Notary for rules related to e-notary and electronic signature.		
ISS235	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
ISS236	**Search Rules**	Please see the General Requirements, section M - Searching and Matching, for search and duplicate checking rules.		
ISS237	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
ISS238	**Issuance Manager Queue**	The system provides a work queue of orders for certified copies that require special attention (e.g. missing child). The orders that appear in the Issuance Manager Queue is configurable by the State.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS239	**Ready to Issue Queue**	There is a queue for requests that include records which have just been registered and can now be filled.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS240	**Pending Eligibility Queue**	There is a queue for requests that require additional documentation before they can be processed.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS241	**Pending Request Queue**	There is a queue for requests that include records which have not been registered yet.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS242	**Pending Request Queue Reminder**	After a State-defined period of time (for example, 2 weeks of DOB/DOD), requests in the Pending Request Queue generate an alert that is sent to the Registration unit, informing them that the request is still awaiting registration.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS243	**VitalChek Queue**	If multiple orders are downloaded to the system from the VitalChek system at one time, they can be accessed from a queue that contains only orders from VitalChek's system.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS244	**Funeral Home Request Queue**	There is a queue for requests that are entered online by funeral homes.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS245	**Process Order from Issuance Immediately**	The system allows a user to proceed from order entry to directly process the order for fulfillment.	***E - Exact match***	
ISS246	**Order Cannot be Processed Until Paid**	The system blocks printing of the certificate until the order has been paid for.	***E - Exact match***	
ISS247	**Process VitalChek Order Immediately**	If the user downloads only one order from VitalChek into the system, the same user who initiated the download can immediately process the order without re-selecting the order.	***W - Workflow or System Configuration Required***	
ISS248	**Issuance Queue Assignable to State Location**	The VitalChek request queue is assignable to the State only.	***W - Workflow or System Configuration Required***	
ISS249	**Clear Indication of Account Status**	The system provides a clear indication of account statuses by funeral home location.	***W - Workflow or System Configuration Required***	
ISS250	**COD Notification**	The system provides an authorized user with a notification when a cause of death is added to a pending COD record.	***W - Workflow or System Configuration Required***	
ISS251	**Limit Orders with Pending COD**	If a certificate is pending a cause of death, the system flags the order and limits the number of certified copies that may be issued. The number of issuable copies is State-defined.	***W - Workflow or System Configuration Required***	
ISS252	**Move to Ready to Issue Queue**	The system moves a record to the Ready to Issue Queue once the cause of death has been added.	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS253	**Registered Pending COD Notification**	The system provides a notification when a record with a pending cause of death is registered.	***W - Workflow or System Configuration Required***	Define Notificaton Rules in GCOM VRMS
ISS254	**Clear Old Pending Requests**	The system automatically clears out pending requests at the end of a State-defined period of time.	***W - Workflow or System Configuration Required***	Define Configurations to clear pending Requests in GCOM VRMS
ISS255	**Manually Clear Pending Requests**	The system allows an authorized user to manually clear out pending COD record requests after a State-defined period of time.	***W - Workflow or System Configuration Required***	Define User Roles for Clear Out Pending Requests based on configured buiness rules
ISS256	**Other State Agency Request Tracking**	The system tracks how many times other state agencies (e.g. Child Support Services, state/federal agencies) requests a read-only and/or certified copy of a birth record.	***E - Exact match***	
ISS257	**Other State Agency Drop-Down List**	The system provides a State-defined drop-down list to select the state/federal agency making the request.	***E - Exact match***	
ISS258	**Change Queue if Record is Registered**	When the system determines that a record has been registered, the request that is being held moves into a queue for fulfillment.	***E - Exact match***	
ISS259	**Abandoned Requests**	After a State-defined period of time, requests in the Pending Queue become abandoned requests.	***E - Exact match***	

ISS260	Purge Abandoned Requests	Abandoned requests can be purged from the system according to State-defined parameters.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS261	Archive Abandoned Requests	The State can choose to archive abandoned requests prior to purging them from the system.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS262	Display Alerts Such as "Missing Child"	An alert for issues such as "missing child" are displayed when the record is retrieved.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS263	Alerts State-Defined	The issues that indicate the need for an alert are State-defined and managed by the State.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the buiness rules for alerts , supervisory overrides and Indicators
ISS264	Requestor's Parental Rights Terminated	If the mother's and/or father's parental rights have been terminated, the system generates a "do not issue" flag and the parents are not entitled to certified copies of the child's birth certificate. A comment box is included to indicate which persons are not eligible.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the buiness rules for alerts , supervisory overrides and Indicators
ISS265	Supervisory Override	A supervisory override is required for changes to "do not issue" flags.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS266	"Deceased Requestor" Alert	The system provides an alert that allows the user to put a hold on a record if a person indicated as "deceased" requests their own death or birth certificate.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS267	Indicators	The indicators that are displayed are State-defined.	*W - Workflow or System Configuration Required*	GCOM VRMS to Define the buiness rules for alerts , supervisory overrides and Indicators
ISS268	Replacement Fee Type - Birth	For birth records, the system links the request number back to the original receipt number.	*W - Workflow or System Configuration Required*	
ISS269	Replacement Fee Type - Death	For death records, the system links the request number back to the original receipt number.	*W - Workflow or System Configuration Required*	
ISS270	Void Inventory Control Number on Returned Certificates	The system allows authorized users to void inventory control numbers on returned certificates.	*E - Exact match*	
ISS271	Reasons for Void	The system allows the user to select from a State-defined drop-down list of options the reason why a certificate has been voided.	*E - Exact match*	
Additional Rules for Online Ordering for Funeral Homes				
ISS272	Online Request Queue	The system provides the user with an Online Request Queue for requests submitted online.	*E - Exact match*	
ISS273	Online Request Confirmation Number	The system provides the customer with a confirmation number for online request.	*E - Exact match*	
ISS274	Look Up Order by Confirmation Number	The system allows the State user to look up an online order by entering a combination of the customer's confirmation number and last name.	*E - Exact match*	
ISS275	Online Request Pickup Location	If the requestor must pick up the items that were requested online, the system queues online requests based on the pickup location selected by the requestor.	*W - Workflow or System Configuration Required*	
ISS276	Online Request Billable Account	The system recognizes if an online request is a billable account.	*F - Future*	Release Spring 2020
Additional Rules For "No Record Found"				
ISS277	Send Orders to Queue	The system provides a work queue for counter requests for which a vital record event cannot be found.	*W - Workflow or System Configuration Required*	Queues logic can be configured as per State needs
ISS278	Update Status to "No Record Found"	An authorized user may update the record status to "No Record Found" if the system could not find a match based on the information provided by the requestor.	*E - Exact match*	
ISS279	"No Record Found" Letter Needed	The system provides the user with a method of indicating that a "No Letter Found" letter is needed.	*E - Exact match*	
ISS280	"No Record Found" Letter Format	The format of the "No Record Found" letter is selected by the user from a State-defined drop-down list of "No Record Found" letters.	*W - Workflow or System Configuration Required*	GCOM Format handes various formats which are configurable as per the Print rules and buisness conditions
ISS281	Print "No Record Found" Letter	Based on the type of "No Record Found" letter selected by the user, the system automatically prints the "No Record Found" letter on certified or white paper.	*E - Exact match*	
ISS282	Flag Record	If further action from the requestor is required to complete the transaction, the State user flags the record.	*E - Exact match*	
ISS283	Pending Queue	If a record is flagged for further action, the systems sends the record into a pending queue.	*E - Exact match*	
ISS284	Remove Flags	The system allows an authorized user to remove the flag.	*W - Workflow or System Configuration Required*	Define Rules in GCOM VRMS to remove the flags
ISS285	Close Request	The system allows an authorized user to close a request after the generation of a "No Record Found" letter.	*W - Workflow or System Configuration Required*	Define Rules in GCOM VRMS to handle close request

Description: Customer returns with missing info (Box 6)

If the record was found in the initial search, the system checks to see if the record can be issued. If the record cannot be issued, the record is placed in the Pending Queue and a letter is printed to inform the customer of their next steps. The customer may return with missing information, in which case the flow continues on to step 7.
An authorized user may override the flag, depending on the circumstances. Optionally, the request can be sent to a queue for a supervisor to review. If the record cannot be issued, the request is placed in the Pending Queue and a letter with a request for the missing information is generated.

If the user determines that the record requires an amendment, the record is queued for the Corrections Unit.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS286	Various Types of Documents May Print	The system prints a variety of document types depending on the item(s) included on the request. A complete list is included in the Reports Matrix.	*W - Workflow or System Configuration Required*	Bases on the Document Types the Print templates will be configured in GCOM VRMS

ISS287	System Records	The system records print from the data record.	***W - Workflow or System Configuration Required***	Define Print Rules for Legacy records in GCOM VRMS
ISS288	Relaxed Edits for SFN Entry	The system allows for relaxed edits when back data entering that provides the user the ability to data enter a SFN.	***E - Exact match***	
ISS289	Relaxed Edits for Legacy Records 1935 and Prior	For legacy records from 1935 and prior, the system provides further relaxed edits when a user is keying the record into the EVRS.	***E - Exact match***	
ISS290	Legacy Records Backfilled	Legacy records that have been backfilled can print from the image in the system or directly from the data record.	***W - Workflow or System Configuration Required***	Define Print Rules for Legacy records in GCOM VRMS
ISS291	Legacy Records Not Backfilled	Legacy records that have not been backfilled print from the image in the system.	***W - Workflow or System Configuration Required***	Define Print Rules for Legacy records in GCOM VRMS
ISS292	Legacy Records - Certified Copies	The system requires supervisor approval to issue certified copies from images under special circumstances where the system data is insufficient to issue the order requested.	***W - Workflow or System Configuration Required***	Define the workflow for Legacy Records as per State Requirements
ISS293	Legacy Records - Complete Data Entry	An authorized user, based on their user-defined role, may complete data entry on legacy records.	***E - Exact match***	
ISS294	Legacy Records - QA	The user that backfilled a legacy record cannot be the same user that performs QA of the record. A second user must perform QA of the legacy record and indicate that they have completed the QA before the record can be issued.	***W - Workflow or System Configuration Required***	Define the workflow for Legacy Records to handle QA of the same
ISS295	Legacy Records - Backfill	The system allows the backfilling/completion of legacy records to occur at the State.	***E - Exact match***	
ISS296	Legacy records - Backfill Incomplete	The system allows the user to enter "null" if certain State-defined fields from the legacy record are not available for keying into the EVRS record.	***W - Workflow or System Configuration Required***	Define the Data elements to accept null vaules in GCOM VRMS for Legacy Records
ISS297	Legacy Records - "Null" Prints Blank Fields	When a record has fields that contain "null," those fields print blank on the certified copy.	***W - Workflow or System Configuration Required***	Define Print Rules for Legacy records in GCOM VRMS
ISS298	Legacy Records - Backfill Seamlessly	The system allows Customer Service to backfill/complete data on a legacy record in a seamless manner while they are fulfilling a request at the counter.	***W - Workflow or System Configuration Required***	
ISS299	Legacy Records - Dual Monitor Screens	The user may view the image of a legacy record on a separate monitor screen while entering data on a different monitor screen (dual monitor screens).	***E - Exact match***	
ISS300	Amend Legacy Record	An authorized user may amend a legacy record before fulfilling the request.	***W - Workflow or System Configuration Required***	
ISS301	Review by State	All legacy records that are backfilled by a local county must be queued for review by the State prior to issuance.	***W - Workflow or System Configuration Required***	
ISS302	Capture User	The system will capture the user who adjudicated the record in the record history.	***E - Exact match***	
ISS303	Legacy Record - Multiple Pages	The system recognizes legacy records that have been amended and have multiple pages that need to be printed on security paper; the system captures all document control numbers related to the request.	***E - Exact match***	
ISS304	Legacy Record - Scan Original	When a legacy record is amended, the user must scan and attach the affidavit and original book copy to the record.	***E - Exact match***	
ISS305	Legacy Record - Manually Enter	An authorized user may manually assign a DCN number to a record, in the rare instance where a certified copy is issued manually (from the vault).	***E - Exact match***	
ISS306	Legacy Record - Long Form	The system provides the user with the option of printing a long form of a legacy record of any event type, if the record contains an image.	***E - Exact match***	
ISS307	Print on Demand	The system allows the user to print certified copies on demand.	***E - Exact match***	
ISS308	Associate Document Control Number	Once a starting number is entered, the system assigns a document control number to each certified copy, increasing the number by one for each additional copy and storing the associated number in the document history.	***E - Exact match***	
ISS309	Option to Print System Receipt	The user has the option to print one or more copies of a receipt from the system.	***E - Exact match***	
ISS310	Bulk Print	The system makes it easy for users to enter and print a large number of certificates at a time (e.g. for research projects).	***E - Exact match***	
ISS311	Research Bulk Print	The system allows users to print subsets or full sets of State-defined data from certificates for research projects.	***W - Workflow or System Configuration Required***	
ISS312	Watermark for Bulk Print	The system prints a State-defined watermark on bulk printing jobs (for example, "not for legal use").	***W - Workflow or System Configuration Required***	
ISS313	Verifications Print on Plain Paper	Verifications of vital records are printed on plain paper. The system prints a watermark on the verifications that distinguishes the type and use of each record.	***W - Workflow or System Configuration Required***	
ISS314	Update Document History	Document history is updated for every output from a request.	***E - Exact match***	
ISS315	Track Date, Time and Issuer	Document history includes the date, time, and the person who issued the record or certificate.	***E - Exact match***	
ISS316	State File Number Required	In order for a request to be fulfilled, the associated record must be registered and have an assigned state file number.	***E - Exact match***	
ISS317	Number of Times Document is Printed	The system tracks the number of times a document is printed, the number of documents being printed, the person ordering the documents, and any other State-defined information.	***W - Workflow or System Configuration Required***	

ISS318	Alert for Number of Times Document is Printed	After a State-defined number of print requests, an alert is sent to a supervisor.	W - Workflow or System Configuration Required	
ISS319	Short Form	The system provides the user with the option to print a short form of any event on State-defined paper sizes.	E - Exact match	
ISS320	Long Form	The system provides the user with the option to print a long form of any event on State-defined paper sizes.	E - Exact match	
ISS321	Medical Information Not Included on Certified Copy	Medical information related to pre-natal and delivery is not shown on certified copies.	W - Workflow or System Configuration Required	
ISS322	Medical Certifier Notes Do Not Print	Not all of the information obtained from the medical certifier will be printed on a certified copy.	W - Workflow or System Configuration Required	
ISS323	Update Item Status to "Complete"	The system updates the status of an item on a request to "Complete" or its equivalent after the item has been filled.	E - Exact match	
ISS324	County Clerk Signature	For certificates issued at the county, the system will print the signatures of the State Registrar and respective County Clerk on all certified copies.	W - Workflow or System Configuration Required	
ISS325	Update Request Status to "Printed"	The system updates the status of each item on the request to "Printed" once the item is successfully printed.	E - Exact match	
ISS326	Fill Partial Requests	The system allows the user to fulfill one, none, or all of the items on a request that includes multiple items.	E - Exact match	
ISS327	Adjust Partial Requests	If one but not all of the items on a request is filled, the system user has the option to leave the request open or cancel the other items and close the request.	E - Exact match	
ISS328	Upload of SFN's to Print	The system accepts an upload of SFN's for the bulk printing of non-certified white copies.	W - Workflow or System Configuration Required	
ISS329	Upload Format	The system accepts uploads in various standardized formats, such as Excel.	W - Workflow or System Configuration Required	
ISS330	Print Range of Certificates	The system allows the user to print a range of certificates by SFN.	W - Workflow or System Configuration Required	
ISS331	Update Batch Status Option	When printing is complete, the system provides the user with the option to update the status immediately or at a later time.	E - Exact match	
ISS332	Default Update Status Option for Batch Printing	The default update status option for batch printing is "later". The user may review the print job prior to updating status.	E - Exact match	
ISS333	More Than One Request from Requestor	If the requestor has requested more than one certificate or search, the system displays the next request from the same requestor.	E - Exact match	
ISS334	Record Number of Certified Copies Made	The system records the number of certified copies made.	E - Exact match	
ISS335	Record Identity of Persons Ordering and Receiving Copies	The system records the identity of the person(s) ordering and receiving the certified copies.	E - Exact match	
Rules Affecting Naming Conventions				
ISS336	Character Rules	Please see the General Requirements, section L - Data, Data Format, and Tables for all rules related to characters and naming conventions within the system.		
Rules Affecting Specific Printing Requirements				
ISS337	Verifications	Verification copies of vital record events are watermarked with a State defined watermark such as "administrative copy only."	W - Workflow or System Configuration Required	
Rules Affecting Information Printed for Birth Events				
ISS338	"Deceased" Indicator	Birth certificates for which a death certificate is registered print with a "deceased" indicator.	E - Exact match	
ISS339	Unnamed Child	Customers cannot receive a certified copy of a birth record if the birth record is for an unnamed child.	E - Exact match	
ISS340	Unnamed Child Override	The system allows for a supervisory override for issuing a certified copy of a birth record for an unnamed child by updating the name to "Infant' or "Baby."	W - Workflow or System Configuration Required	GCOM VRMS to configure the text to be updated in case of UNNamed child
ISS341	Printing of Birth Certified Copies	The system tracks and alerts the user of birth certificates that have been printed a State-defined number of times within a State-defined period of time across all offices.	E - Exact match	
ISS342	Multiple Orders of Same Birth Certificate Received	The system tracks and provides an alert when more than the State-defined number of requests for the same birth certificate have been received across all offices.	E - Exact match	
ISS343	Prevent Printing of Certified Copy of Birth Certificate	The system issues a message before filling a request for a certified copy of a birth certificate if the request exceeds a State-defined number of requests within a State-defined time period across all offices; An override by an authorized user is required before the request can be filled.	E - Exact match	
ISS344	Supervisory Override for Birth Certificate	A supervisor can override and print a certified copy of a birth certificate if the request is over the State-defined number of requests across all offices.	E - Exact match	
ISS345	Truncated Birth Name	If a birth record contains an indicator that the child's name has been truncated, the system allows the user to view the image and type in the remainder of the name so that it may print correctly without having to create an amendment.	E - Exact match	
ISS346	Additional Name Space	The system allows for the full name of a child to print at the bottom of page if it is too long to fit into the box.	E - Exact match	

ISS347	Paternity or Legitimation Order	If a birth record is being held because it contains an indicator that a paternity or legitimation order is in process, the system does not allow the printing of a certified copy of the birth record.	*E - Exact match*	
ISS348	Paternity or Legitimation Order Override	The system allows a supervisory override for the printing of a long form, certified copy of a record that has a paternity or legitimation hold.	*E - Exact match*	
ISS349	Do Not Issue	The system does not allow the printing of a long form, certified copy of a birth record that has a paternity or legitimation hold if an amendment is in progress.	*W - Workflow or System Configuration Required*	
ISS350	Add Additional Data to Legacy Records	The system allows a user to enter additional data in legacy records and set a flag so subsequent copies are printed from the system.	*W - Workflow or System Configuration Required*	
ISS351	No Father Information	If a father is not listed on a birth record, no information is printed in the father fields on the certified copy of the birth record.	*E - Exact match*	
ISS352	Delayed Birth Print	Abstracted information is included in the printed copies of delayed birth certificates.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the print rules for Delayed Birth
ISS353	Delayed Certificate Notation	Delayed records (registered more than one year after the date of the event) have the "Delayed Certificate" notation as part of the heading on the certificate and are issued from the system image.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the print rules for Delayed Birth
ISS354	Paternity Flag	Certified copies may still be issued in instances where the mother is married, the father information is missing, and there is a "paternity hold" flag.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the print rules for Paternity hold flag records
ISS355	Accommodate Court Orders	The system will accommodate the printing of court-defined information on a birth record.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the print rules for accommodate Court Orders on a birth record
ISS356	Verification of Birth	Verification of birth has a separate format from certified birth certificates.	*W - Workflow or System Configuration Required*	GCOM VRMS to configure and define the Verification of Birth format
ISS357	Certified Copy of Birth Certificate	The format of a certified copy of a birth record is State-defined.	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format for Certified copy
Rules Affecting Information Printed for Death Events				
ISS358	Statement of Death	A statement of death (abstract) may be issued from the system. Fields on the statement of death are State-defined and do not include medical information.	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format for Statement of death
ISS359	Short Form	A death short form may print from the system. The fields are State-defined and includes only the manner of death and not the actual COD.	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format for Short form of Death
ISS360	Long Form	A death long form may print from the system. The fields are State-defined and does include the COD, which may be pending.	*E - Exact match*	GCOM VRMS define Print rules and format for Long form of Death
ISS361	Verification of Death	A verification of death prints on letterhead with a State defined-watermark and includes State-defined information.	*E - Exact match*	GCOM VRMS to configure and define the Verification of Death format
ISS362	Court-Ordered Death	Court-ordered death certificates are marked with "Judicial Determination of Death."	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format forCourt Ordered Death
ISS363	County Commission Determined Death	Presumed deaths as determined by County Commission are marked with "Presumptive Death."	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format Presumptive Death
ISS364	Pending COD	Certified copies of death certificates can be issued when the cause or manner of death is listed as "pending."	*W - Workflow or System Configuration Required*	GCOM VRMS define Print rules and format for Death certificates with Pending COD
Rules Affecting Information Printed for Genealogy				
ISS365	Genealogy Report	The system provides the option to print a genealogical report.	*W - Workflow or System Configuration Required*	
ISS366	Genealogy Report User-Defined	The format and fields included on the report are user-defined by the State.	*W - Workflow or System Configuration Required*	
ISS367	Genealogy Report Prints on White Paper	Genealogy reports print on white paper and are clearly marked with "Not for legal use."	*W - Workflow or System Configuration Required*	
ISS368	Legacy Records Communicable Disease	All legacy records where COD equals a communicable disease are flagged so that the COD does not print on genealogy requests.	*W - Workflow or System Configuration Required*	
ISS369	Genealogy COD	The system provides the user the option to print COD on genealogical records as long as the COD is not a communicable disease.	*W - Workflow or System Configuration Required*	

Description: Fulfill order and add control # of security paper (Box 7);

Once the record has been retrieved, the system checks for flags and indicators that may affect the ability of the system user to fill the request for that record. If the record can be issued, the system user will add the control number of the security paper and print the certificate.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
ISS370	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
ISS371	Create Letter	If the Customer Service user finds that they cannot complete the request, the user prints a letter for customer indicating the reasons the request could not be processed.	*E - Exact match*	
ISS372	Update Request	The request can be updated to include a request for an amendment.	*E - Exact match*	
ISS373	Queue for Amendments Unit	Requests with amendments added are queued for the Corrections Unit to complete.	*E - Exact match*	
ISS374	Hold Record	If a record contains an indicator that it is being held, the system does not allow the printing of a certified copy.	*E - Exact match*	

ISS375	Record Must be Registered	A record must be registered before any request for that record can be filled.	*E - Exact match*	
ISS376	Paternity Affidavit Form Received	If a signed and notarized Paternity Affidavit Form has been received for a birth record which has a flag indicating that one is expected, and the paternity information has been entered, the system allows the printing of a certified copy of the birth certificate.	*W - Workflow or System Configuration Required*	Define the Print Rules as per State requirements in GCOM VRMS
ISS377	Paternity Affidavit Form Not Received	If a signed and notarized Paternity Affidavit Form has not been received for a birth record which has a flag indicating that one is expected, the system does not allow the printing of a certified copy of the birth certificate.	*W - Workflow or System Configuration Required*	Define the Print Rules as per State requirements in GCOM VRMS
ISS378	Paternity Form Hold Supervisory Override	The system allows a supervisory override to allow issuance of a record that was flagged as awaiting a Paternity Affidavit Form or a Court-Ordered Paternity Form.	*W - Workflow or System Configuration Required*	
ISS379	Sealed Records	If a record contains an indicator that the record has been legally removed and sealed, the system does not allow the printing of a certified copy.	*E - Exact match*	
ISS380	Check Note in System	When a record has an "insufficient payment" flag, an authorized user can access the notes in the system to determine if the money to be collected is different than the standard fee.	*W - Workflow or System Configuration Required*	
ISS381	No Note in System	If there is no note in the system for a record with an "insufficient payment" flag, the user collects the standard fee.	*W - Workflow or System Configuration Required*	
ISS382	Reason for Refund is Clear	When the need for a refund is created by reducing the quantity ordered through the issuance of a "No Record Found" letter, the reason for the refund is noted in a way that is clear to the person reviewing the potential refunds list.	*W - Workflow or System Configuration Required*	
ISS383	Print Refund on Receipt	The system can print refunds on receipts.	*E - Exact match*	
Additional Rules Flags and Indicators				
ISS384	File Flags and Indicators	The system checks file flags and indicators on each record to determine if the issues being identified by the indicator or flag affect the system user's ability to fill the request.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the Business Rules to handle Flags and Indicators
ISS385	Override Flags and Indicators	Authorized users can override certain types of flags and indicators.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the Business Rules to handle Flags and Indicators
ISS386	Remove Flags and Indicators	Authorized users, based on their role, can remove flags and indicators based on circumstances.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the Business Rules to handle Flags and Indicators
ISS387	"Pending Request" Flag	The system allows users to set an indicator for amendment requests being held and to select a reason for holding the request. Different reasons could include: the requestor looks suspicious or possible case of fraud.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the Business Rules to handle Flags and Indicators
ISS388	Comment Field Available for Holding Files	The system provides a comment field for files that have a "hold" flag.	*W - Workflow or System Configuration Required*	GCOM VRMS to define the Business Rules to handle Flags and Indicators
Additional Rules Fees				
ISS389	Fee Not Received	If the fee for an amendment is not received or is insufficient, the record contains a "Do not issue" flag that prevents certified copies from being issued.	*E - Exact match*	
ISS390	Modify Request to Reflect Money Collected	If the money due as noted on the record is collected by the system user, the request is updated to show the collection of the additional money.	*E - Exact match*	
Additional Rules Amendments				
ISS391	Notify User if Amendment is Pending	The system notifies users of pending amendments that prevents the issuance of a record.	*E - Exact match*	
ISS392	Override Flags and Indicators	Users with the proper authority can override the "amendment pending" flag or choose to wait until the amendment is processed.	*E - Exact match*	
Additional Rules Letters				
ISS393	"No Record Found"	If no record is found, the system user can alter the order to print a "No Record Found" letter in lieu of the requested output.	*E - Exact match*	
ISS394	Letter Specifications Apply	The system requirements relative to generating letters apply to the "No Record Found" letter.	*E - Exact match*	
ISS395	Update Request	The request is automatically changed to reflect that the "No Record Found" letter has printed instead of the appropriate certificate.	*E - Exact match*	
ISS396	Refund Certified Copies	When a requestor is found to be ineligible after a search for the record has been performed, the system prints a "No Record Found" letter and refunds the money that the requestor had paid for certified copies, minus the search fee.	*E - Exact match*	
ISS397	More Than One "No Record Found" Letter	When a search requires more than one "No Record Found" Letter, the system does not refund any associated additional copy fee(s).	*E - Exact match*	
ISS398	Sales Statistics Separate "No Record Found" from Certified Copies	When sales reports are ran, "No Record Found" letters can be separated from certified copies.	*W - Workflow or System Configuration Required*	
ISS399	Productivity Reports	The system allows users to run productivity reports by State-defined sets of data such as types of transactions, users and region.	*W - Workflow or System Configuration Required*	Define Reports as per State defined sets
ISS400	Request Reports	The system allows users to run reports by State-defined sets of data such as number and type of certificates ordered per customers within a given time period.	*W - Workflow or System Configuration Required*	Define Reports as per State defined sets of data
ISS401	Record Hold Letter to Requestor	The system allows the generation of a letter and the printing of an appropriate form for a requestor to resolve a hold code.	*E - Exact match*	

Description: QA order (Box 8); OK? (Box 9); If no, void doc, add note stating the reason for void (Box 10); Has the customer paid? (Box 11); If no, the records enter the Billing Process Queue (Box 12); Generate billing documents (invoice, spreadsheet, final notice after 10 days) (Box 13); Payment received (Box 14); go to step 16.

The QA step can be done by the same individual who filled the request or by a second individual from the Quality Check Queue. The QA processor reviews the source of the request and the delivery option specified. The processor reviews the quality of the print job to determine if any copies were damaged during the print process or not appropriately printed. The order is also checked to ensure all line items were filled. If documents are not correct or clear, the document is marked "void." The QA processor can print new copies and perform QA again.

If the documents pass QA, the system updates the security paper numbers and prepares the order for sending or releasing to the requestor.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
ISS402	Inventory Rules	Please see the business rules in Inventory regarding the adding of document control numbers to a record		
ISS403	Send to QA Queue	For requests received by mail, the system user has the option to send the completed order to the QA Queue so the outputs can be checked against the order by a second person.	W - Workflow or System Configuration Required	Queue logic to be configured as per the business rule provided by state
ISS404	QA Immediately	The system user has the option to complete the QA steps without sending the request to the QA Queue.	W - Workflow or System Configuration Required	Queue logic to be configured as per the business rule provided by state
ISS405	QA Directly Follows Filling of Order	When an error is found in the printing of the record after the request has been completed, an authorized user can access the request, void the certificate and document control numbers, and reissue the certificate.	E - Exact match	
ISS406	Send to Queue	In some cases such as training a new employee, the person filling the order may send the order to the QA Queue to be reviewed by a second person before it is released.	W - Workflow or System Configuration Required	
ISS407	Select from Queue	The QA processor, if s/he is not the person who filled the order, can select completed requests from a queue.	W - Workflow or System Configuration Required	
ISS408	View Entire Request	The QA processor can view the entire request, including the document history of the items printed.	W - Workflow or System Configuration Required	
ISS409	Associate Security Paper with Document History	The security paper inventory number used is associated with a specific document in the document history.	E - Exact match	
ISS410	Security Paper Not Previously Used	The system automatically checks to make sure that the security paper number being entered has not already been used or voided.	E - Exact match	
ISS411	Check Security Paper Number Location	The system automatically checks to see if the security paper number being entered is assigned to the user's location.	E - Exact match	
ISS412	No Override on Messages	If the system notifies the user that the security paper number is not available or assigned to the location, an authorized user at the State can make corrections using the Inventory Module before an update to that record can be completed.	E - Exact match	
ISS413	Update Inventory	The status of the inventory is updated immediately upon the successful completion of a transaction that involves the use of secured inventory.	E - Exact match	
ISS414	Correct Input Error	The system provides a manual method of correcting security paper numbers associated with a record by error.	W - Workflow or System Configuration Required	
ISS415	Void Function	The system provides authorized users at the State the ability to void a certified copy and the DCN if the user determines that one or more copies are damaged or not needed.	E - Exact match	
ISS416	Print Vault Copy	The system prints a vault copy of all records issued. The functionality may be turned on or off by the State.	W - Workflow or System Configuration Required	

Description: Release documents to customer (Box 15)

The documents are released to the customer at the counter or otherwise placed in an envelope and sent to the mailroom for mailing to the requestor.

If the documents are returned to the State, the user notes this in the system by marking the documents as "returned." Once the customer contacts the State regarding the documents, the user accesses the record and updates the incorrect information. The documents are then resent to the customer with the updated information. Returned mail may be sent out to the customer one time at no charge. Any additional re-mails of returned items may be associated with a fee.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
ISS417	Print Receipt for Interagency Transactions	For billable accounts, the system provides the ability for the user to print a receipt showing what was given to the customer.	W - Workflow or System Configuration Required	GCOM VRMS to define the buiness rules to handle Receipt fro Interagency Transactions
ISS418	Update Audit Log for Voids	The system tracks voids in the audit log.	E - Exact match	
ISS419	Option to Record Reason for Void	The system provides the user with the option to record the reason for voiding a certified copy and/or document control number.	E - Exact match	
ISS420	Textual Explanation for Void	The system provides the user with the option of entering a textual explanation regarding why a copy was voided.	E - Exact match	
ISS421	Reason List for Void	The system provides the user with a display in the form of a selection list or drop-down menu to indicate the reason a document was voided.	E - Exact match	
ISS422	Reprint	The system requires a supervisory override to reprint any documents.	W - Workflow or System Configuration Required	GCOM VRMS to configure supervisory Override for reprint
ISS423	No Effect on Sales Figures	Reprints are not included in sales reporting as a new sale.	E - Exact match	
ISS424	Void Replaced Copies	The system provides the ability to void replaced copies from a previous request that have been returned, usually because an amendment has been processed and new copies are being produced.	W - Workflow or System Configuration Required	GCOM VRMS to define the workflow to handle void of replace copies
ISS425	Order Closed	The order is automatically closed when all of the transactions on the order have been completed.	E - Exact match	
Additional Rules for Returned Mail and Re-Mails				

ISS426	**Search Rules**	Please see the General Requirements, section M - Searching and Matching, for search and duplicate checking rules.		
ISS427	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
ISS428	**Returned Mail Queue**	The system provides a queue for records marked as "returned."	***W - Workflow or System Configuration Required***	Queues logic can be configured as per State needs
ISS429	**Open Closed Request**	The system allows a closed request to be opened when a mailed certificate is returned because of a bad address.	***W - Workflow or System Configuration Required***	GCOM VRMS to define configuration to open the closed Request
ISS430	**Capture Date Received**	The system provides a place to capture the received date for returned mail.	***E - Exact match***	
ISS431	**Comment Box**	The system provides a comment box for the user to add any necessary comments.	***E - Exact match***	
ISS432	**Request Has Been Re-Mailed**	The system provides a checkbox to note that the request has been re-mailed.	***E - Exact match***	
ISS433	**Remove from Returned Mail Queue**	The system automatically removes a record from the Returned Mail Queue once the record has been marked as "re-sent."	***W - Workflow or System Configuration Required***	Queue logic to be configured as per the Return Mail business rules
ISS434	**No Fee for First Re-Mail**	No fee is associated with the first re-mail.	***W - Workflow or System Configuration Required***	Configuration for fee for Return mail to be defined
ISS435	**Fee for Additional Re-Mails**	A State-defined fee is associated with any re-mails after the initial re-mail.	***W - Workflow or System Configuration Required***	Configuration for fee for Return mail to be defined
ISS436	**Capture Re-Mail Date**	The system provides a place to capture the re-mail date.	***E - Exact match***	
ISS437	**New Address**	The system provides a place to capture the new address for the re-mail.	***E - Exact match***	
ISS438	**Service Transaction Type: Re-Mail**	The system provides a service transaction type for re-mail.	***E - Exact match***	
ISS439	**Print with New Address**	The system allows a user to print a copy of a receipt with the new address information received from a re-mail.	***W - Workflow or System Configuration Required***	Define Receipt Printing rules in case of Return mails

Description: Order complete? (Box 16) If no, search for the record again (Box 1).

The system user continues to search for records and print appropriate outputs until all items on the request have been filled. When all items have been filled, the order is marked "Ready for QA" or an equivalent status. If the order is a credit card order, the receipt produced by the EVRS system is matched to the certified copies so it can be sent to the customer with the documents. If a refund is due and the request was processed on the same day as the refund, the refund can be made from the cash drawer. If the order will be charged, the record is available for billing.

Orders are prepared for mailing to the requestor based on the handling instructions on the request.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
ISS440	**Allow Refunds on Same Day**	The system allows for same-day refunds, provided that the business day has not closed.	***E - Exact match***	
ISS441	**Review Potential Refunds**	An authorized user can select and review a list of all requests for which a refund has been requested.	***W - Workflow or System Configuration Required***	GCOM VRMS can
ISS442	**Final Refund List**	The user can produce a refund list.	***E - Exact match***	
ISS443	**Remove Items from Refund List**	The user can remove items from the refund list.	***E - Exact match***	
ISS444	**Excluded Refunds Closed**	Items removed from the refund list are excluded from future refund lists.	***E - Exact match***	
ISS445	**Change Request Status**	When all of the items on the request have been filled, the request status is changed to "complete" or equivalent.	***E - Exact match***	
ISS446	**Notification to Customer Upon Release of Order**	The system sends an email notification to the customer upon release of an order if an email address was provided.	***E - Exact match***	

Additional Rules for County

Issuance at the county occurs in the same way as the State office with a few exceptions.

Please note: Issuance rules in the Issuance - Counter Flow apply and are not repeated here.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
ISS447	**Search Rules**	Please see the General Requirements, section M - Searching and Matching, for search and duplicate checking rules.		
ISS448	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
ISS449	**Services Differ**	The types of services provided at different counties may vary.	***W - Workflow or System Configuration Required***	
ISS450	**County Cannot Complete Amendments**	The system does not allow a user at the county to complete an amendment.	***W - Workflow or System Configuration Required***	
ISS451	**Same Screens as State**	Request screens and corresponding edits for the county are the same as the State's.	***W - Workflow or System Configuration Required***	
ISS452	**State Specifies County Capability**	The State has the ability to specify which event types and certificate types each county may issue.	***W - Workflow or System Configuration Required***	Part of County configuration

ISS453	**Turn On/Off Access for All Counties**	The system provides the ability to turn on and off the feature that allows any county to access any record.	***W - Workflow or System Configuration Required***	Part of County configuration
ISS454	**Turn On/Off Access for Specific County**	The system provides the ability to turn on and off the feature that allows a specific county to access any record.	***W - Workflow or System Configuration Required***	Part of County configuration
ISS455	**County Access to Records**	Counties have the ability to view all vital event records regardless of the county of occurrence.	***W - Workflow or System Configuration Required***	Part of County configuration
ISS456	**County May Only Issue Their Records**	Counties may issue records for their county only.	***W - Workflow or System Configuration Required***	Part of County configuration
ISS457	**Validate Payment Method**	The system checks each account to ensure that the method of payment being used is valid for that requestor.	***W - Workflow or System Configuration Required***	Part of County configuration
ISS458	**"Hold" Flags**	Authorized users can put temporary "hold" flags on accounts with charging privileges that prevent that method of payment from being used.	***E - Exact match***	
Release of Order at County (Counter)				
ISS459	**Same Rules**	The rules for releasing an order at the State apply to the local health departments.		
ISS460	**Same Accounting Reports as State**	The system produces the same accounting reports at the local level that are produced at the State level to facilitate day-end closing and State audit requirements for each county.	***W - Workflow or System Configuration Required***	GCOM VRMS to configure reports as per State specifications

From the dropdown list, please select one of the available condition codes E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. DO NOT include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. Enter the anticipated date of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

OVERVIEW OF THE BUSINESS PROCESSES FOR PROCESSING AMENDMENTS

Amendments types in the state include: administrative corrections, legal corrections, medical information including pending cause of death, adoptions, foreign born, Legitimations, paternities, and court orders. The request for an amendment may come from a system user or directly from an individual. If the request is through an individual, they may mail in the request or bring it to a counter at the State or County of occurrence, and a flag is applied to identify which. If the request is initiated at the County, the County will data enter the changes to the recorded and scan and attach the supporting documentation. The record is then queued for the State's review. The system will recognize if the record is a simple change such as a name change, and will queue the record in the Customer Waiting Queue. All other records will be queued in the State's review queue to be processed as needed. When an Amendment is mailed or brought to the State office, the Corrections staff will process the entire amendment if possible. The record may need be held in a Pending Active Queue for the Corrections staff to re-access the record as needed. More than one person can process the records from the queue and a messaging system will be implemented to ensure that different users can communicate/collaborate on records. If required documentation is missing, the record is put into a Waiting Queue and is automatically flagged. In the meanwhile, the requestor is contacted regarding the incomplete documentation and instructed to resubmit the application.

Amendments often need an affidavit to initiate the change. If an affidavit is needed, it can be presented in person, through the mail, or electronically through the system. A request application is generated in the Point of Sale module; this request application is linked with the actual record that will be amended. Acceptance of an amendment request is based on the eligibility of the requestor and the supporting documentation presented. Please see Issuance for business rules.

When sealed files are required, the original record is saved and linked to the new replacement record but is no longer visible except to authorized personnel. For electronic records, it should be sealed electronically. When an amendment has been completed, the system automatically updates the Issuance Queue.

NAPHSIS use case models:
EBRS UC 018 v. 1.9 - Register a Record
MVRS UC 006 v. 2.2 - Modify a Registered Record
MVRS UC 010 v. 1.4 - Responder Responds to RFI
MVRS UC 012 v. 1.5 - Search
POS UC 003 v. 1.3 - Update a Request

BUSINESS PROCESS: System User Requests a Correction to a Registered Record

System users can request a correction to a registered record within the first year of the date of the event. System users can do this electronically through the system for their records only. The system provides a way for users to see the current certificate information in a read-only format while allowing the user to enter the requested correction information in the system. The user may also request additional certified copies when requesting the correction.

For birth: After one year of the event, a court order and/or documentation is required to justify any changes. If minor changes are to be made to the birth record within one year, they can be made using the Birth Worksheet as reference. Only obvious errors may be changed for last name and require proof from the mother and father. First and middle name changes may be done without proof until one year from birth; thereafter, an affidavit is required. Changes cannot be made to the year of birth. Place of birth, age, and DOB of parents are all changeable if proof, including an affidavit, is provided by the parents to substantiate the changes. Gender can be changed with proof from the hospital or by court order. If there are clerical errors on the part of the hospital, they can initiate changes without a court order.

For death: Funeral directors may change another funeral director's records as long as they are part of the same funeral home or group, or are affiliated in some other professional way. If one funeral home is bought by another, the new funeral home will assume responsibility for all of the records made by the old funeral home. The new funeral home will have the responsibility of changing/amending any of the old records and any record after the sale will be changed to reflect the new funeral home's information.

Description: Log into system (Box 1)

The system user logs into the system.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC1	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
AC2	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
AC3	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
AC4	**Request Corrections Within One Year of Event**	All external system users may request birth corrections through the system for their records within one year of the date of the event.	E - Exact Match	
AC5	**Court Order After One Year**	The system requires a court order or affidavit for any correction or amendment after one year.	W - Workflow or System Configuration Required	
Additional Rules for death records				
AC6	**No Time Limit for Funeral Homes**	All funeral homes may process death corrections through the system for their records with no time limit after the date of the event	E - Exact Match	
AC7	**No Time Limit for Medical Examiner**	All medical examiners may process death corrections through the system for their records with no time limit after the date of the event	E - Exact Match	
AC8	**Medical Certifier (Physician) May Amend Medical Information**	Certifiers may amend medical information within the same facility.	E - Exact Match	
AC9	**Medical Certifier (Medical Examiner) May Amend Medical Information**	Certifiers may amend medical information only within their records.	E - Exact Match	
AC10	**Medical Examiner Exception**	There is no limit to the number of times a Medical Examiner can update the death record information.	E - Exact Match	
AC11	**Funeral Home Exception**	Funeral directors within the same funeral home or funeral home group/affiliation can amend one another's records.	E - Exact Match	
AC12	**Funeral Home Sale**	If a funeral home is acquired by another funeral home, all records owned by the old funeral home become property of the new funeral home.	E - Exact Match	
AC13	**Funeral Home Name Change**	If a funeral home is acquired by another funeral home, the system allows the record to print the new funeral home's information on their record.	E - Exact Match	
AC14	**Funeral Home Request**	Funeral homes are only able to change the records that they are affiliated with, regardless of actual funeral home on record.	E - Exact Match	

Description: Create correction request or amendment (Box 2)

The user will create a correction request through the system.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC15	**Issuance Rules**	Please see the business rules for Issuance for creating a request in the system.		
AC16	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
AC17	**E-Notary**	Please see General Requirements section T - Electronic Signature and E-Notary for rules related to e-notary as they apply here.		
Additional Rules for amending birth record				
AC18	**No Changes Without Court Order**	If a particular item on a birth record has been changed once, no further changes can be made without a court order.	W - Workflow or System Configuration Required	
AC19	**First and middle Name Change**	The system allows the child's first and middle names to be changed through a notarized affidavit until the child's first birthday.	E - Exact Match	

AC20	Track Changes and Date of Change	The system will track which item was amended on a certificate, and the date of that amendment.	E - Exact Match	
AC21	Last Name Change	Last name changes require proof from the mother and father through a notarized affidavit.	W - Workflow or System Configuration Required	
AC22	Parent's Name	The system allows the parents' names to be changed with the exception of last name.	W - Workflow or System Configuration Required	
AC23	Change with Affidavit Marked "Amended"	Any change requiring an affidavit will be marked "amended" on the record.	W - Workflow or System Configuration Required	
AC24	Source of Amendment	An open field will capture the source of the amended information (e.g. affidavit, court order, hospital records).	E - Exact Match	
AC25	Name Changes Marked "Amended"	The new birth certificate will be marked "amended" any time a name is amended, regardless of the timing of the amendment	W - Workflow or System Configuration Required	
AC26	Override Amendment Stamp	Authorized users can override the amendment stamp in special circumstances.	F - Future	Release Spring 2020
AC27	Comment with Reason for Override	If an authorized user opts to override the amendment stamp, a drop down menu with reasons for the override is opened. The user must select a reason to complete the override.	F - Future	Release Spring 2020
AC28	Authorized User Mark Record as "Amended"	An authorized user may add an amendment stamp to a record if a minor correction took place to a record but did not require an affidavit, within one year of the DOB/DOD. An amendment stamp cannot be placed on a record that has had no corrections or amendments to it.	F - Future	Release Spring 2020
AC29	Date of Birth of Parents	The system allows the DOB of parents to be changed with documentation.	W - Workflow or System Configuration Required	
AC30	Place of Birth	The system allows the place of birth to be changed with documentation.	W - Workflow or System Configuration Required	
AC31	Date of Birth	The system allows the date of birth to be changed with the exception of the year, with proof from the hospital or supporting affidavit.	W - Workflow or System Configuration Required	
AC32	Gender Change	Gender can be changed with proof from the hospital.	W - Workflow or System Configuration Required	

Description: Retrieve record and auto-populate request form with read-only information (Box 3)

The system retrieves the original record and the user is able to view the original record in a read-only format. The request is auto-populated with the information that was originally entered.

Please note that the rules for this section follow the same rules detailed for boxes 5-6 from the Amend a Registered Record Flow. The rules are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC33	Queues Rules	Please see the General Requirements section N - Queues for rules of queues. Amendments will be queued based on type of amendment.		
AC34	Requestor Must be Owner of Record	A requestor can only request amendments to records in which they are the owner.	E - Exact Match	
AC35	Change Person Requesting	If a request is rejected for correction, the person signing and submitting the request the second time may be different from the person initiating the request, although they need to originate from the same facility (i.e. medical examiners in the same office; funeral directors at the same funeral home).	E - Exact Match	
AC36	Cancel Request for Correction	The system allows requestor to cancel a correction, record a cancellation reason, and change the status to "closed."	E - Exact Match	
AC37	Removal of Cancelled Request for Correction	Upon indication of a cancelled request for a correction, the cancelled request for a correction is removed from the State's Pending Queue.	E - Exact Match	
AC38	Cancellations Prior to Approval	The system only allows the requestor to cancel a request for a correction prior to State approval.	E - Exact Match	
AC39	Notes for Cancellation	A note section will be available so the user may identify the reason for the cancellation.	E - Exact Match	
AC40	Cancellation Becomes Part of History	Each cancellation becomes part of the history of the record.	E - Exact Match	
AC41	No Request for Records Over One Year After Date of Event	For records one year or more past the date of the event, the system does not allow a hospital to submit a request for a change to a record.	W - Workflow or System Configuration Required	

Description: Enter correction information or amendment (Box 4); System edits run (Box 5); OK? (Box 6); Scan and attach affidavit or other supporting documents (Box 7); Print affidavit if necessary (Box 7a)

The user enters the information to be amended. The system runs an edit check to confirm that the information entered is okay to proceed. Affidavits or other supporting documentation is are scanned and attached to the record.

Please note that the rules for this section follow the same rules detailed for boxes 9-12 from the Amend a Registered Record flow. The rules are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC42	Amend Registered Record	The business rules from the previous section apply to this flow.		
AC43	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
AC44	Multiple Documents	One or more documents can be scanned.		
AC45	Unlimited Changes	There is no limit to the number of changes that can made in one request.	E - Exact Match	
AC46	Supporting Documents Attached	The system allows the user to indicate what supporting documents are attached.	E - Exact Match	
AC47	Include Original Document Number in Pending COD	The amendment request record includes the state file number and medical examiner case file number (if applicable) of the original document being amended.	W - Workflow or System Configuration Required	
AC48	Rejected Request Queue	The user can access a rejected amendment request from the Rejection Queue or by entering State defined search criteria such as the amendment request tracking number or name on record.	W - Workflow or System Configuration Required	
AC49	Adding/Attaching Documents to Amendment	The system allows the attaching of supporting documentation (scanned or other electronic) to the amendment at any time.	E - Exact Match	
Additional Rules for Birth Amendments				
AC50	Exception Regarding Year of Birth	External system users cannot make changes to the year of birth without a court order.	E - Exact Match	
AC51	Exception Regarding Place of Birth	External system users cannot make changes to place of birth without a court order.	E - Exact Match	
AC52	Exception Regarding Age on Record	External system users cannot make changes to the age listed on the record without a court order.	E - Exact Match	
AC53	Exception Regarding Date of Birth of Parents	External system users cannot make changes to the date of birth of parents without a court order.	E - Exact Match	

Description: Electronically sign request and order copies (Box 8)

The requestor electronically signs the request form and the system provides the user with the ability to order copies of the certificate and/or amendment, if desired. The requestor submits the correction request form and the request for certified copies to the State. The request is queued in the appropriate amendment queue at the State based on the type of amendment being requested.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC54	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC55	Issuance	Please see the business rules for Issuance.		
AC56	Resolve Errors	The correction cannot be marked "complete" if all of the required fields in the request have not been completed.	W - Workflow or System Configuration Required	Using Validation Rules for AMD
AC57	Record Leaves Queue	Once the request is complete, it leaves the queue and is ready for State.	E - Exact Match	
AC58	Confirm Request	The system prompts the user to confirm that s/he is finished with the request and that the information provided is correct. Prompt could be an action such as selecting a check box. This action makes the user responsible for confirming that the request is valid.	E - Exact Match	
AC59	Save as Pending	The user may choose to save the request as pending and submit the request at a later time.	E - Exact Match	
AC60	Only Authorized Users May Submit	Only authorized users may submit a correction.	W - Workflow or System Configuration Required	
AC61	Queue for Signature	If a user not authorized to sign creates the initial amendment request, the request can be directed to a queue for the authorized signer.	E - Exact Match	
AC62	Update Correction Request Status "Correction Request Transmitted"	The system updates the correction request status to "Correction Request Transmitted" or equivalent when the request has been signed.	E - Exact Match	
AC63	Signing Submits Request to State	The act of submitting the correction request causes the request to be submitted to the State, where all processing of correction requests occurs.	E - Exact Match	
AC64	Request Copies	The system allows a funeral establishment to request the number of certified copies when the correction request is submitted.	E - Exact Match	

AC65	Invoice	The system allows a previously approved requestor to invoice fees associated with the correction request.	E - Exact Match	
AC66	No Fee for Obvious Errors	For obvious errors, the record is updated administratively and fees are not collected.	E - Exact Match	
AC67	Ability to Re-Correct a Correction	A user may edit the request for a correction until it is submitted to the State.	E - Exact Match	
AC68	Cancel a Correction Request	The system allows an authorized user to cancel a correction request that has not been submitted to the State.	E - Exact Match	

Description: Submit to Vital Records (Box 9)
Once signed, the request moves to Vital Statistics

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC69	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC70	Pending Amendment Queue	The system provides a queue for system users that contains all pending amendments.	E - Exact Match	
AC71	Sent to State	Once the user electronically signs an amendment, the record is automatically sent to the State's review queue.	E - Exact Match	

Description: Vital Records reviews (Box 10); Approved? (Box 11); Register amendment (Box 12); Send notification to requestor and county (Box 13); Ready to issue queue for the county (Box 13a)

Vital Records reviews amendment requests that are received and approves the changes. The amendment is applied and a notification is sent to the requestor that the amendment is complete.

Please note that the rules for this section follow the same rules detailed for boxes 1-6 from the Amend a Registered Record flow. The rules are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC72	Amend Registered Record	The business rules from boxes 1-13 apply to this flow.		
AC73	Complete Amendment Notification	The system will send a message to the system user once the amendment is complete and ready to issue.	W - Workflow or System Configuration Required	

Description: If not approved, reject cycle back to EVRS user requestor (Box 14); EVRS requestor accesses reject queue (Box 15); Updates/corrects information and runs edit checks (Box 16); OK? (Box 17); Fix error (Box 18)
If the record cannot be processed at the State, a message is sent through the system to the requestor indicating the errors. The record is moved to the requestor's queue. The requestor accesses the request form from the queue and updates and/or corrects information in the request. Edits run to ensure that no errors exist. If errors are found, the user continues to edit/update the information until there are no errors. When all the edits have passed, a message is sent through the system back to the State indicating the request has been corrected. The corrected request form is added to the appropriate queue for the State.

Please note that the rules for this section regarding the Rejection and Correction Cycle follow the same rules detailed in box 12 (Rejection and Correction cycle) from the Amend a Registered Record Flow. The rules are not repeated here.

Please note that the rules for this section follow the same rules detailed for boxes 10-11 from the Amend a Registered Record Flow. The rules are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC74	Query Message	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
AC75	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC76	Same Rules	The business rules for the Query and Rejection Cycle are the same as for box 12 from Amend a Registered Record flow.		
AC77	Same Rules	The business rules for entering amendment information and edit checks are the same as for boxes 5 from Amend a Registered Record flow.		
AC78	Rejection Queue	The system provides a work queue for rejects (all events).	E - Exact Match	
AC79	Message to Requestor	The system sends a message electronically to the system user that requested the amendment to alert them of errors that need to be fixed.	W - Workflow or System Configuration Required	
AC80	Return Request	The system allows a user to reject an amendment request back to a requestor for correction/additional information.	E - Exact Match	
AC81	Modify Amendment Request	The system allows a requestor to modify an amendment request that has been rejected back from the State.	E - Exact Match	
AC82	Remain In Queue	An amendment request that contains one or more rejected items remains active until the remaining items are resolved or until it is closed by the system user.	E - Exact Match	
AC83	Record Leaves Queue	Once the record is complete, it leaves the queue and is ready for Issuance.	E - Exact Match	

AC84	Record Printing	The record is printed in either a long form or short form. There will be a footnote on the record indicating "amended" along with an amendment history on the amended copy.	W - Workflow or System Configuration Required	
AC85	Report Printing Option	The option to print the footnote on the record can be turned on and off.	W - Workflow or System Configuration Required	

End of the Rules for System User Requests a Correction to a Registered Record

BUSINESS PROCESS: AMEND A REGISTERED RECORD

If an error is discovered on a registered record, the record must be amended with the correct information. There are several ways an amendment can occur.

1. The requestor may go to the county where the event occurred and request an amendment;
2. The requestor may send in the request or court order to the State office;
3. A medical certifier or funeral home may initiate the change through the system (this process is described in the next section).

If the amendment request is initiated at the State (either by mail or at the counter), the State user will log into the system and enter the application request in the Point of Sale (POS) module for tracking and issuance purposes. The record is then retrieved by the type of amendment to be processed. The electronic amendment request is auto-populated with the certificate information. The certificate information is read-only to prevent alteration. The amendment information is keyed into the electronic request form. The edit checks are ran and any errors are corrected. Once the request passes the edit checks and all supporting documentation is scanned and attached to the record, the record is queued at the State for the Corrections/Amendments unit to process. Money is receipted through EVRS or the county system.

For legacy records not originated in the system, two actions may occur.

1. The State accesses the image of the legacy record (a scanned image of the original document) that is in the system and a decision is made about whether the amendment can be processed.
2. The county accesses the image of the legacy record (a scanned image of the original document) that is in the system, data enters minimal information from the image into the database, and submits an amendment request to the State.

If the amendment cannot be processed, the State either informs the applicant (requestor or registrant) via email or a system generated rejection letter, or calls the requestor to get more information. The request is held in the Pending Queue until the applicant (requestor or registrant) provides the additional information. When received, the State retrieves the record from the Amendment Queue. The State updates the system, and an email or other notification is sent to the requestor that the amendment is completed. If no copies are requested, no further action is required. If copies are requested, the appropriate copies are printed and delivered to the customer.

If the record being amended originated in the system, the State retrieves the record from the Amendment Queue and processes the amendment.

If the amendment request is initiated by mail at the State, the State user will enter the application request and receipt the money in the POS module. The record is then retrieved by the type of amendment to be processed. The electronic amendment request is auto-populated with the certificate information. The certificate information is read-only to prevent alteration. The amendment information is keyed into the electronic request form. The edit checks are ran and any errors are corrected. Once the request passes the edit checks and all supporting documentation is scanned and attached to the record, the record is queued at the State for the Corrections/Amendments Unit to process.

Description: State accesses amendment queue (or searches for the record) (Box 1)

Please note: All rules that relate to requests for an amendment are listed in Issuance requirements and are not repeated here.

The user accesses the Amendment Queue or alternatively searches for the record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC86	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
AC87	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
AC88	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
AC89	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
AC90	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
AC91	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC92	Issuance Rules	Please see Issuance business rules for all rules related to creating a request and receipting.		
AC93	Messaging	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
AC94	Amendment Screens State Defined	Amendment screens are State defined.	W - Workflow or System Configuration Required	
AC95	Automatically Queue for State	Correction and amendment requests created at the counties are automatically queued for process at the State.	W - Workflow or System Configuration Required	
AC96	Assess and Create	The system provides the State user with a method of accessing an event record and making a correction without having to first place the request in a queue.	E - Exact Match	

AC97	Processing a Queue	The system allows more than one person to process records from the same queue at a time.	E - Exact Match	
Amendment Queues				
AC98	Active Queue	The system provides a queue for all open amendments.	E - Exact Match	
AC99	Review Queue	The system provides a work queue for training purposes. New users or those determined by a supervisor will have their work reviewed prior to completion of the amendment.	W - Workflow or System Configuration Required	
AC100	Supervisor Approval Queue	The system provides a work queue for amendments where a supervisory review prior to completion is required. In the case of adoptions, the system has the ability to move the record to the Supervisor Queue.	E - Exact Match	
AC101	Pending Queue	The system will provide a Pending Queue by amendment type for all records waiting further information or investigation.	E - Exact Match	
AC102	Display Statistics in Queue	Each queue displays statistics about how many items are in the queue and how long the items have been in the queue.	E - Exact Match	
AC103	Customer Waiting Queue	The system provides a work queue for corrections in which the customer is waiting for the State to review the record	W - Workflow or System Configuration Required	
AC104	Customer Waiting Criteria	Customer waiting criteria is State defined.	W - Workflow or System Configuration Required	
AC105	Identifying Customer Waiting Options	The system can identify which type of correction can be queued in Customer Waiting.	W - Workflow or System Configuration Required	
AC106	Customer Waiting Automatic	The system will automatically queue records in the Customer Waiting queue.	W - Workflow or System Configuration Required	
Birth Amendment Queues				
AC107	Adoption Queue	The system provides a work queue for adoptions.	E - Exact Match	
AC108	Out-of-State Adoption Queue	The system provides a queue for when the State receives a court order for adoption of a child born out of state. This queue allows the State to forward the adoption to the correct state where the birth certificate will be created.	W - Workflow or System Configuration Required	
AC109	Birth Amendments Queue	The system provides a work queue for birth amendments.	E - Exact Match	
AC110	Foreign-Born Adoption Queue	The system provides a work queue for foreign-born adoption amendments.	F - Future	Release Spring 2020
AC111	Birth Amendments within 1st Year Queue	The system provides a queue for birth amendments within the first year. Only amendment requests that take place within one (1) year of the DOB are placed in this queue.	E - Exact Match	
AC112	Birth Corrections Queue	The system provides a corrections queue for birth records.	E - Exact Match	
Fetal Death Amendment Queues				
AC113	Fetal Death Queue	The system provides a work queue for fetal death amendments.	E - Exact Match	
Death Amendment Queues				
AC114	Death Amendments Queue	The system provides a work queue for death amendments.	E - Exact Match	
AC115	Death Amendments within 1 Year Queue	The system provides a queue for death amendments within the first year. Only amendment requests that take place within one (1) year from the DOD are placed in this queue.	E - Exact Match	
AC116	Death Corrections Queue	The system provides a queue for corrections to a death records. Only State defined fields within the death record can have corrections made to them.	E - Exact Match	
AC117	Pending COD queue	The system provides a queue for pending cause of death.	E - Exact Match	
AC118	Medical Amendment Work Queue	The system provides a queue of records for all amendment requests to any medical field.	E - Exact Match	

Description: EVRS Record? (Box 2); If yes, Review the amendment request and supporting documentation (Box 3); Can process? (Box 4); If no, Rejection and Correction Cycle (Box 5); If yes, Accept Correction/Amendment (Box 6)

The user checks to see if the record is an EVRS record. If it is an EVRS record, the user reviews the amendment request and supporting documentation to determine if the amendment can be processed.

The type of amendment dictates the type of changes to be made in the database. In some cases, the original record may be corrected. Hold codes may be updated or added. The system saves the amendment request in history. History is also created to show the details of the changes made to the record, tying the record history to the specific amendment by date and the amendment request tracking number. A specific item on a record may only be changed once.

If the record cannot be processed, the user sends the record through the Rejection and Correction Cycle until the record can be processed. Once the record can be processed, the system accepts the correction/amendment.

Supporting documentation is scanned into the system and attached to the original record.

Please note: All the rules regarding the Rejection and Correction Cycle for a record are defined in the Rejection and Correction Cycle flow apply to this process and are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	Comments
AC119	Search Rules	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
AC120	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC121	Query and Rejection Cycle	Please see Query and Rejection Cycle business rules, regarding rules related to rejection and corrections of System records.		
AC122	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
AC123	Second Review	Please see the General Requirements section HH - Second Review Capability for all rules related to second reviews.		
AC124	Amendment Screens	Amendment screens are specific to the type of amendment.	E - Exact Match	
AC125	State Processes Requests at Time of Creation	At the State, all correction and amendment requests are processed at the time the request is created, unless the user takes an actionable step to put the requests in a queue for later processing.	W - Workflow or System Configuration Required	
AC126	Request is Read-Only	The request application is viewable in read-only mode for the user.	W - Workflow or System Configuration Required	
AC127	Memo of Instruction	The user can view or print a short memo of instruction for any items on an amendment request.	W - Workflow or System Configuration Required	
AC128	Delete Scanned Documentation	The ability to delete a scanned document associated with a record is role-based and defined by State.	E - Exact Match	
AC129	Multiple Amendment Codes Allowed on Single Record	The system allows for multiple amendment codes. Amendment codes are State defined.	W - Workflow or System Configuration Required	
AC130	Delayed Indicator	If an amendment is processed on a record on which there is a "delayed" indicator, the amendment is processed without resetting the "delayed" flag.	E - Exact Match	
AC131	Update System Records Automatically	If the record being amended was created by the system, the record is updated automatically from the information in the amendment request once approved.	E - Exact Match	
AC132	Data Entry at County	The system allows the county in which the request was made to data enter amendment information into the system.	E - Exact Match	
AC133	Review by State	Any amendment keyed by the county must be reviewed by the State.	W - Workflow or System Configuration Required	
AC134	Accept Changes	The system requires a State user to take an actionable step to accept amendments and corrections on a record.	W - Workflow or System Configuration Required	
AC135	Certified Copies Issued	If certified copies have been issued, the system generates a letter to the requestor recalling the copies.	W - Workflow or System Configuration Required	
AC136	Certified Copies Issued, Record Queued in Pending	If certified copies have been issued, the record is held in a queue until such time as all the certified copies have been returned to the State or the State does an override.	W - Workflow or System Configuration Required	
AC137	Screens Follow Worksheets	Where appropriate and as defined by the user, the amendment screens follow the layout of corresponding forms and worksheets to ensure ease of data entry.	W - Workflow or System Configuration Required	
AC138	Dual Monitor Screens	The user may view the image of the original record while entering amendment or corrections information on a separate monitor screen to complete the amendment request (dual monitor screens).	E - Exact Match	
AC139	Auto-populate original information	The system auto-populates the current values of the fields to be amended.	E - Exact Match	
AC140	Read-Only	Current information is displayed in a read-only format; the original fields are locked.	E - Exact Match	
AC141	Visual Cue for Items Selected for Update	The system provides a way for the user to know which changes on an amendment request have been made and which have not been made.	E - Exact Match	

AC142	New Values	An open field is displayed next to or below each piece of data that can be changed to allow the user to enter the new value.	E - Exact Match	
AC143	Consistent Controls	Field controls for entering correction information are consistent with the entry of a new record.	E - Exact Match	
AC144	Consistent Edits	Field and cross-field edits are consistent with the entry of a new record.	E - Exact Match	
AC145	Resolve Errors	The amendment cannot be marked complete if there are unresolved errors in the record.	E - Exact Match	
AC146	Date Amended	The date the amendment is complete is auto-populated from the system date.	E - Exact Match	
AC147	Mark Amendment Complete	The system requires a specific action to mark the amendment complete.	E - Exact Match	
AC148	Reason Codes Available	The system provides the user with the ability to select a reason code for the requested change.	E - Exact Match	
AC149	Select Reason Codes	The user selects a reason code for the change from a drop down list of reasons.	E - Exact Match	
AC150	Reason Codes Specific to Each Change	Reason codes and supplemental notes are specific to each piece of data that is changed.	F - Future	Release Spring 2020
AC151	Reason Code Must be Selected	A reason code for each change must be selected in order for the amendment to be filed.	F - Future	Release Spring 2020
AC152	Additional Notes	The system provides a display where the user may enter additional explanatory notes regarding the requested changes.	F - Future	Release Spring 2020
AC153	Additional Notes for Each Reason	Additional explanation notes may be attached to each reason.	F - Future	Release Spring 2020
AC154	Reason Codes State defined	Reason codes are State defined.	F - Future	Release Spring 2020
AC155	Edit Check Against Reason Codes	The edit set against the reason codes is State defined.	F - Future	Release Spring 2020
AC156	Display Message	The system displays a message to the user indicating the results of the edit check against reason code.	E - Exact Match	
AC157	One Amendment Per Data Element	When a second amendment is initiated on the same data element in a record, the amendment cannot be processed without a court order.	W - Workflow or System Configuration Required	
AC158	Capture Court Order Information	The system allows the user to capture the court order information for the subsequent amendments to a data field.	W - Workflow or System Configuration Required	
AC159	Court Order Information State Defined	The information from the court order that will be captured for subsequent amendments is State defined.	W - Workflow or System Configuration Required	
AC160	Court Orders and Adoptions	A court order or adoption may be filed after an amendment has been completed on the record without firing the "one amendment per data element" edit.	W - Workflow or System Configuration Required	
AC161	Override Requirement for Court Order	A designated State user may override the restriction on a second amendment without a court order.	W - Workflow or System Configuration Required	
AC162	Selective Update	The system user may selectively make some but not all of the requested changes.	W - Workflow or System Configuration Required	
AC163	History Viewable	The history of a record is easily available when processing an amendment.	E - Exact Match	
AC164	Correction History	Corrections or amendments of registered records trigger the creation of a change history record. The fields are State defined and includes but are not limited to original data, corrected data, date of the change, person requesting change and person approving change, if applicable.	E - Exact Match	
AC165	Selection List of Supporting Documentation	The system provides the user with a selection list from which to select the supporting documentation presented by the requestor. The list is specific to the amendment type.	E - Exact Match	
AC166	Other Supporting Document	If a supporting document used to substantiate an amendment is not included in the list, the user may select "Other" and enter the document type.	E - Exact Match	
AC167	Allow Comments with Document List	The system allows the user to enter notes about the documents listed.	W - Workflow or System Configuration Required	
AC168	Specify Document Type	The user can select a document type from a State defined list to identify the type of document being scanned.	E - Exact Match	
AC169	Associate Documents with Amendment	The scanned documents are automatically associated with the original record for which an amendment has been requested.	E - Exact Match	

AC170	Associate Document with Amended Record	When the amendment is finalized, the associated documents are linked with the registered record that was amended.	E - Exact Match	
AC171	Scan Anytime	Scanning can occur anytime in the process after the amendment has been started.	E - Exact Match	
AC172	Scan Multiple Times	Scanning can occur at multiple times in the process for the same amendment.	E - Exact Match	
AC173	Search for Another Record	The system provides the ability to search for and print a copy of another record in the system as supporting documentation while processing an amendment.	W - Workflow or System Configuration Required	
AC174	Enter Reference Information	The system provides fields that allow the user to enter the reference information from the other record into the current amendment as supporting documentation instead of printing the document. Reference information is State defined.	W - Workflow or System Configuration Required	
AC175	Reference Information State Defined	The reference information fields to be entered into the record are State defined and will consist of, at a minimum, name, event type, event year, SFN and relationship.	W - Workflow or System Configuration Required	
AC176	Supervisory Overrides	Any amendments requiring supervisory review or override are sent to the Supervisor Queue for review prior to completing the amendment processing.	E - Exact Match	
AC177	Message to Supervisor	A message is sent from the system to the supervisor if the record is in the Supervisor Queue in excess of a State-defined period of time.	W - Workflow or System Configuration Required	messages as per the business Rule defined by the Supervisior
AC178	Link Amendment to Original Record	Amendment records are linked to the original record. The order of the amendment is important to subsequent processing of a record. Order is determined by the date that the amendment was accepted/completed.	E - Exact Match	
AC179	Lock Record	The system allows an authorized user to lock any given record from being amended.	E - Exact Match	
AC180	Unlock Record	The system allows an authorized user to unlock a locked record so that it may be amended.	E - Exact Match	
AC181	Automatically Remove "Do Not Issue" Indicator	The "Do Not Issue" indicator is automatically removed when the amendment is complete.	W - Workflow or System Configuration Required	Configure the same in GCOM VRMS via Business Rules while issuance
AC182	Internal Flag on Amended Record	Any change to a record sets the "amended" flag in the system.	E - Exact Match	
AC183	Update Statistical Flags	Flags are set in such a manner that Vital Statistics can identify amended data and re-extract the record.	W - Workflow or System Configuration Required	To define the a configuration to store the flags and its retrival
AC184	Old Record Includes Amendment Number	The system can identify which amendment request caused a system record to be amended and the data that was changed in the record based on that specific amendment request.	E - Exact Match	
AC185	New Record Viewable	When the amendment has been fully processed, the new record is available to all authorized users.	E - Exact Match	
AC186	Future Searches	Unless a user has the proper authorities, all future searches return the corrected record.	E - Exact Match	
AC187	Amendment Review Business Function	The system may provide a business function that controls who can review and approve amendments.	E - Exact Match	
AC188	Mark Amendment "Approved" or "Rejected"	The system allows the State to mark the amendment as "approved" or "rejected."	E - Exact Match	
AC189	Void After Amendment	The system allows an authorized user to void an amended record.	E - Exact Match	
Additional Rules for Administrative Corrections				
AC190	State Office Makes Correction	The system allows the State to make corrections from the applications received from a county.	E - Exact Match	
AC191	Clerk Can Change Data	An authorized user can change field values to correct obvious errors.	E - Exact Match	
AC192	Enter Documentation of Corrections	The system provides a mechanism for an authorized user to document the authorization for correcting administrative (obvious) errors.	E - Exact Match	
AC193	No Limit on Obvious Errors	The system allows an authorized user to correct typos and obvious errors as many times as necessary without a court order.	E - Exact Match	
Additional Rules for Death and Fetal Death Amendments				
AC194	Notify Funeral Establishment of Processed Correction	A funeral establishment is notified when a requested correction to demographic information on a record they own is amended.	W - Workflow or System Configuration Required	GCOM VRMS to configure to notify rthe FH
AC195	Search on Name or Date	Death and pending COD records can be searched for by name or event date.	W - Workflow or System Configuration Required	GCOM VRMS to configure search for Pending COD
AC196	Amendment from Same Certifier	An amendment to a death record for medical information must come from the medical certifier or medical examiner that submitted the original medical information.	E - Exact Match	

AC197	Medical Director Views All	Medical directors may view all records within their facility.	E - Exact Match	
AC198	Medical Director Amends Medical Information	Medical directors may amend a record if the doctor is unavailable.	E - Exact Match	
AC199	Medical Examiner Amends Medical Information	Medical examiners may view a record and amend the medical information of any record they originally certified.	E - Exact Match	
AC200	Access from Pending Queue	Cases with pending COD can be accessed from a Pending Queue.	E - Exact Match	
AC201	Medical Examiner "Pending" COD	Medical examiners may view their records with pending COD from a queue or a filter and select the record from the queue that is the subject of the amendment.	E - Exact Match	
AC202	Medical Examiner Overrides Physician	Medical examiners can override the diagnosis of a physician.	F - Future	Release Spring 2020
AC203	Medical Examiner Selects Action	When a medical examiner creates an amendment, s/he selects "Override a Cause of Death" to override previous certification.	F - Future	Release Spring 2020
AC204	Delete ICD-10 Codes	The COD ICD-10 codes are deleted if a death record's medical items are amended.	F - Future	Release Spring 2020
AC205	Death Fields	Any data field may be amended on death record except the registration date.	E - Exact Match	
AC206	Fetal Death Fields	Any data field may be amended on the fetal death record except the registration date.	E - Exact Match	
AC207	Update Specific Death Fields	For legacy records, SFN and file date may be updated by an authorized user.	E - Exact Match	
AC208	Changes to Medical Information Resets Flag	Changes to death record medical data reported to NCHS set the flags in such a manner as to re-submit the record for NCHS coding of cause of death (SuperMICAR).	E - Exact Match	
AC209	SuperMICAR Edits on Death Amendment	Changes made to the medical section of the death record cause the record to be edited against the Views II edits including the dictionary for spelling and terminology.	E - Exact Match	
AC210	Reset Flags	In an amended COD (cause of death), reset flags to include in next SuperMICAR file.	E - Exact Match	
AC211	Pending Amendments Queue	The system provides work queues for medical examiners for pending amendments to any medical information (excluding pending COD) that have not yet been submitted to the State.	E - Exact Match	
AC212	Allow Amendment at Facility for Pending COD	The system provides the ability for a user at a facility to create an electronic amendment changing the COD from pending to actual causes, certify the medical information, and submit the amendment.	E - Exact Match	
AC213	Medical Information or COD Changes to Registered Record - System User	The system allows an authorized user to initiate changes to medical information or COD on a registered record.	E - Exact Match	
AC214	Flag Records	Once an amendment for medical information or COD is started in the system it is flagged with a "do not issue" flag until such time that the amendment is complete.	E - Exact Match	
AC215	Remove from Pending COD Queue	Once an amendment for COD is submitted to the State, the record is removed from the Pending COD queue.	E - Exact Match	
AC216	Reviewed by State	Amendments to medical information or COD may be reviewed by the State for approval.	E - Exact Match	
Additional Rules for Birth Amendments				
AC217	Birth Data Amendments	For a birth, any field can be amended with the exception of the record registration date.	W - Workflow or System Configuration Required	
AC218	Update Legacy Birth Fields	For all legacy birth records, SFN and file date may be updated by an authorized user.	E - Exact Match	
AC219	Documentation Needed for Amendment	The system provides the user with a State defined list of documentation options needed for a birth record change request.	E - Exact Match	
AC220	Reason for Change	The system provides the user with a State defined list of reasons for a change request to a birth record.	E - Exact Match	
AC221	Witness Protection Bypass Edits	The system allows a "witness protection" profile which allows a user to enter a record bypassing all edits (e.g. registration date). The entry of these records are role based.	E - Exact Match	
AC222	Seal Witness Protection Record	The system seals the original record for a record marked with a "witness protection" profile.	E - Exact Match	
AC223	Witness Protection Flag	The system will flag any record with a witness protection on it.	E - Exact Match	
AC224	Unseal Witness Protection Record	The system allows authorized personnel to unseal a record marked as "witness protection."	E - Exact Match	

AC225	No SSN Enumeration Request on Amendment	The system does not run the SSA enumeration request for a birth record that is created as a result of an amendment.	W - Workflow or System Configuration Required	
AC226	Child Deceased Indicator	If an amendment is processed on a birth record on which there is a "deceased" indicator, the amendment is processed without resetting the "deceased" flag.	E - Exact Match	
AC227	No Changes After Paternity Without Court Order	The system does not allow a change to the father's information or the child's surname after a paternity has been filed on a record without a court order.	E - Exact Match	
AC228	Electronic Court Orders	The system allows courts to submit court orders to the State electronically	F - Future	Release Spring 2020
AC229	Authorized Users Make Change	In the case of a legitimation, an authorized user may change a child's surname even after a paternity has been completed on a record.	W - Workflow or System Configuration Required	GCOM VRMS to
AC230	Parental Rights Terminated Flag	The system allows a user to indicate and flag a record where the mother's and/or father's parental rights have been terminated.	F - Future	Release Spring 2020
AC231	Import from Law Enforcement	The system allows law enforcement to provide a report of parental abuse to the State for import into the EVRS.	F - Future	Release Spring 2020
AC232	Cross Reference Parent on Birth Certificate and Parental Abuse Report	The system will cross reference any parent listed on a birth certificate with the parental abuse report and flag that record for review by the State.	F - Future	Release Spring 2020
AC233	Parental History of Abuse Flag	The system allows a user to indicate and flag a record where the mother and/or father had parental rights terminated or a history of child abuse or fatality.	F - Future	Release Spring 2020
Additional Rules for Legitimations, Surrogacy and Adoptions Amendments				
AC234	Single Petitioner	When a final order of adoption is granted to only one petitioner, the second parent information may remain blank.	W - Workflow or System Configuration Required	GCOM VRMS to configure business rules for single Petitioner
AC235	Same-Sex Adoption	The system allows same-sex parents on an adoption record and provides ability to include both names on birth certificate (for example, Father/Father, Mother/Mother).	W - Workflow or System Configuration Required	GCOM VRMS to configure business rules for Same Sex Adoption
AC236	Move to Supervisor	The system allows a State user to transfer the adoption amendment to a supervisor.	W - Workflow or System Configuration Required	GCOM VRMS to configure rules for transfer of adoption
AC237	Retain Original Mother's Statistical Information	In the case of surrogacy or other adoptions, the statistical information of the original mother is retained and available to Vital Statistics.	F - Future	Release Spring 2020
Additional Rules for Paternity				
AC238	Paternity Rules Apply	Please see Paternity business rules for additional rules related to paternity		
AC239	Rescission of Paternity	See Paternity rules for all rules related to rescission of paternity.		
AC240	Paternity Data Entry Screen	The system provides a screen for data entry unique to paternity.	W - Workflow or System Configuration Required	
AC241	Assign Paternity Amendment Code	The system assigns an amendment code to a paternity that is State defined. The code will reference the location where the paternity acknowledgement was obtained (for example hospital, state office, county office).	W - Workflow or System Configuration Required	
AC242	Scan Worksheets	Paternity worksheets must be scanned and attached to the record.	W - Workflow or System Configuration Required	
Additional Rules for Sealed Records				

For amendment types that require the original record to be sealed, the system creates a new record with the same State File Number and ties it to the original record. For most users, only the new record is visible. Authorized users can view sealed records. Appropriate footnotes are created, if applicable.

AC243	Print Plain Paper Copy	The system provides an authorized user the ability to print a plain paper copy.	E - Exact Match	
AC244	Retain SFN	When sealing records in the system, both the original record and the new record have the same State File Number.	E - Exact Match	
AC245	Subsequent Amendment with Images	If, subsequent to sealing a record with images a new amendment request is submitted which also has images, the new images are associated with the new amendment request and may be viewable without causing the sealed images to become viewable.	E - Exact Match	
AC246	Viewing of Sealed Records	Only authorized users can view the original sealed record.	E - Exact Match	
AC247	Sealed Message on Search	General users, when searching for a name related to a sealed record, receive a message that the record is sealed. No additional information is displayed.	W - Workflow or System Configuration Required	
AC248	Seal Original Image	If the record being sealed has images associated with it, the system seals the images as well.	E - Exact Match	
AC249	Track Viewing	The system provides a tracking for sealed records that have been viewed including who, when, and how many times the record was viewed.	E - Exact Match	
AC250	Link Records	For birth records, the system links old and new records by sequential or system number if the SFN and year of birth change.	E - Exact Match	

AC251	No Access to Supporting Documents	Supporting documents are only visible in the system to authorized users.	E - Exact Match	
AC252	Seal for Legitimation by Subsequent Marriage	The system provides the ability for the user to seal a record if it is a legitimation by subsequent marriage.	E - Exact Match	
AC253	Seal for Adoption	The system provides the ability for the user to seal a record if it is an adoption.	E - Exact Match	
AC254	Seal for Paternity	The system provides the ability for the user to seal a record if it is a court-ordered paternity.	E - Exact Match	
AC255	Seal for Foreign Birth	The system provides the ability for the user to seal documents for a Report of Foreign Birth.	E - Exact Match	
AC256	Open Sealed File Request	The system allows a user to enter a request to open a sealed file.	W - Workflow or System Configuration Required	
AC257	Override to Print	An authorized user may print an opened sealed record.	E - Exact Match	
Additional Rules for Reinstatements				
AC258	Can Reverse Amendment	If a request for reinstatement is processed, the amendment is reversed in the system so the record reflects the values that existed prior to the amendment.	E - Exact Match	
AC259	Trade Sealed and Unsealed Record	If the original record was sealed, the original record becomes the current record and the second (newer) record is sealed.	E - Exact Match	
AC260	Keep Images Sealed	When a reinstatement is processed, any images associated with the original record and the new record in the system remain sealed.	E - Exact Match	
AC261	Authorized Users May Unseal	For a reinstatement, an authorized user may unseal images associated with the record in the system.	E - Exact Match	
AC262	Unseal Legacy Certificate	When a reinstatement is processed on a legacy record, the images of the certificate from the original record in the system is also unsealed; however, the supporting documentation remains sealed.	E - Exact Match	
Additional Rules for Footnotes				
AC263	Medical Footnote Queue	The system provides a queue for records with a medical footnote.	E - Exact Match	
AC264	Review Medical Footnotes	The system requires that a user review the footnotes prior to printing footnotes on a certificate.	W - Workflow or System Configuration Required	
AC265	Medical Footnotes	The system prints footnotes for medical amendments in a State defined format. The format is an abbreviated version of the changes made such as "Cause of Death Amended" rather than listing out each individual change that was made. Medical footnotes also include the date amended.	E - Exact Match	
AC266	Trigger Multiple Footnotes	Each time a record is amended, the user may choose the option to apply a footnote.	E - Exact Match	
AC267	Footnote Format	The format of the footnote is consistent across all event types and is defined by the State.	E - Exact Match	
AC268	Footnote Contents	The system prints a footnote that includes the amended item and the date amended. Any other information should not print on the certificate.	E - Exact Match	
AC269	Stored Content	The system stores the item, date changed, old value and new value, system user who made the change, and any added notes for amendments made but does not print them in the footnotes.	E - Exact Match	
AC270	Ability to Modify Footnote	An authorized user has options to modify footnotes to make them fit within the designated space, including rewording or changing the size.	E - Exact Match	
AC271	Footnote Override	The footnote trigger may be overridden and refused by an authorized user.	E - Exact Match	
AC272	Print COD Amendments	The system allows authorized users to choose from a State defined list what is printed when medical information, including COD, is amended.	E - Exact Match	
AC273	Edit Footnote	The system allows authorized users to edit the footnote for medical information, including COD.	E - Exact Match	
AC274	Audit Trail	The system maintains an electronic audit trail, separate from amendment history, of each change and the person making the change.	E - Exact Match	
AC275	Footnotes Printed on Certified Copies	All footnotes not specifically overridden and created at the time of the amendment are printed on certified copies.	E - Exact Match	
AC276	No Footnote in Adoption	Footnotes are not printed on certified copies for adoption.	E - Exact Match	

AC277	No Footnote on Paternity Actions	Footnotes are not printed on certified copies for any paternity actions.	E - Exact Match	
AC278	Footnote Option	The system allows the footnote option to be turned off.	E - Exact Match	
Additional Rules for Rejection and Correction Cycle for Amendments (Box 5)				
AC279	Input Information About Missing Documentation	If there is not sufficient documentation to process the amendment, the user may select from a display list the documents that are needed to process the request. .	F - Future	Release Spring 2020
AC280	Missing Documentation Letter	The system generates a rejection letter that states the documents needed to process the request.	E - Exact Match	
AC281	Code Reason for Rejection	Amendment requests in "reject" status can be coded with a reason for rejection from a pre-defined list, which includes the option for "Other Reasons".	E - Exact Match	
AC282	Allow Notes About Rejection	The user can enter notes to be included in the standard rejection letter to clarify the reason for rejection and the steps necessary to have the amendment approved. The notes options are cumulative.	E - Exact Match	
AC283	"Other" Rejection Reason	If "Other Reasons" is selected for the "reject" status, the system requires the user to enter a description.	E - Exact Match	
AC284	Allow Selection of Multiple Rejection Reasons	The user may select as many reasons as necessary for rejection of the proof supporting the amendment. Reasons may include legal impediment or missing documentation.	E - Exact Match	
AC285	Comments on Rejection	Comments can be entered to provide information about amendment requests in "reject" status.	E - Exact Match	
AC286	Court Order Required Letter	The system provides the ability to generate a letter directly to the requestor indicating no further modifications will be made to the delayed record without a court order.	W - Workflow or System Configuration Required	Define Business Rules
AC287	Paternity Court Order Required Letter	The system provides the ability to generate a letter to the requestor indicating no further modifications will be made to the paternity record without a court order.	W - Workflow or System Configuration Required	
AC288	Second Request Letter	The system allows a user to produce the same letter multiple times for records in the Rejection Queue.	W - Workflow or System Configuration Required	
AC289	Include Amendment Request Tracking Number on System Generated Documentation	The amendment request tracking number prints in a numeric format on all documentation printed by the system.	W - Workflow or System Configuration Required	
AC290	Flag Request for Investigation	If the user believes that more information is required to process the amendment, the user flags the request (for example selecting a check box).	E - Exact Match	
AC291	Potential Fraudulent Request	If the user believes the request is fraudulent, they are able to flag the record as such (for example, selecting a check box).	W - Workflow or System Configuration Required	
AC292	Move Records Flagged for Investigation to Pending Queue	Records that are flagged for investigation move to the Pending Queue.	E - Exact Match	
AC293	Make Different	The system marks a record flagged for investigation in the Pending Queue in such a way that it stands out from other records in the Pending Queue.	E - Exact Match	
AC294	Sort Pending Queue for Flagged Records	The system allows a user to sort the Pending Queue to include only records flagged for investigation.	E - Exact Match	
AC295	Court-Ordered Amendment Query	For a court-ordered amendment, if additional information is needed, a query letter is generated to the requestor who is the relation to the party (not the court) with the address information auto-populated.	W - Workflow or System Configuration Required	Define Business Rules in GCOM VRMS to handle Court Order Amendment Letter generation
AC296	Maintain Do Not Issue Flag	Records that are in the Pending Queue awaiting further information will maintain the "do not issue" flag.	W - Workflow or System Configuration Required	Define Business Rules in GCOM VRMS to flag the queue with "DO not Issue" Flag
AC297	State Defined Tickler File	queued in a tickler file for the supervisor/manager to review and determine what action to take.	E - Exact Match	
AC298	Close Abandoned Amendment Requests	If the State determines that an amendment request will not be completed, the request can be closed by the user.	E - Exact Match	
AC299	Archive Closed Requests	The system allows a request that was closed to be archived.	W - Workflow or System Configuration Required	Define Business Rules and Roles to be configured to arvhive request and its retrieval
AC300	Archive After State Defined Period	The system archives a request after a State defined period of time.	W - Workflow or System Configuration Required	Define Business Rules and Roles to be configured to arvhive request and its retrieval
AC301	Can be Retrieved	The system allows a user to retrieve archived requests.	W - Workflow or System Configuration Required	Define Business Rules and Roles to be configured to arvhive request and its retrieval
AC302	Removal of Amendment Flag	If an amendment request is closed by a user for any reason, the amendment flag is removed from the associated record.	F - Future	Release Spring 2020
AC303	Forward to Supervisor	If a supervisor override is required, the request can be forwarded to the Supervisor Approval Required Queue.	E - Exact Match	
AC304	Rejecting Request from System User	The rejection information is sent to a system user through the messaging system.	E - Exact Match	

AC305	Reject queue for requestor	The rejected request from the system user is stored in a reject queue for the requestor.	W - Workflow or System Configuration Required	Define Queue Logic for Rejection Queues in GCOM VRMS
AC306	Return Request	The system allows a user to reject an amendment request back to a requestor for correction/additional information.	E - Exact Match	
AC307	Modify Amendment Request	The system allows a requestor to modify an amendment request that has been rejected back from the State.	E - Exact Match	

Description: The system updates record and seals original record (image) if necessary (Box 12); Print vault copy (Box 13); Record Queued for Issuance at County or State (Box 14)
The system will updated the record and if necessary seal the original record. The record is automatically send to the issuance queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC308	Issuance	Please see the rules on the Issuance Requirements regarding printing of certificates.		
AC309	Sealing a Record	Please see the rules related to sealing record in the system.		
AC310	Issuance of Amended Records	Once the amendment or correction is complete, the system automatically sends the record to an Issuance Queue	E - Exact Match	
AC311	Print Corrected Certificate	The system allows a corrected certificate to be printed at the State office or at the county where the application was originally received.	E - Exact Match	
AC312	Print Vault Copy of Amended Records	The system will print a vault copy of corrected or amended records on white paper and include an indication that it is "not a legal copy".	E - Exact Match	
AC313	Short Form Exception	The system will not print the short form unless actions are taken by an authorized State user. The fields to be printed on short form are State defined.	W - Workflow or System Configuration Required	GCOM VRMS to define Users Roles for specific rules while printing
AC314	Removal Slips	The system allows a user to print a State defined removal slip containing, at minimum, the sequential or system number, the State File Number, the County File Number and date removed.	E - Exact Match	
AC315	Update Pending Request Queue	When an amendment is marked as complete, the system automatically updates the Pending Issuance Queue to indicate that the record may now be issued.	E - Exact Match	
AC316	Print "Amended" on Certificate	The system can print "Amended" on a certificate when any changes are made to a record with the exception of adoptions, administrative corrections, and birth records in short form, and paternity actions.	E - Exact Match	
AC317	Override Printing "Amended"	A designated State user may override the system 's ability to print "Amended" on a certificate.	W - Workflow or System Configuration Required	GCOM VRMS to define Users Roles for specific rules while printing
AC318	Link Certificate to Request	All certificates printed as a result of a request are linked to the request. This includes number of copies and document control numbers (DCN).	E - Exact Match	
AC319	Link Amendment Tracking Number to Certificate Record	To directly associate the request with the certificate, the amendment request tracking number is placed in the electronic record.	E - Exact Match	
AC320	New Information in Body	The amended information appears in the body of the certified copy.	E - Exact Match	

Description: If not an EVRS record, access stored images and index data (Box 7); Add or update record in EVRS (Box 8)
For legacy records that are not already in the system or contain partial data, the system will allow the user to access the image and either create or complete the electronic record. Once the record is complete and saved, the user may amend the record as described in box 9.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC321	Sequential State File Number	For legacy records which have no electronic record, the system searches for the last SFN assigned within the birth year and assigns to the record the number next in sequence.		
AC322	Update Legacy Record	The system allows the user to update or "back fill" missing data for a legacy record in order to create a complete electronic record. Missing fields may include amendment information, dates and footnotes.	W - Workflow or System Configuration Required	
AC323	Create New Record	For legacy records which have no electronic record, the system allows the user to create a new electronic record.	E - Exact Match	
AC324	Side-by-Side View	The system allows the user to see the stored image at the same time as data entry screen.	E - Exact Match	
AC325	Relaxed Edits	For all newly updated or created legacy records, a State defined minimum data set fires edits that are distinct from the edits of a normal record.	W - Workflow or System Configuration Required	
AC326	Access to Sealed Legacy Records	The access to sealed legacy records is available only to authorized users.	E - Exact Match	

Description: Enter changes, run edits and scan supporting documents (Box 9); OK? (Box 10); if not ok, review errors (Box 11) If ok, go to step 12

The State user will enter the changes to the record. The system will then run edit checks, and the supporting documentation is attached to the original record. If there are no errors to review, the system will update the record and seal the record if necessary.

Please note rules related to amending a record are listed above and not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
AC327	Queues Rules	Please see the General Requirements section N - Queues for rules of queues.		
AC328	Edit Checks	Please see the General Requirements, section L - Data Editing, for edit check rules		
AC329	Scanning	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
AC330	Void Record	Please see the General Requirements, section I - Voids and Abandonment of Records, for rules on voiding a record		
AC331	Amend Legacy Records	Once all information is entered into the system, the system allows user to amend the record.	E - Exact Match	

Additional Rules for foreign-born adoptions

A system user may begin a Certificate of Foreign Birth once a certificate of adoption, report of annulment of adoption, or amendment of an order of adoption for a person born in a foreign country is received from the court.

The user enters the information, scans, and attaches all supporting documentation. Foreign-born adoptions are sealed by the system once complete. Only the state issues a foreign record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	Comments
AC332	Certificate of Adoption for Foreign Birth	The system provides data entry screens unique to the Certificate of Adoption for foreign birth.		
AC333	Screen Matches Certificate of Adoption for Foreign Birth	The foreign-born adoptions screen matches the layout of the Certificate of Adoption for foreign birth and is State defined		
AC334	Original Birth Screen	The system provides a data entry screen for "original" birth information	W - Workflow or System Configuration Required	
AC335	ROA Birth Screen	The system provides data entry screen for updated birth information listed on the ROA.	W - Workflow or System Configuration Required	
AC336	Side-by-side View	The system allows the user to view both the original birth screen and the ROA screen at the same time.	W - Workflow or System Configuration Required	
AC337	Allow Unknown	The system allows "unknown" to be entered in the ROA birth screen to accommodate limited information.	W - Workflow or System Configuration Required	
AC338	Bypass Option	The system allows the user to select a bypass option that will auto-populate "unknown" into all fields of the ROA birth screen.	W - Workflow or System Configuration Required	
AC339	Relaxed Edits	The system allows the for relaxed edits in the foreign-born adoptions screen because of limited information.	W - Workflow or System Configuration Required	
AC340	Foreign Birth at State Only	The system only allows the State to access the foreign-born adoptions screens.	W - Workflow or System Configuration Required	
AC341	Country of Foreign Birth	The system allows the country of birth to be other than "US" for reports of foreign birth.	W - Workflow or System Configuration Required	
AC342	Create New Record	Foreign-born adoptions create an "original" birth record.	W - Workflow or System Configuration Required	
AC343	Scan Supporting Documentation	The system allows the user to scan and attach State defined supporting documentation to a foreign-born adoptions record.	W - Workflow or System Configuration Required	
AC344	No SSN Enumeration Request	The system does not run the SSA enumeration request for a foreign-born record.	W - Workflow or System Configuration Required	
AC345	Scan Forms	Form must be scanned and attached to the record.	W - Workflow or System Configuration Required	
AC346	Seal File	"Original" file must be sealed.	W - Workflow or System Configuration Required	
AC347	Send notice to the US Immigration and Naturalization Services.	The system auto-generates a letter to the US Immigration and Naturalization Services for all adoptees born out of the country,	W - Workflow or System Configuration Required	

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: SECURED INVENTORY ORDER, DISTRIBUTION & RECONCILIATION

Security paper and other supplies (e.g. forms) are issued to specific printers within the State office and at each of the counties. To request resupply of items, the user logs into the system, selects the inventory menu option, and accesses the Inventory Request Form. The requestor completes the Inventory Request Form and electronically submits the request to the inventory control person(s) at the State.

The State logs into the system and selects the Inventory Request queue. The request is reviewed for reasonableness. If there are questions about the request, the inventory control person(s) will contact the requestor. If there are not any questions, the inventory control person(s) fills the order and allocates the inventory. Contact may happen through the system via messaging.

The requested inventory is shipped to the requestor. The requestor logs into the system and updates the order as received. The requestor assigns inventory to individual printers.

Inventory counts of security paper are updated automatically as supplies are used by the individual printers. Security paper inventory reports are printed on a periodic basis and inventory is reconciled by the State. Any discrepancies identified by a county are reported to the State and any necessary adjustments are entered into the system.

Description: User logs into EVRS (Box 1); Select inventory menu (Box 2); Access Inventory Request Form (Box 3); Complete Inventory Request Form (Box 4); Submit request to inventory control person(s) (Box 5)

To request resupply of items, the user logs into the system, selects the inventory menu option and accesses the Inventory Request Form. The requestor completes the Inventory Request Form and electronically submits the request to the State Inventory Manager. A message is sent to the State Inventory Manager notifying them that an inventory request has been submitted.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
INV1	**Authorization for Ordering**	The person at the county who orders the paper must be authorized to do so. This authorization is included in their user profile.	***W - Workflow or System Configuration Required***	
INV2	**Facility Authorization for Ordering**	The person at a facility who orders forms and/or worksheets must be authorized to do so. This authorization is included in their user profile.	***W - Workflow or System Configuration Required***	

INV3	Temporary Authorization	Authorization can be temporarily delegated to a different user for a State defined temporary amount of time.	*W - Workflow or System Configuration Required*	
INV4	Auto-Populate Facility Information	The form auto-populates with facility information.	*F - Future*	Release Spring 2020.
INV5	List of Items	The system presents a State defined list of items available for order.	*E - Exact Match*	
INV6	Calculate Totals	The system calculates total quantity and amount due per item requested and displays the total to the user for confirmation.	*F - Future*	Amount is not calculated at this time, will be part of the future release. Release Spring 2020.
INV7	Transfer Between Counties	A user can request inventory to be transferred from one office to another.	*E - Exact Match*	
INV8	Central Store Items	Central Store items (e.g. forms) may be ordered and tracked through the inventory function.	*E - Exact Match*	
INV9	Location Code and Other Location Identifying Information	The order is associated with a location and other State defined information.	*E - Exact Match*	
INV10	Location Coordinated with Issuance Module	The location code used for inventory is tied to the location coding used in the Issuance Module to record usage.	*E - Exact Match*	
INV11	Location Codes with State Office	Specific location codes may be assigned to specific users or groups of users within the State office.	*E - Exact Match*	
INV12	Reasonable Quantity	The quantity **requested** will be edited against a high and low range value to test for reasonableness as defined by the State.	*E - Exact Match*	
INV13	Expedite	The requesting user can indicate that the order needs to be expedited.	*F - Future*	Release Spring 2020
INV14	Notes	The requesting user can add a note to the order.	*W - Workflow or System Configuration Required*	
INV15	Submit Button	The user checks the requests and, when it is complete, takes the option to submit the request to the State.	*E - Exact Match*	
INV16	Inventory Request Queue	The submitted request goes to an Inventory Request Queue at the State.	*E - Exact Match*	
INV17	Send Message	A message is sent to the State Inventory Manager that a request is waiting for review.	*F - Future*	Release Spring 2020.
INV18	Low Inventory Alert	A message is sent to the State Inventory Manager when the security paper falls below a State defined threshold.	*F - Future*	Release Spring 2020.

Description: Authorized user logs into EVRS (Box 6); Select Inventory Request Queue (Box 7); Review inventory usage (Box 8); OK? (Box 9); If no, Contact requestor (Box 10); Resolve or modify request (Box 11)

The State logs into the system and selects the Inventory Request queue. The request is reviewed for reasonableness. If not reasonable, the authorized user will contact the requestor to resolve to modify the request. If a payment is required for the requested supplies, the account is charged.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
INV19	Inventory Requests Queue	The State user can select the request from the Inventory Request Queue.	*E - Exact Match*	
INV20	Filter Queue	The State user can filter the Inventory Request Queue based on type of form requested (for example: certification paper, mother's worksheet, etc.)	*E - Exact Match*	
INV21	Search for Request	The State user can search for a request by date or the facility requesting.	*E - Exact Match*	
INV22	Decline Order	The system provides the ability for a designated State user to decline an order.	*F - Future*	
INV23	Edit Request	The system allows a State user to edit a request and make changes such as reducing the number of forms requested.	*E - Exact Match*	
INV24	Enter Reason	If an order is declined, the State user selects a reason from a list.	*F - Future*	
INV25	Notes	The State can add notes to a request.	*W - Workflow or System Configuration Required*	It allows to upload any documents such as invoice, purchase orders.
INV26	Send Decline Message to Requestor	If an order is declined, the requestor is notified of the declination and the reason.	*W - Workflow or System Configuration Required*	

INV27	Charge Account	The system provides the ability for a designated user to charge accounts for ordered supplies.	*F - Future*	Amount is not calculated at this time, will be part of the future release. Release Spring 2020.
INV28	Inventory Usage Reports	The State can print inventory usage reports by type and location from the system to support their analysis of inventory requirements.	*E - Exact Match*	

Description: Fill order and allocate inventory (Box 12); Ship or distribute (Box 13)

For small quantities of security paper, the State may fill the request from their internal stock. In this case, a packing slip is printed from the system. The supplies and packing slip are shipped to the requestor. If the supplies are not fulfilled from the State's supply, an order is generated in the system to the vendor. The order is emailed to the vendor for fulfillment. The vendor produces a packing slip. The vendor ships the supplies and packing slip to the requestor.

Forms and worksheets ordered by a facility are fulfilled by the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
INV29	Paper Distributed by State	Security paper can be stored and distributed by the State for small orders.	*E - Exact Match*	
INV30	Supply from State Stock	The authorized State user can indicate that the request was filled from the State supply.	*E - Exact Match*	
INV31	Indicate Range	The system prompts for the range of numbers to be checked out to the requestor.	*E - Exact Match*	
INV32	Individual or Range	A range can be only one number or a range of numbers.	*E - Exact Match*	
INV33	Sequential Numbers	Inventory number ranges are sequential.	*E - Exact Match*	
INV34	Assign Number Range	The system assigns the quantity specified and the number range from The Office of Vital Records to the specific requestor.	*E - Exact Match*	
INV35	Forms/Worksheets Distributed by State	Forms and/or worksheets for facilities can be stored and distributed by the State.	*E - Exact Match*	
INV36	Track Forms/Worksheets Sent to Facilities	The system tracks the number of forms and/or worksheets sent to a facility.	*E - Exact Match*	
INV37	No Control Numbers	Forms and/or worksheets for facilities do not have control numbers.	*E - Exact Match*	
INV38	Inventory of Printed Forms/Worksheets	The system tracks the inventory of printed forms and/or worksheets for facilities available at the State.	*E - Exact Match*	
INV39	Alert	The system alerts the State user when the printed inventory of forms and/or worksheets at the State is below a State defined amount.	*W - Workflow or System Configuration Required*	
INV40	Low Paper Alert	The system alerts the State user when the printed inventory of forms and/or worksheets at the State is below a state defined amount.	*W - Workflow or System Configuration Required*	
INV41	State Packing Slip	For orders shipped from the State, the system prints a packing slip for each shipment specifying State defined items such as item(s), quantity, and number range(s) included in the shipment.	*E - Exact Match*	
INV42	Paper Distributed by Vendor	Security paper can be stored and distributed by the paper vendor.	*E - Exact Match*	
INV43	Order Information	Orders generated for security paper contain the item, quantity ordered, shipping information, and any expedite messages or notes from the requestor that are appropriate for the vendor.	*E - Exact Match*	
INV44	Vendor Fulfilled Order Information	The system provides fields for the vendor to enter the shipped order information. This information is State defined and includes items such as quantity shipped; range of security numbers shipped, and date shipped.	*W - Workflow or System Configuration Required*	
INV45	Assign Order Number	Orders are assigned a unique sequential order number.	*W - Workflow or System Configuration Required*	
INV46	Email Order	The system provides the ability to email generated orders to the vendor from within the system.	*F - Future*	Release Spring 2020.
INV47	Open Orders	The system provides the ability for the State to track and view orders that the vendor is in the process of filling for shipment to the State.	*E - Exact Match*	

Description: Requestor receives request (Box 14); Update receipt in EVRS (Box 15); Requestor assigns inventory to specific printers (Box 16); Inventory updates as used by individual user (Issuance) (Box 17)

The requestor receives the shipment and verifies the order against the packing slip. After logging into the system, the requestor updates the order status and notes any discrepancies. The requestor enters what they have received into the system and confirms the accuracy of the information entered and submits it to the State.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
INV48	Retrieve Original Receipt from System	The requestor retrieves the original receipt in the system to check in the inventory.	E - Exact Match	
INV49	Type Inventory Numbers	Numbered inventory can be checked in by entering a beginning and ending inventory number.	E - Exact Match	
INV50	Recognize Range of Numbers	The system recognizes that the range includes all the numbers in between and determines the quantity accordingly.	E - Exact Match	
INV51	Multiple Ranges	The system allows users to designate receipt of multiple ranges of security paper numbers to account for breaks in numbering.	E - Exact Match	
INV52	Enter Quantities	The requestor enters the total quantity received.	W - Workflow or System Configuration Required	
INV53	Edit Quantity Received	The system edits the total quantity calculated from the range of numbers entered to the quantity entered by the user to make sure they are the same.	E - Exact Match	
INV54	Confirm Quantity Received	The system requires the requestor to confirm the number received to attest to the accuracy of the information entered.	E - Exact Match	
INV55	Shipment Not Received Alert	The system alerts the State if county does not mark shipment as received within a State defined period of time.	F - Future	Release Spring 2020.
INV56	Change Range of Numbers or Quantity	Authorized users can change either the range of numbers or the quantity and rerun the edit to determine if the two agree.	E - Exact Match	
INV57	Compare Receipt to Order Quantity	The quantity received is compared to the quantity ordered and a message is displayed if they do not match.	E - Exact Match	
INV58	Record Discrepancy	If the user determines that the discrepancy is real, the order is updated to reflect the difference.	F - Future	Release Spring 2020.
INV59	Notify State of Discrepancies	The system alerts the State Inventory Manager of any discrepancies.	F - Future	Release Spring 2020.
INV60	Validate Numbers	The system checks to make sure numbers being received have not already been assigned or used by this facility or any other facility by checking both the inventory in stock and used inventory.	E - Exact Match	
INV61	State Resolves Security Control Number Issues	The system sends a message to the State if the system detects problems with the security paper number that cannot be fixed at the county.	F - Future	Release Spring 2020.
INV62	Update On-Hand Quantity	The inventory-on-hand figure is updated immediately upon the successful receipt of new inventory.	E - Exact Match	
INV63	Assign to Individual Users	The system allows an authorized user to assign inventory to individual orders	E - Exact Match	
INV64	Security Numbers Available for Issuance	Once the check-in process is complete, the security numbers are available for use for Issuance.	E - Exact Match	
INV65	Sign In Security Paper to Printer	Authorized users will sign into the system at the beginning of each day and assign paper to each printer by entering the starting control number for each printer.	E - Exact Match	
INV66	Sign Out Security Paper to Printer	Authorized users will sign into the system at the end of each day and enter that security paper was removed from each printer by entering the ending control number for each printer.	E - Exact Match	
INV67	Sequential Numbers Out of Order	If the starting or ending control number is out of sequence, the system alerts the user.	W - Workflow or System Configuration Required	
INV68	Supervisory Override	The system prevents printing when the control number is out of sequence until an override is provided by an authorized user.	W - Workflow or System Configuration Required	

Description: Print inventory report on periodic basis (Box 18); Reconcile inventory (Box 19); Communicate discrepancies (Box 20); Enter Adjustments into EVRS (Box 21)

A notification of any discrepancies is automatically sent to Vital Records. Any discrepancies are documented by the requestor. Inventory counts of security paper are updated as supplies are used. Security paper inventory reports are printed on a periodic basis and inventory is reconciled by the State. Any discrepancies identified by the State are reported to the counties. Any necessary adjustments are entered into the system.

	Business Rule Name	Business Rule Description	Vendor Response	Comments

INV69	Reports	Please see Reports - Appendix C for rules on reports.		
INV70	Auto Notification of Discrepancy	The State is automatically notified of any discrepancies in inventory received.	F - Future	Release Spring 2020.
INV71	County Notification of Discrepancy	The county is automatically notified of any discrepancies in inventory.	F - Future	Release Spring 2020.
INV72	Adjust Inventory	An authorized State user can make changes to the security paper numbers assigned to locations or issuance history in order to resolve inventory issues.	E - Exact Match	
INV73	Reason Code for Adjustment	All adjustments to inventory require entry of a reason code.	F - Future	Release Spring 2020.
INV74	Reason Adjustment Comment	All adjustments to inventory include the ability to add a comment.	F - Future	Release Spring 2020.
INV75	Update Inventory Levels	The system automatically records usage by security paper number in the Issuance Module.	E - Exact Match	
INV76	Display Status of Security Paper	The system provides the ability for an authorized user to display the status of any controlled inventory number to determine whether it is in inventory or how it has been used.	E - Exact Match	
INV77	Void Controlled Inventory	The system provides the ability to void a range of security paper numbers or a single security paper number when the paper has been damaged, lost or stolen before it was used. (Voids of used inventory occurs in the Issuance Module so that document history can be updated.)	E - Exact Match	
INV78	Voids Require Reason	A reason must accompany every void.	E - Exact Match	
INV79	Voids Cannot be Issued	Voiding a control number in Inventory prevents it from being assigned during Issuance.	E - Exact Match	
INV80	Accept Returned Inventory	The system has the ability for an authorized State user to accept returned secured inventory items from one location and assign them to another.	E - Exact Match	
INV81	Display/Print Inventory Status	An authorized user can display/print a summary of the status of inventory showing usage and quantity that is on hand.	E - Exact Match	
INV82	Compare the System to Physical Inventory	If, after comparing the physical inventory at a location to the system inventory status report and discrepancies exist, an authorized State user can adjust the system to make the electronic record match the physical inventory.	E - Exact Match	
INV83	Analyze Inventory Usage	The system provides the ability for a designated user to analyze inventory usage across facilities and regional offices.	E - Exact Match	

BUSINESS PROCESS: ORDER NEW PAPER

A request is sent to the vendor for shipment of supplies.

The vendor prints a packing slip and ships it to the requestor with the items ordered. The requestor receives the shipment and verifies the order against the packing slip. After logging into the system, the requestor updates the inventory status and checks for any discrepancies. Any discrepancies are reconciled and the inventory status is updated.

Description: Vendor prints packing slip and ships item (Box1); State receives paper and verifies against packing slip (Box 2); Log into EVRS (Box 3); Update inventory status (Box 4)

The State Inventory Manager places an order for secured paper using the normal procurement processes. The system can produce statistics on usage by location to assist the state in deciding the correct quantity to order. Once the shipment has been received from the vendor and reconciled to the order, the user logs into the system and selects the option from the menu to update the inventory. S/he may select the type of inventory received and the display may prompt the user to enter the quantity and range of numbers for the item received. The inventory on hand in the system is increased and the individual numbers of the paper are logged as received.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
INV84	Same Rules	The rules for inventory apply to the State as well.		
INV85	Purchase Order	The system provides the ability to print a purchase order form.	E - Exact Match	
INV86	Purchase Order State Defined	The purchase order will be state defined.	W - Workflow or System Configuration Required	
INV87	Purchase Order Numbering	The purchase order form contains State defined numbering.	E - Exact Match	

INV88	Email Purchase Order	The system can email the purchase order form to the vendor.	*W - Workflow or System Configuration Required*	
INV89	Augment PO Numbering	The purchase order numbering is augmented automatically with each new requisition.	*W - Workflow or System Configuration Required*	
INV90	Print Purchase Order	The state can print the purchase order form from the system.	*E - Exact Match*	
INV91	Requisition Form	The system provides the ability to print a requisition form.	*W - Workflow or System Configuration Required*	
INV92	Requisition Form State Defined	The requisition form is State defined.	*W - Workflow or System Configuration Required*	
INV93	Requisition Form Numbering	The requisition form contains State defined numbering.	*W - Workflow or System Configuration Required*	
INV94	Requisition Form Numbering	The requisition numbering is maintained in the system.	*W - Workflow or System Configuration Required*	
INV95	Augment Requisition Numbering	The requisition numbering is augmented automatically with each new requisition.	*W - Workflow or System Configuration Required*	
INV96	Email Requisition Form	The system can email the requisition form to the vendor.	*W - Workflow or System Configuration Required*	
INV97	Print Requisition Form	The State can print the requisition form from the system.	*W - Workflow or System Configuration Required*	
INV98	Link Order	The system can link the order, purchase number, receipt of order, and scanned documents.	*E - Exact Match*	
INV99	Order from Vendor	The system provides the ability for an authorized State user to generate an order that can be sent to the security paper vendor.	*E - Exact Match*	
INV100	Location Code	Only a location designated as a main storeroom can be selected and is State defined.	*E - Exact Match*	
INV101	Range of Numbers	Numbered inventory may be checked in by entering a beginning and ending inventory number. The system may recognize that the range includes all the numbers in between and determine the quantity accordingly.	*E - Exact Match*	
INV102	Unique Document Control Number	The system checks to make sure numbers being received have not already been received by checking both the inventory in stock and used inventory.	*E - Exact Match*	

Description: Discrepancies? (Box 5); If yes, Reconcile (Box 6)

A notification of any discrepancies is automatically sent to the State Inventory Manager. Security paper inventory reports are printed on a periodic basis and reconciled to the physical inventory by location (main storeroom, issuing offices). Adjustments in the system are made as necessary to bring the system reports into alignment with the physical inventory.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
INV103	Auto-Notification of Discrepancy	The State is automatically notified of any discrepancies in inventory received.	*F - Future*	Release Spring 2020.
INV104	Adjust Inventory	An authorized State user can make changes to the security paper numbers assigned to locations or issuance history in order to resolve inventory issues.	*F - Future*	Release Spring 2020.
INV105	Reason Code for Adjustment	All adjustments to inventory require entry of a reason code and include the ability to add a comment.	*F - Future*	Release Spring 2020.
INV106	Display Status of Security Paper	The system provides the ability for an authorized user to display the status of any controlled inventory number to determine the status (used, void, available).	*F - Future*	Release Spring 2020.
INV107	Associated Receipt Number for Used Document Control Numbers	The system provides the ability for an authorized user to display the associated receipt number for numbers that have a status of "used" for any document control number .	*F - Future*	Release Spring 2020.
INV108	Display/Print Inventory Status	An authorized user can display/print a summary of the status of inventory showing usage and quantity that is on hand.	*F - Future*	Release Spring 2020.
INV109	Adjustment Comment	Adjustments made to reconcile the physical inventory require a comment.	*F - Future*	Release Spring 2020.
INV110	Analyze Inventory Usage	The system provides the ability for a designated user to analyze inventory usage across locations.	*F - Future*	Release Spring 2020.

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E – Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: ACCOUNTING

While there is no business process flow for performing accounting functions, there are capabilities that must be supported by the system to support the accounting functions at both the counties and the State.

The cash management functionality will be managed primarily through Issuance. The Finance Division will account for all cash and checks received for certified copies, and drawer balancing will occur through the Finance Division. The system handles the accounting functions for the State and county including receipting, drawer balancing, request tracking, etc. A file is extracted from EVRS with all financial information needed for the Finance Division. EVRS must encompass all accounting functionality. The system does provide the ability for users to enter the payment information so the data can be used for management reporting and request tracking. Additionally, reporting from the system allows the State to reconcile processed transactions with the payments received in the Finance Division. Billings to counties and other entities for certified copies, certain amendments, and security paper are supported by the system.

State and federal agencies who do business with the State on a regular basis may be billed on a periodic basis for services. The system keeps track of services provided. Periodically (generally monthly), the State prepares an invoice for services provided for each entity. The interdepartment transfers are processed through the Finance Division.

The system provides the ability for funeral home establishments to have accounts with the State. The State can decide whether or not to allow a funeral home establishment to have an account. If approved, the State is able to set up and manage the accounts for these funeral establishments. These accounts may be used to pay for certified copies.

BUSINESS PROCESS: DAILY ACCOUNTING

At the beginning of each day the State users will open their cash drawer and verify the cash available to them in their drawer. Throughout their day they will conduct daily business and collect money.

At the end of each day, the cash drawers are closed out and reconciled. The state user reviews the cash drawer summary report and compares it to the money in their drawer. If a discrepancy is found, the user will review the day's transactions, determine the differences and make the appropriate corrections. If no discrepancies are found, the user will print their final drawer balance report by event type and type of tender. The supervisor will then consolidate the drawers for deposit and verify the money. Once the money is verified, the individual drawers can be closed. The system will create an extract to be sent to the state finance along with a deposit slip.

The County may or may not choose to use this daily accounting functionality. The function will be made available to those counties wishing to receipt money through the EVRS. The same rules apply to the counties; fees and G/L accounts may be different.

Description: Supervisor assigns cash drawer and cash to employees in EVRS (Box 1); Open cash drawer and verify cash (Box 2)

The user logs on and verifies their drawer.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A1	**User Log In**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
A2	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
A3	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
A4	**Individual Drawers**	Each user has their own 'drawer' and the 'drawer' is based on the employee's user ID.	***E - Exact match***	
A5	**Starting Cash**	Each location may have a different standard amount that is used at the beginning of the day to open the virtual drawer. The system must accommodate this.	***W - Workflow or System Configuration Required***	
A6	**VitalChek Virtual Drawer**	Transactions received through VitalChek are posted to a single cash drawer designated for VitalChek and kept separate from other receipts.	***E - Exact match***	
A7	**State Portal Virtual Cash Drawer**	All transactions received through the State Portal are posted to a single cash drawer designated for State internet transactions and kept separate from other receipts.	***W - Workflow or System Configuration Required***	
A8	**Augment Cash in Drawer**	Sometimes the office may need to augment the cash in the drawer during the day. This information will be entered as a separate transaction and will update the cash balance of the drawer.	***W - Workflow or System Configuration Required***	

Description: Conduct daily business and collect money (Box 3); End of day? (Box 4)

The user fulfills all the requirements for the transaction and collects the funds. The user collects and enters the total fees due for the request prior to releasing the requested items. Tables in the system are defined by transaction and how much money will be posted to each general ledger (G/L) account. Amounts received for each transaction and posted to each G/L will be recorded in the database. G/L coding at the counties may differ from the State G/L coding; the system accommodates these differences.

Some customers, such as funeral homes, may be set up to be invoiced for payment rather than paying cash for each request. The customer service clerk has a mechanism to indicate that a request may be billed later than at the time they are fulfilling the order. These payments are recorded in the system like any other transaction. Reports may be generated to show all open invoices. When payment is received, it is recorded in the system. Funeral homes may have the privilege of using the invoicing system revoked for bad checks or late payments.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A9	**Reports**	Please see Reports - Appendix C for rules on reports.		
A10	**Exports and Imports**	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
A11	**Multiple Codes at State Level**	The system can accommodate both G/L and other state specific codes by transaction type.	***E - Exact match***	
A12	**May Include One or Both Codes**	The system does not require both a G/L code and Finance Division code on a transaction. The transaction may have one or both codes or the codes may be the same.	***E - Exact match***	

A13	Transaction Records Include User ID	Each transaction record contains the user ID used to collect funds for that transaction.	*E - Exact match*	
A14	System Calculates Fees	The system calculates the fees for each transaction and totals all fees for multiple transactions in a single session for a single customer.	*E - Exact match*	
A15	Breakdown of Costs	The system maintains a breakdown of the cost of each item on the request when the fee is distributed to multiple G/L accounts.	*E - Exact match*	
A16	Transaction Fee Table Drives Posted to G/L	Information on the fee breakdown for each type of item sold along with the associated G/L account are maintained in a reference table.	*E - Exact match*	
A17	Combination of Payment Types to Complete Transaction Payment	The customer may pay by cash, check, or money order or a combination of all three to complete a transaction payment.	*E - Exact match*	
A18	Orders Taken Over Phone	The system must accommodate a State or local user taking an order over the phone and utilizing VitalChek to process the credit card.	*E - Exact match*	
A19	Required Check Information	If the customer pays by check, the screen prompts the user to enter the check number.	*E - Exact match*	
A20	Check Number	The system provides a field to capture the check number used to make the payment.	*E - Exact match*	
A21	Required Money Order Number	When the payment is in the form of a money order, the money order number is entered into the system.	*E - Exact match*	
A22	Billing Account	All billable accounts may pay the State using a billing account. The system provides the appropriate fields to record the billing account information.	*W - Workflow or System Configuration Required*	
A23	Fees Listed on Account	If an entity (e.g. other state/federal entity, funeral home) has an account set up with the State Vital Records Office, the fees for each transactions are listed against that account for invoicing later.	*W - Workflow or System Configuration Required*	
A24	Transmittal Sheet Information	Transmittal sheets are marked as "This is not a bill" by the system.	*W - Workflow or System Configuration Required*	
A25	Comments on Transmittal Sheet	The system provides a State defined table of comments for printing on the transmittal sheet.	*W - Workflow or System Configuration Required*	
A26	County's G/L Coding	The system recognizes the G/L coding specific to the counties.	*W - Workflow or System Configuration Required*	
A27	Transaction Fee Table Drives Posted to G/L	A set of Transaction Fee Tables that list all transactions and the various G/L accounts to which funds are posted for that transaction.	*E - Exact match*	
A28	Payment Coded to Correct G/L	As payments are received, they are automatically coded to the proper G/L account based on the transactions processed and the appropriate Transaction Fee Table.	*E - Exact match*	
A29	Remittance of Invoices	The system allows a user to receipt money received for an invoice.	*E - Exact match*	
A30	Separation of Duties	The system provides a default that creates a separation of duties between the person receiving the money and the person completing the transaction.	*W - Workflow or System Configuration Required*	
A31	Turn On and Off Separation of Duties Default	Separation of duties default functions can be turned on and off by a role based user.	*W - Workflow or System Configuration Required*	
A32	Override Separation of Duties Default	The system provides a seamless way of overriding the separation of duties default for small offices that may not have sufficient staff at all times.	*W - Workflow or System Configuration Required*	
A33	Track Use of Override	The system may track the use of the override of the separation of duties default by person and transaction.	*W - Workflow or System Configuration Required*	
A34	Payment Coded to Correct G/L	As payments are received, they are automatically coded to the proper G/L account based on the transactions processed and the appropriate Transaction Fee Table.	*E - Exact match*	

A35	Recognize Revenue (Invoices)	The system may account for requests that may be invoiced, in such a way as to separate it from forms of payment that are considered revenue since the revenue is recognized when the invoice is paid.	*W - Workflow or System Configuration Required*	
Additional Rules for Other State/Federal Agencies				
A36	Other State/Federal Agencies Requests	The system invoices other state/federal agencies and all other billable accounts.	*E - Exact match*	
A37	Enter by System User	Requests by other state/federal agencies will be entered by a State system user. State/federal agencies will not have direct access to the system.	*W - Workflow or System Configuration Required*	
A38	Track Free Requests	The system keeps track of the number of free requests for state/federal agencies.	*E - Exact match*	
A39	Run Report on Free Requests	A system user may run a reports of the number of free requests for state/federal agencies.	*E - Exact match*	
Additional Rules for Refunds				
A40	Refund Message	The system sends a message to the authorized user when it is determined that a refund needs to be processed.	*E - Exact match*	
A41	Refund Amount	The system can determine the amount of the refund needed.	*E - Exact match*	
A42	Debit Slip	The system creates a debit slip to send to finance to issue a refund. The debit slip is State defined.	*E - Exact match*	
A43	Send for Payment	The authorized user may update pending refunds to indicate that they have been sent to Finance. This will remove the refund from the pending queue.	*E - Exact match*	
A44	Pending Refund Queue	The system should provide a queue for all refunds sent to Finance.	*E - Exact match*	
A45	Pending Refund Queue Total	The pending fund queue shows the total number that are pending.	*E - Exact match*	
A46	Pending Refund Queue Sent	The pending fund queue shows the total number that have been sent.	*W - Workflow or System Configuration Required*	
A47	Reconcile Pending Queue	The pending refund queue is reconcilable with mail sent and received.	*W - Workflow or System Configuration Required*	
A48	Credit Card Refunds	Refunds for requests paid by credit card through the system may be refunded the same day of processing.	*E - Exact match*	
A49	Same Day Refunds	Refunds in cash or check that are identified in the same day as the money was originally taken can be refunded through the drawer as defined by jurisdictional rules. A check payment would be refunded with the original check the customer used to pay for the transaction but cash cannot be given in place of the check.	*W - Workflow or System Configuration Required*	
A50	Refund on Account	Refunds provided to a billable account may be listed separately and may not be counted as drawer funds since they do not figure into the balancing of funds in the drawer at the end of the day. The transaction must have a receipt number, fund, program account, control number, person paying, person's address; decedent name, DOD, and WV state file number.	*W - Workflow or System Configuration Required*	
A51	Refund on Over Payments	System allows refunds for any amount paid that is over the amount due.	*E - Exact match*	
A52	Refund On/Off Option	System allows the refund option to be turned off for locations that do not allow refunds.	*W - Workflow or System Configuration Required*	
A53	Overage Where No Refund Allowed	The system allows the user to designate by location how to apply any overages from a fund and G/L perspective.	*W - Workflow or System Configuration Required*	
A54	Partial Refund	The system allows for partial refunds.	*E - Exact match*	

A55	Accounting of Refunds	All refunds, full or partial, are applied to the appropriate fund and G/L account per location from which the refund has been processed.	*W - Workflow or System Configuration Required*	

Description: Review cash drawer summary against money in drawer (Box 5)

The user places the cash and/or checks in the cash drawer. Credit card receipts from transactions completed through the system are also included in the cash drawer. At the end of the day, the customer service clerk balances the amount of cash, checks, and credit card receipts in the drawer to the amount recorded by the system. The system includes functions to display transactions for the day to locate errors causing the report and the drawer to differ. Corrections can be made to the clerk's transactions as needed to resolve differences. After balancing, if the report shows an overage, the amount is recorded and added to the deposit. If there is an overage, it is applied as designated by the location. Shortages are not resolved through petty cash; a justification must be written and sent to Finance.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A56	Capture ID of Person Closing Drawer	The system saves the user ID of the person performing the drawer closing activities.	*E - Exact match*	
A57	Display List of Checks, Credit Card Receipts, and Amount of Cash Expected	The system displays a list of all checks, money orders, and credit card receipts, and the total amount of cash that should be in the cash drawer at the end of the day.	*E - Exact match*	
A58	Allow User to Run Totals at Any Time During Day	The user may request the system to display current totals at any time during the day.	*E - Exact match*	
A59	Drawer Closed by Any Authorized User	Cash drawers may be closed by any authorized user regardless of whether or not they worked with that drawer during the day.	*E - Exact match*	
A60	Customer Accounts	Transactions charged against billable accounts are listed separately as a group and are not counted as drawer funds since they do not figure into the balancing of funds in the drawer at the end of the day.	*W - Workflow or System Configuration Required*	
A61	Payment Received on Customer Accounts	When a payment for a customer account is received, the money and the transactions are included in the daily drawer balance.	*W - Workflow or System Configuration Required*	
A62	Customer Account Details on Daily Close	Reconciliation of customer account payments as a daily drawer function are by invoice number and transactions on the invoice paid.	*W - Workflow or System Configuration Required*	
A63	VitalChek	Transactions processed through VitalChek download into the system automatically.	*E - Exact match*	
A64	VitalChek Listed Separately	Transactions from VitalChek may be listed separately by event and are counted as drawer funds if a physical check is printed from VitalChek at the Vital Records office.	*E - Exact match*	
A65	VitalChek Included in Deposit	Transactions entered from VitalChek are included on the deposit slip if there is a physical check that is included in the daily balancing of funds.	*W - Workflow or System Configuration Required*	
A66	VitalChek Deposit to State's Account	Money received through VitalChek may be deposited directly into the State's account. A deposit slip is not needed.	*E - Exact match*	
A67	Reconcile VitalChek	The total transaction amounts received from VitalChek are balanced against monies received from VitalChek.	*E - Exact match*	
A68	VitalChek Report	The system allows a user to run a report on a state defined timeframe to reconcile the money received from VitalChek that has been directly deposited in the State's account.	*E - Exact match*	
A69	Credit Card Payments	Credit card transactions through the EVRS are processed through Finance Division through State Treasurer's Office at the State.	*F - Future*	Release Spring 2020
A70	Credit card merchant integration	The system integrates with the State's credit card merchant, providing charge transaction capabilities and transaction information to EVRS.	*F - Future*	Release Spring 2020
A71	Credit card receipt	The system provides the ability to print a receipt from the credit card charge for the customer to sign.	*F - Future*	Release Spring 2020
A72	Print Credit Card Receipt	The user allows the user to print a credit card receipt.	*E - Exact match*	

A73	**Record Payment of Invoice**	If a payment for an invoice is received, the revenue for all requests included on that invoice are recognized as revenue in the appropriate categories and are included in the deposit form at the end of the day.	***W - Workflow or System Configuration Required***	
A74	**Mark Requests Paid When Invoice Paid**	When the payment for an invoice is entered, the requests included on the invoice are marked "Paid."	***E - Exact match***	
A75	**Print Multiple Times**	Balancing reports can be displayed or printed multiple times.	***E - Exact match***	
A76	**Over/Short**	The drawer may be closed even if the money does not balance due to an over/short situation.	***E - Exact match***	
A77	**Overages**	Overages are reflected on the daily report and applied to the appropriate account.	***W - Workflow or System Configuration Required***	
A78	**Pending Request**	Funds associated with a pending request are not refunded unless a written request is received by Finance. These transactions are handled outside of the EVRS.	***E - Exact match***	
A79	**Shortages**	Shortages are not made up out of petty cash and are handled by Finance.	***W - Workflow or System Configuration Required***	
A80	**Comment Box for Justification on Shortage**	A shortage opens a comment box for the user to enter a justification for Finance on shortages.	***E - Exact match***	
A81	**Comment Box for Justification on Overage**	An overage opens a comment box for the user to enter a justification for Finance on overages.	***E - Exact match***	
A82	**Daily Closing Reports**	The data included in the daily closing reports is State defined and configurable.	***E - Exact match***	
A83	**Deposit Slip**	The data included in the deposit slip is State defined and configurable.	***E - Exact match***	

Description: OK? (Box 6); If no, review transactions, determine differences, and make corrections (Box 7)

At the end of the day, the user balances the amount of cash, checks, money orders, and credit card receipts in the drawer to the amount recorded by the system. Errors may be corrected in the system with supervisory approval.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
A84	**System Accounts for Opening Balance and Drawer Adjustments**	The system accounts for the amount of cash in the drawer at opening, and for any additional money added to augment the drawer balance, when computing the expected amount of cash.	***W - Workflow or System Configuration Required***	
A85	**System Programming Errors**	If errors are caused by flaws in the system, there is a mechanism to correct the errors, record an audit trail of the changes, and create an error report and fix request for the programming staff.	***E - Exact match***	
A86	**Finding Errors**	If the figures do not balance, the system allows a user to scroll through the day's transactions by State defined rules such as user, chronological order and/or by payment type to determine what the problem is.	***E - Exact match***	
A87	**Correcting Operational Errors**	If there are errors created through normal business functions, the system allows for their correction with a trail of the changes and a reason code for the change along with a comment.	***E - Exact match***	
A88	**Print Report of Transactions**	The employee may also have the option to print a report of the day's transactions for that drawer to assist in determining where the error(s) occurred.	***E - Exact match***	
A89	**Display Day's Transactions and Payment by Type**	The system displays a summary total of the day's transactions and the total amount collected in cash, credit, money orders, and checks. The program subtracts out the starting balance and any cash used to augment the drawer to arrive at the amount of money from sales that should be in the drawer.	***E - Exact match***	
A90	**ID on Corrections**	All corrections must contain the employee ID number of the person making the correction.	***E - Exact match***	

A91	Transaction Reports	Transaction reports are State defined and configurable.	W - Workflow or System Configuration Required	

Description: Each user prints final drawer balance report by type of tender and event (Box 8)

The customer service clerk prints the daily report for their drawer by tender and event type.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
A92	Reports	Please see Reports - Appendix C for rules on reports.		
A93	Print Final Detailed Report of Transactions	The employee may print a final detailed report of the day's transactions for their drawer once the error(s) have been reviewed/corrected.	E - Exact match	
A94	Detailed Report Display Day's Transactions and Payment by Type	The system displays a detailed report total of the day's transactions and the total amount collected in cash, money orders, credit cards, and checks.	E - Exact match	
A95	Print Final Summary Report of Transactions	The employee may print a final summary report of the day's transactions for their drawer once the error(s) have been reviewed/corrected.	E - Exact match	
A96	Summary Report Display Day's Transactions and Payment by Type	The system displays a summary total of the day's transactions and the total amount collected in cash, money orders, credit cards, and checks.	E - Exact match	
A97	Final Summary Report	The final summary report is State defined and may include fund and G/L account information in addition to event and tender information.	E - Exact match	
A98	Detailed Report of Transactions	This report is State defined.	W - Workflow or System Configuration Required	

Description: Consolidate drawers for deposit and verify money (Box 9)

The office fiscal manager or other authorized user consolidates all funds from all drawers, runs the consolidation report and validates that the money is correct. Fund verification is done by an employee who has not worked with the individual drawers. S/he recounts the money to reconcile the total amount to the consolidation report. If errors are found, the drawer owner must reconcile the drawer. If they cannot figure out the discrepancies, s/he must get supervisor assistance for help with their drawer.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
A99	Display Consolidated Funds Report	The user can display/print a report showing the consolidation of all money collected by payment type for all drawers for the office.	E - Exact match	
A100	Make Adjustments	The employee who recounts the money to determine that the total balances to the consolidated report needs the same functionality to be able to scroll through transactions by drawer, or print a report to spot problems and to enter corrections.	W - Workflow or System Configuration Required	
A101	Supervisor Assistance	For errors that the user cannot resolve, the system requires supervisor assistance with reconciliation.	E - Exact match	
A102	Capture Supervisor Information	The system captures State defined information for the supervisor assisting with reconciliation.	E - Exact match	
A103	Over/Short	The drawer may be closed even if the money does not balance due to an over/short situation. The program needs to allow for the over/short information to be entered and the proper updating of the G/L to occur.	E - Exact match	
A104	Reports	The system allows the user to run reports by state defined fields including but not limited to: transaction type, amount, payment method, person completing the transaction.	E - Exact match	

Description: Close drawers once verified (Box 10)

Anytime the user closes his/her drawer the system reconciles the drawer. At the end of the day, when all drawers are closed, the system performs any processing required to balance accounts and print reports.

	Business Rule Name	Business Rule Description	Vendor Response	Comments
A105	Close Drawer	The system provides a way to indicate that the drawer has been reconciled and closed every time a user logs out during the day. No new transactions can be added while the user is logged out.	E - Exact match	

A106	Reopen Reconciled Drawer	The system allows a user to reopen a reconciled drawer in the same day to continue transactions within State defined time frame (ex: 8am-4pm Monday-Friday).	*W - Workflow or System Configuration Required*	
A107	Close Before End of Work Day	The system allows the closing time for drawers to occur at a user defined time during the day that may be different from "end of day".	*E - Exact match*	
A108	End of Day Reconciliation	The system provides a way to indicate that the drawer has been reconciled at the end of the business day so no new transactions can be added.	*E - Exact match*	
A109	Unclosed Drawers	The system provides a way to check to see that all drawers have been closed.	*E - Exact match*	

Description: Print State finance forms and deposit slip (Box 11); Send forms to finance and money (Box 12)

Deposit reports are printed showing all funds collected, and all funds from each given location to be deposited for that day. All paperwork for the deposit, including the deposit slip, and any required associated reports are sent to the administrative/finance group for the location. These can be printed or sent via email.

The system produces consolidated summary reports showing all transactions processed for the entire system as well as a detailed report of transaction types by each location and a summary of G/L by location. Reports may be run for each jurisdiction or as a consolidated report for the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A110	Reports	Please see Reports - Appendix C for rules on reports		
A111	Print Total Sales Report	The system will print a State defined report showing the total sales for the day by payment type. Report may include payment type for each transaction, appropriate budget number and G/L account number. Transactions paid by check include check number.	*E - Exact match*	
A112	Different G/L Accounts	The State and counties may use different G/L accounts and use a different percentage of money to allocate to those G/L accounts.	*W - Workflow or System Configuration Required*	
A113	Sort by Transaction Type	The system provides the ability to sort the total sales report by transaction type (check, cash, etc.) by user ID, and check amount (if applicable).	*W - Workflow or System Configuration Required*	
A114	Print Deposit Slip	The system prints a deposit slip. The deposit slip contains only the items that are needed to support the bank deposit. Checks will be listed individually.	*E - Exact match*	
A115	Deposit Slip Format	The system prints the deposit slip in a format approved by the bank.	*W - Workflow or System Configuration Required*	
A116	Deposit Slip Fields	The system prints State defined information on the deposit slip.	*W - Workflow or System Configuration Required*	
A117	Deposit Date Recorded in System	The system records the deposit date, amount, and deposit number.	*E - Exact match*	
A118	Query Capability	The system provides the ability to query the database by deposit number and by date.	*E - Exact match*	
A119	G/L Reports	The system allows an authorized user to print a G/L report for each office separately, and for all offices in consolidated format. Information on report is State defined and may include each unique service method for state and county offices, a consolidated report for the state, show the G/L accounts appropriate to the State office included in the report.	*W - Workflow or System Configuration Required*	
A120	Sales Report	The system allows an authorized user to print a sales report based on State defined time frames (ex: a day or a range of dates) that includes State defined fields such as overall or by office, type of service, counts for the number of items produced, and the fees collected.	*W - Workflow or System Configuration Required*	
Additional Rules for Summary Reports				
A121	Activity Summary Report	A summary report may detail all activities by G/L account for a State defined period.	*E - Exact match*	
A122	Summary Report	A summary report may detail the split of money between the State and county offices.	*E - Exact match*	

A123	Overages Report	The system will run a report at a user defined interval on all overages.	*W - Workflow or System Configuration Required*	
A124	Report of Transaction Types by County	The system creates a State defined report of transaction types by county office for a State defined period.	*W - Workflow or System Configuration Required*	
A125	Credit Card Sales Report	The system generates a report showing all credit card sales for a State defined period.	*E - Exact match*	
A126	Medical Examiner Fee Summary Daily	The system provides each county with a summary of coroner fees at the end of the day for the county.	*W - Workflow or System Configuration Required*	
A127	Medical Examiner Fee Summary Monthly	The system provides the county with a summary of coroner fees at the end of the month for the county.	*W - Workflow or System Configuration Required*	

END OF DAILY ACCOUNTING

BUSINESS PROCESS: GENERATE INVOICES

The State has clients (funeral homes, other agencies) that are invoiced on a monthly basis. At the beginning of each month, the State generates invoices through the system. The user logs into the system and accesses the invoice screens. The user may globally generate and review invoices for all clients with a balance due for a certain time frame or generate individual invoices for one client at a time. Invoices may be sent automatically through the system or printed and mailed to the customers. Past due reports are ran periodically. Past due notices are printed/generated along with a letter and mailed/emailed to the customer. Once the State receives the customers' payment, the user enters the payment and generates a receipt. The receipt is automatically sent to the user via email or printed and mailed.

Description: User sets up customer accounts (Box 1)

The system allows designated users the ability to establish accounts for entities that regularly do business with the State. Creating an account makes it easy to enter requestor information on a request, as contact information can be automatically populated from the information stored in the account record. Entities that have accounts may also be authorized to charge the fees for obtaining certified copies or other services that have fees. They will then receive an invoice produced by the system on a periodic basis and submit payments per the invoice. Transactions with associated fees include certified copies and certain types of amendments.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A128	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
A129	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
A130	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
A131	Exports and Imports	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
A132	Specific Exports and Imports	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
A133	Set Up Account	The system provides the capability to set up accounts against which charges can be made for customers that routinely order certified copies or other items.	*W - Workflow or System Configuration Required*	
A134	Account Information	The account information is State defined and includes, but is not limited to, information such as account name, physical address, billing address, phone number, contact person, contact information, and type of account.	*W - Workflow or System Configuration Required*	
A135	Multiple Billing Locations for Corporate Accounts	The system allows multiple billing addresses for corporate accounts.	*W - Workflow or System Configuration Required*	
A136	Billing Address	For billing purpose, all invoices are sent to the identified billing address.	*W - Workflow or System Configuration Required*	
A137	Physical Address	The system also captures the physical address for an account.	*W - Workflow or System Configuration Required*	

A138	**Account Status**	The account status code shows whether the account is in good standing. Status flags are State defined and may include: - Late payments - Bad check - Cash only - Good standing	***W - Workflow or System Configuration Required***	
A139	**Comment Drop Down**	Accounts that are marked with a status flag open a State defined drop down list of options for the user to select regarding the account's status. Options may include 30 Days Past Due, 90 Days Past Due, Cash Only, Delinquent Account and/or Account On Hold Until Payment Received.	***W - Workflow or System Configuration Required***	
A140	**Additional Comments**	The system allows a user to enter additional comments regarding an account's status in a text box if needed.	***W - Workflow or System Configuration Required***	
A141	**Date Status Flag Set**	The account automatically notes the date that the account was flagged as anything except in good standing. The system will interface with software that approves or denies checks.	***E - Exact match***	
A142	**Manually Change Status**	The system allows an authorized user to change an account's status manually.	***W - Workflow or System Configuration Required***	
A143	**Date of Status Flag Removed**	The account automatically notes the date that flag is removed from an account.	***W - Workflow or System Configuration Required***	
A144	**Cash-Only Accounts**	If an account is placed on a cash-only basis, this system may flag the account accordingly. This system will not allow posting of checks against that account until this flag is cleared.	***W - Workflow or System Configuration Required***	
A145	**Cash Only**	For cash-only accounts, the payment options are State defined and may include payment only by cash, money order, cashier's check, and credit card.	***W - Workflow or System Configuration Required***	
A146	**Billable Account**	The system allows authorized users to designate the type of account being established as a billable account, where payment is made after the service is rendered from an invoice produced by the system.	***E - Exact match***	
A147	**Overages**	The system allows the user to enter a payment amount for more than the invoice amount.	***E - Exact match***	
A148	**Partial Payments**	The system allows a user to apply partial payments to an account.	***E - Exact match***	
A149	**Account Information**	The system allows the authorized user to enter information about the account such as account name, address, phone number, contact name and account number.	***W - Workflow or System Configuration Required***	
A150	**Change Status of Account**	The system allows an authorized user to change the status code of an account.	***W - Workflow or System Configuration Required***	
A151	**Bad Checks**	Bad checks are recorded in the request records or the account records for entities that have an account.	***E - Exact match***	
A152	**Add or Remove Bad Check Flag**	The system allows an authorized user to activate and de-activate a bad check flag.	***E - Exact match***	
A153	**Import from Finance**	The system imports State defined bad check information for non-billable accounts from Finance on a State defined interval.	***F - Future***	Release Spring 2020
A154	**Manually Add In Information**	The system allows a user to manually add in State defined bad check information received for non-billable accounts from Finance.	***W - Workflow or System Configuration Required***	
A155	**Add Bad Check Flag**	The system adds a bad check flag to accounts imported from Finance.	***E - Exact match***	
A156	**Must Pay with Credit Card or Cash**	Bad-check-flagged accounts must pay with a credit card or cash until the bad check flag is removed.	***E - Exact match***	
A157	**Bad Check Queries**	The system provides the ability to query for bad checks.	***W - Workflow or System Configuration Required***	

A158	Alert Issuance	The system alerts Issuance when processing a request for an account with a bad check flag. Issuance can only accept State defined payment methods such as cash, money-order, cashier's check, or credit card.	E - Exact match	

Description: User logs into EVRS and accesses invoice screens (Box 2);

An authorized user logs onto the system and accesses the invoicing menu. S/he selects the customer account or group of accounts that s/he wishes to process. The system has the ability to generate the invoices in "preview" mode without changing the status of the records included in the report to "invoiced." Once the user has reviewed the invoices, the invoices can be re-run in "final" mode where the record status is changed to "invoiced" or equivalent. Invoices can be printed on demand or in batch by State defined identifiers. The user also has the option to either print to a printer or print to file so the invoice can be emailed. The system produces a cover letter and a detailed transaction report.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A159	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
A160	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
A161	Record Ownership and Access	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
A162	Letter Rules	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		
A163	Individual Processing	The user may produce an invoice for an individual account.	W - Workflow or System Configuration Required	
A164	Preference for Receiving Invoices	The system allows an authorized user to set a State defined preference for receiving invoices. Delivery methods may include email and postal mail.	W - Workflow or System Configuration Required	
A165	Batch Processing	The user may choose to produce invoices for all or a series of customer accounts through a batch process based on State defined options. State defined options may include email delivery, postal mail delivery, and/or customer type.	W - Workflow or System Configuration Required	
A166	Batch Processing Options	All customer accounts selected for processing are associated in a batch by State defined options (ex: delivery preference, type of account, status, and date.	W - Workflow or System Configuration Required	
A167	Display Previous Batches	Authorized users can enter a batch option and display all the invoices produced in a previous batch.	F - Future	Release Spring 2020
A168	System Totals Certificate Requests	The system totals the amount, including all unpaid balances, for all requests that have been processed since the last invoice for each account selected.	W - Workflow or System Configuration Required	
A169	Review Without Need to Print	The user may review an invoice without printing.	E - Exact match	
A170	Print Without Review	The user may print an invoice without reviewing the invoice first.	W - Workflow or System Configuration Required	
A171	Generating Report Without Creating Invoice	The user may generate an invoice preview or an invoice report to review prior to actually creating the invoice.	E - Exact match	
A172	Invoice Format	The invoice format is State defined. A one page itemized invoice prints for each customer account. Information may include past due balances, current amount due, due date, remittance information, and comments.	W - Workflow or System Configuration Required	
A173	Comments for Invoice Form	The system allows a user to enter comments to be included on an invoice form.	W - Workflow or System Configuration Required	
A174	Edit Invoice Form	The system allows a role defined user (such as a business process administrator) to configure and edit the invoice form.	W - Workflow or System Configuration Required	
A175	Itemized Invoice Report	An itemized list of requests included in the amount due is printed for each customer account to be sent with the summary invoice form.	W - Workflow or System Configuration Required	

A176	Record Status	When invoices are produced, all request transaction records included in the invoice are flagged and dated as "invoiced" so that they may be invoiced only one time and branded with the batch identifier and date invoiced.	*W - Workflow or System Configuration Required*	
A177	Past Due Notice	The system includes a "Past Due Notice" on an invoice.	*W - Workflow or System Configuration Required*	
A178	Undo Batch	An authorized user can undo a batch of invoices so that the invoice process can be repeated.	*W - Workflow or System Configuration Required*	
A179	Reprint	The system allows an authorized user to reprint an invoice at the request of the purchaser.	*E - Exact match*	
A180	System User Accounts	Users with the proper authorization may view the status of their account and the amount due at any time.	*W - Workflow or System Configuration Required*	
A181	Read-Only View	Customers with the proper authorization may view their account status as read-only that includes State defined information.	*F - Future*	Release Spring 2020
A182	View Own Accounts Only	Customers with the proper authorization may only view the status of their own accounts.	*F - Future*	Release Spring 2020
A183	View Accounts at State	The State can search for an account and display the current status of charges related to any facility.	*F - Future*	Release Spring 2020
A184	Monthly Detailed Invoice	The system generates a detailed monthly invoice with State defined information detailing unpaid requests for an account.	*F - Future*	Release Spring 2020
A185	Batch Processing	The user may choose to process all or a group of customer accounts at one time.	*F - Future*	Release Spring 2020
A186	Enter Date	The user can enter a date that is used to cut off the invoices selected (such as the end of a month).	*W - Workflow or System Configuration Required*	
A187	Beginning Date Field	The user can enter a beginning date that is used to cut off the invoices selected (such as the beginning of a month).	*W - Workflow or System Configuration Required*	
A188	Beginning and End Date Fields	The user can enter a beginning date and end date to view selected invoices for a given period of time.	*W - Workflow or System Configuration Required*	
A189	Include All Requests Since Last Invoice	The invoice for new charges includes all open requests up to the date entered.	*W - Workflow or System Configuration Required*	
A190	Reprint Previous Invoice by Request Only	The system allows a user to reprint an invoice only if requested by a customer.	*E - Exact match*	
A191	No Date Entered	If no date is entered, all invoices that have been charged will be selected for the customer group selected.	*W - Workflow or System Configuration Required*	
A192	Itemize Requests	The system provides a detailed itemization of all requests and the services provided on each request that are included on the invoice as supporting documentation.	*W - Workflow or System Configuration Required*	
A193	Amendment Fees	The invoice includes a line item for amendment fees.	*E - Exact match*	
A194	Option to Print Notes on Invoice	The system allows the user to enter notes to be printed on the invoice.	*W - Workflow or System Configuration Required*	
A195	Preview Invoices Without Updating Records	The user may generate a report without marking the records as "invoiced."	*W - Workflow or System Configuration Required*	
A196	Record Status	After invoice generation, all transaction records included in the invoice are flagged as "invoiced."	*W - Workflow or System Configuration Required*	
A197	Add Invoice Number and Date to Record	The records included in the invoice batch are updated with the invoice number and invoice date.	*W - Workflow or System Configuration Required*	
A198	Paid Status	An invoice status is changed to "paid" once the customer has paid the full amount they were invoiced.	*W - Workflow or System Configuration Required*	

A199	Reports by Account	In addition to invoices, the system includes detailed and summary reports by account for amounts due. (Specific reports are defined in Reports Matrix.)	*W - Workflow or System Configuration Required*	

Description: Select customer accounts with a balance to process (Box 3); EVRS calculates amount due and generates invoice/report (Box 4); Generate past due letters as needed (Box 5); Send invoice to customer via email or print (Box 6)

The user selects the customer accounts with a balance to process. The system calculates the amount due and generates an invoice. The system user can generate past due letters as needed. The user prints/mails or emails the invoice to the customer.

Please note, the rules detailed in "User logs into EVRS and accesses invoice screens (Box 2)" apply to this section and are not repeated here.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A200	Invoices	The rules for printing invoices to customers in Box 2 of this flow apply to this section.		
A201	Billing Address	For accounts with postal mail marked as their billing preference, all invoices are sent to the customer using the billing address submitted when an account is created.	*W - Workflow or System Configuration Required*	
A202	Billing Address for Multiple Locations	For accounts with multiple locations, the system allows invoices to be mailed/emailed to each individual location or the central locations with all accounts on one invoice.	*W - Workflow or System Configuration Required*	
A203	Email Invoices & Statements	For accounts with email marked as their billing preference, all invoices are sent to the customer using the email submitted when an account is created.	*W - Workflow or System Configuration Required*	
A204	Confirmation Email	The system will send a confirmation email once the email has been read.	*W - Workflow or System Configuration Required*	
A205	Stakeholders View Outstanding Charges	Funeral homes can display a list of unpaid transactions, outstanding fees, and totals due since the last invoice was paid.	*W - Workflow or System Configuration Required*	

Description: Customer remits payment (Box 7); User enters payment (Box 8)

The customer remits funds to the State. The State enters the payment against the invoice(s) included in the payment. A delinquent flag may be set if an account is past due. When the delinquent flag is set, charging is not allowed. Each invoice payment is added to the cash drawer for the user who processed it and is included in drawer reconciliation at the end of the day.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A206	Bulk Entry for Payments	The system allows a user to pull up a bulk entry screen to enter payment information for multiple customers at the same time. The information on the screen is State defined and must include, at a minimum, the invoice number, person or account number, and amount due.	*F - Future*	Release Spring 2020
A207	Enter Information on Bulk Entry Screen	The system allows a user to enter information regarding the payment received on the bulk entry screen for payments. The screen must include State defined payment information including payment method, check number (if applicable), date received, and amount paid.	*F - Future*	Release Spring 2020
A208	Save Bulk Entry Screen	The system allows a user to save the bulk entry screen for payments at any time and with fields left blank.	*F - Future*	Release Spring 2020
A209	Invoices Marked "Paid"	Each invoice may be marked "paid."	*F - Future*	Release Spring 2020
A210	Transactions Marked "Paid"	Payments are posted by invoice and transaction and are marked "paid" accordingly.	*F - Future*	Release Spring 2020
A211	Record Check Number	Check numbers may be recorded in the system as part of the payment information.	*F - Future*	Release Spring 2020
A212	Recognize Sale	From a sales perspective, the statistics of the number of certificates sold is reflected in the period when the payment is made.	*F - Future*	Release Spring 2020
A213	Recognize Revenue	From a G/L perspective, revenue is recognized when money is received for an invoiced account.	*F - Future*	Release Spring 2020
A214	Create G/L Accounts for Each Invoice	A report may print showing the payment amounts allocated by G/L accounts.	*F - Future*	Release Spring 2020

A215	Delinquent Report	The system displays/produces a report of all delinquent accounts.	*F - Future*	Release Spring 2020

Description: Generate receipt (Box 9); Send receipt to customer by email (Box 10)

The user prints a receipt for each account that has remitted a payment. The user prints/mails or emails the receipt to the customer.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A216	**Receipting Rules**	Please see the Issuance business rules for all rules related to receipting within the system.		
A217	**Generate Receipt**	The system generates a receipt with the option to print or email the receipt to the customer.	*E - Exact match*	
A218	**Email Receipt Automatically**	The system allows a receipt to be emailed automatically to users with an e-mail address.	*E - Exact match*	

Description: See Daily Accounting flow for cash drawer steps (Box 11)

Please note: The rules for daily accounting and the cash drawer steps described above apply here and are not repeated.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
A219	**Cash Drawer Steps**	Please see the Daily Accounting (Box 1) above, for all rules related to daily accounting for cash drawers within the system.		

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E - Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M – Modify – Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F – Future – Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N - Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: QUERY AND REJECTION CYCLE

If the system user determines that s/he cannot fix the errors, the user can take one of two actions:

(1) Send a message to the original author asking for additional information.
(2) Reject the record back to the original author.

The record is flagged accordingly and placed in the appropriate pending queue. The EVRS system automatically notifies the record author that further information or a correction to the record is required, and that the record is in their pending queue.

BUSINESS PROCESS: QUERY CYCLE

Please note: All rules regarding messaging, rejecting records, editing of records and resubmitting of records described in the general requirements apply to this flow and have not been repeated in this section.

Description: State user sends message to original author (Box 1); Place record in follow up queue (Box 2)

When a State user finds an error that cannot be fixed at the State level, the user has the option of messaging the original author for clarifying information.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*
RC1	**Query Message**	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
RC2	**Letter Rules**	Please see the General Requirements, section X - Letters and Forms, for all rules related to creating letters within the system.		

Description: Original author logs in and reviews message (Box 3); Original author messages back an answer and the State user makes non-legal change (Box 4)

The original author logs into the system and reviews the message. The original author messages back the information requested and scans and attaches any necessary documentation. The State user may then fix the error, rejects the record, or decide not to change the record. The record moves from the queue once one of these actions are taken.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*

RC3	User Log In	Please see the General Requirements section B -User Authentication for rules related to user log in.		
RC4	User Profiles	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
RC5	Query Message	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
RC6	Scanning	Please see General Requirements, section A - User Technical Environment, regarding rules related to scanning.		
RC7	Send Message to Record Owner	User can initiate a message to the facility who originated the record to ask for additional information on potential errors in the event type.	*E - Exact Match*	
RC8	Update Status to "Query Pending"	When a query is sent, the record is flagged and the status updated to "query pending."	*W - Workflow or System Configuration Required*	
RC9	Query Pending	The system provides a queue for records by event that have been queried.	*W - Workflow or System Configuration Required*	
RC10	Update Statistical Fields	Based on the information returned as a result of the query, the authorized user may update statistical fields.	*E - Exact Match*	
RC11	Retain Original Value	The original value is retained for auditing purposes only.	*E - Exact Match*	
RC12	Directly Open Record	The in-system message contains a method to directly open the record under review so that the user does not have to search for the record.	*E - Exact Match*	
RC13	View at Same Time	The system allows a user to view the message and the record at the same time.	*E - Exact Match*	
RC14	Action Taken	The system allows the user to note the action taken by a system user. Actions may include change made, reject record, and change not made.	*W - Workflow or System Configuration Required*	
RC15	Query Filters	The system provides the ability to create an ad hoc QA queue by applying a filter made up of every field in the database to select records for QA review.	*W - Workflow or System Configuration Required*	
RC16	Remove Records	The user can flag and remove records from a query queue after they have been reviewed. For example, they have discussed the issue with the certifier and determined that they no longer need additional information.	*W - Workflow or System Configuration Required*	
RC17	Keep File of Query Letters Issued	The system attaches any query letters created to the record.	*W - Workflow or System Configuration Required*	
RC18	Record Receipt of Response to Query Letters	When a response is received for a query letter, the record is updated to indicate that a response has been received.	*W - Workflow or System Configuration Required*	
RC19	Review Outstanding Query Letters	An authorized user can view all records with an outstating query letter for which a response has not been received.	*F - Future*	Release Spring 2020
RC20	Generate Query Letter from Data Entry Screens	System allows State users to generate a query letter from data entry screens.	*F - Future*	Release Spring 2020
RC21	Request a Change	Based on the information returned as a result of the query, the authorized user may reject the record and request a change or amendment to the record.	*E - Exact Match*	

BUSINESS PROCESS: REJECT RECORD PRIOR TO REGISTRATION

Please note: All rules regarding messaging, rejecting records, editing of records and resubmitting of records described in the general requirements apply to this flow and have not been repeated in this section.

Description: State user rejects record (Box 1); Record queued for original author (Box 2)

In some cases, a record cannot be corrected through the messaging system. In those cases, an authorized state user would reject the record back to the record's original author. The record is made available to the original author in a rejected queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*

RC22	**Drop Down List for Reason for Rejection**	The reasons for rejection can be selected from a State defined drop down list of potential reasons for rejecting the record, such as "duplicate of registered record," "review failed," etc., so that the user may select from a set of standard reason codes.	***E - Exact Match***	
RC23	**Reason for Rejection Comments**	The system provides the option for the user to enter an explanation for the rejection.	***E - Exact Match***	
RC24	**Information Needing Correction**	The information needing completion/correction is noted on the record.	***E - Exact Match***	
RC25	**Queue Rejected Records for Original Author**	Rejected records are queued for the appropriate original author of the record (i.e.: facility, funeral establishment or medical certifier) in their Rejected Queue.	***E - Exact Match***	
RC26	**Send Automatic Notification to Record Originator(s)**	The system sends automatic notification of the rejection to the record originator(s). If returned to the medical certifier, the funeral home is also notified.	***W - Workflow or System Configuration Required***	GCOM VRMS messages is configurable.
RC27	**System Tracks Number of Times Record is Edited**	For training purposes, the system tracks how many times a record is returned for correction.	***F - Future***	Release Spring 2020
RC28	**Reports**	The system allows role-defined users to run reports on records that are corrected. Information in the reports are State defined and may include record type and number of errors by facility.	***F - Future***	Release Spring 2020
RC29	**Reject Record**	The system allows a system user to reject a record back to the original record owner for correction/additional information.	***E - Exact Match***	
RC30	**Remove Electronic Signature**	The system removes the electronic signature of the certifier on a registered record that has been rejected.	***E - Exact Match***	
Additional Rules for Death				
RC31	**Medical Information Section Rejected**	If the medical information section is rejected but the personal information section passes the review, the system keeps the personal information section as "Signed."	***E - Exact Match***	
RC32	**Personal Information Section Rejected**	If the personal information section is rejected but the medical information section passes the review, the system keeps the medical information section as "Certified."	***E - Exact Match***	

Description: Original author accesses and reviews rejected record (Box 3); Original author fixes record (Box 4); Original author submits the record to State (Box 5); Record is reviewed (Box 6); OK? (Box 7); If OK, register record and assign SFN (Box 8); If not OK, the record is rejected.

The original author accesses the record and reviews the reasons for rejection. The original author corrects the record and submits the corrected record to the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*
RC33	**Record Ownership Reverts to Submitter**	If the record is rejected back to the original owner, the record is queued accordingly and ownership of the record reverts back to the original owner. Owner example is a facility or funeral home.	***E - Exact Match***	
RC34	**Rejection Queue for Requestor**	The rejected request from the system user is stored in a Rejection Queue for the original record owner.	***E - Exact Match***	
RC35	**Display Reasons for Rejection**	The system displays the reason the record was rejected.	***E - Exact Match***	
RC36	**Correct Rejected Record**	The system allows an original record owner to modify the record that has been rejected and resubmit.	***E - Exact Match***	
RC37	**Review for Exceptions**	Once the original author resubmits a rejected record, the system automatically reviews the record for additional exceptions.	***E - Exact Match***	
RC38	**Automatic Registration**	If the resubmitted record contains no additional exceptions, the record is automatically registered.	***E - Exact Match***	
RC39	**Rejected Record Exceptions**	If the resubmitted record contains an additional exception, the system automatically queues the record into the appropriate Exception Queue.	***E - Exact Match***	
RC40	**Review Changes**	The system allows an authorized State user to review the changes made to a rejected record.	***E - Exact Match***	

RC41	Accept Changes	The system allows the State user to accept the changes made to the rejected record.	*E - Exact Match*	

BUSINESS PROCESS: QUERY RECORD POST-REGISTRATION

Please note: All rules regarding messaging, rejecting records, editing of records and resubmitting of records described in the general requirements apply to this flow and have not been repeated in this section.

If there is an exception on the record, the user will review the record. As needed, the system user may choose to query a record back to the original owner. In the case of querying the record, the record is flagged and queued for the appropriate record owner. A message is sent to the record owner indicating queried records are pending review. Rejected and queried records retain their original SFN. The file date and the electronic signature of the certifier are retained.

Description: State user queries a registered record (Box 1); Record queued for original author (Box 2); Author reviews record in read-only format (Box 3)

Once the state user determines a registered record needs to be rejected or queried back to the original user, the system will automatically queue the record in the original user's Rejection Queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*
RC42	**See Rejection Rules**	All rules regarding rejecting a record listed in Reject Record Prior to Registration section apply here.		
RC43	**Do Not Issue Rules**	See the "Do Not Issue" rules in General Requirements.		
RC44	**Post-Registration Rejection**	The system allows an authorized user to reject a registered record.	*W - Workflow or System Configuration Required*	
RC45	**Post-Registration Rejection Queue**	The system provides a queue for registered records that have been rejected by the State.	*W - Workflow or System Configuration Required*	
RC46	**Remove File Date**	The system removes the file date on a registered record that has been rejected.	*W - Workflow or System Configuration Required*	
RC47	**Retain SFN**	The system keeps the SFN assigned to a registered record that has been rejected.	*W - Workflow or System Configuration Required*	
RC48	**Do Not Issue Rejected Record**	The system automatically flags rejected record with a "do not issue" flag.	*W - Workflow or System Configuration Required*	
RC49	**Read-Only Format**	The system allows the original author to review a rejected record in read-only format.	*E - Exact Match*	

Description: Correspondence messaging between the State and original author (Box 4); Amend Record? (Box 5); If no, State user makes a note validating the query (Box 6); State removes flag (Box 7); Original author re-signs record (Box 8)

The system allows staff users and original authors to correspond regarding the rejected or queried record. If, through correspondence, the State determines that no amendment is required, the State user makes a note validating the query, removes the rejection flag, and the original author re-signs the record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*
RC50	**Removal of Flags**	Please see General Requirements, section regarding rules about removing flags.		
RC51	**Flag Removal Note**	The State user must note that the rejection has been validated.	*W - Workflow or System Configuration Required*	
RC52	**Re-Sign Record**	Once the "do not issue" flag has been removed, the system allows the record to be re-signed by the original author.	*W - Workflow or System Configuration Required*	
RC53	**Removal of Rejection**	Once the record has been resigned by the original author, the record is removed from the Rejection Queue.	*W - Workflow or System Configuration Required*	

Description: If Amend Record is yes, original author creates amendment (Box 9); Submits amendment to State (Box 10); Record queued for amendments (Box 11); Go to Amendment Flow

If, after corresponding with the original author, the State determines that an amendment is required, the system allows the original author to create an amendment and submit it to the State's Amendment Queue.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*State Comments*
RC54	**Amendment Rules**	See Amendments and Correction Requirements regarding a System User Requests a Correction to a Registered Record.		

RC55	**Amendment to Rejected Record**	The system allows the original user to create an amendment to a rejected record.	***E - Exact Match***	
RC56	**Submit Amendment to State**	The system allows the original user to submit an amendment on a rejected record to the State.	***E - Exact Match***	

From the dropdown list, please select one of the available condition codes **E - Exact, W - Workflow/System Config, M - Modify, F - Future, N - Cannot Meet** as described below for your answer to the following business rules.

Condition	Description
E - Exact Match	The COTS solution, as delivered at contract execution, fully satisfies the function as described in workflow and business rule **without any workflow configuration effort** (workflow configuration is as defined below and does not include changes such as updating screens to correspond with State-specific language). You must be able to demonstrate this functionality EXACTLY as defined.
W - Workflow or System Configuration Required	The COTS solution, as delivered at contract execution, contains the functionality as described in workflow and business rule but must be configured during the project.
M - Modify - Modification Required	The underlying code of the COTS solution must be modified at a cost to meet this functionality. Please do not comment. **DO NOT** include costs in Technical Response; if you do, your proposal will be disqualified.
F - Future - Planned for Future Release	The current version of the COTS solution cannot meet the functionality as stated, but functionality will be met by a planned future release of the system at no additional cost to WV. **Enter the anticipated date** of the release where the feature will be included in the date column.
N- Cannot Meet - Cannot Meet Requirement	The COTS solution proposed for WV will not satisfy the requirement.

BUSINESS PROCESS: INDUCED TERMINATION OF PREGNANCY (ITOP)

When an Induced Termination of Pregnancy (ITOP) occurs in West Virginia, the event must be registered with the State.

The facility logs into the EVRS system to access the registry and once logged in, they create the record. Then the record is certified in the system and is submitted to the State registry. The record SFN is automatically applied to the record along with the date and time stamp required. The original record is saved in the database as "Submission #1."

If there are any exceptions to the record, the record is automatically sent back to the facility with a message stating the reason for rejection. The facility will then make the appropriate corrections and resubmit the record to the State. The second submission is saved in the database as a separate record which does not overlay, but is linked to, the original.

This process continues until the record is complete. Each new submission is a new record that does not overlay, but is linked to, the original record. Each new submission is date and time stamped

NAPHSIS use case models:

- EBRS UC 004 v. 1.9 - Create ITOP Record

Description: Facility creates ITOP report (Box 1); Paper? (Box 2); If no, log into EVRS at facility (Box 3); Key record (Box 4); If yes, WV/OOS facility sends form to State (Box 17); OK? (Box 18); If no, State calls facility to obtain any missing info or incorrect information (Box 22); If yes, State keys record, scans and attaches form (Box 19); File record (Box 20)

The facility user logs into the EVRS system. Once the user is logged in, they create the ITOP Record.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
IT1	**User Log in**	Please see the General Requirements section B -User Authentication for rules related to user log in.		
IT2	**User Profiles**	Please see the General Requirements section C -Roles, Profiles and Institutional Affiliations for rules related to user log in.		
IT3	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
IT4	**Scanning**	Please see General Requirements, A - User Technical Environment, regarding rules related to scanning.		
IT5	**Search Rules**	Please see the General Requirements, section M- Searching and Matching, for search and duplicate checking rules.		
IT6	**Unique ITOP Screens**	ITOP records have unique screens for data entry.	***E - Exact match***	
IT7	**ITOP Screens Match Form**	The layout of the ITOP tabs/screens matches the layout of the State's ITOP form to facilitate data entry.	***E - Exact match***	
IT8	**Print Blank ITOP Form**	The system allows user to print copies of the blank ITOP form	***E - Exact match***	
IT9	**Fields State Defined**	The specific fields on the ITOP screens are State defined.	***E - Exact match***	
IT10	**Fields for Out-of-State ITOP**	If a procedure was performed out of state and the ITOP report was not received via STEVE, additional State-defined fields and edits are required.	***W - Workflow or System Configuration Required***	With GCOM VRMS new fields can easily be added or removed from the individual form pages.
IT11	**ITOP User ID**	The system automatically assigns the facility name and ID based on the User ID.	***E - Exact match***	
IT12	**Duplicate Record Search**	The system automatically searches for a duplicate record for the facility based on State defined criteria such as facility, physician, mother's age, county of residence, procedure, and encounter number, or other facility-specific indicators, none of which may be SSN.	***E - Exact match***	

IT13	**Medical Record Number**	The ITOP screens provide a field to enter the patient medical record number. The medical record number may not be the same as the SSN.	***E - Exact match***	
IT14	**Encounter Number**	The ITOP screens provide a field to enter the patient encounter number. The encounter number may not be the same as the SSN.	***E - Exact match***	
IT15	**Facility Information**	The system will capture a series of information about the facility where the procedure took place. Fields are State defined.	***E - Exact match***	
IT16	**Patient's Information**	The system will capture a series of information about the patient. Fields are State defined.	***E - Exact match***	
IT17	**Procedure Information**	The system will capture a series of information about the ITOP procedure. Fields are State defined.	***E - Exact match***	
IT18	**Filtered List for Attending Physician**	The system allows the user to select the name of the attending physician from a filtered list which can be edited by an authorized user at the State.	***E - Exact match***	
IT19	**Mandatory Fields**	Mandatory fields that must be completed before the record can be submitted to the State will be State defined.	***E - Exact match***	
IT20	**Additional Fields for Under 17 Years**	The system populates additional State defined fields if mother is 17 years or younger.	***W - Workflow or System Configuration Required***	GCOM VRMS uses a configurable validation rule system
IT21	**Edits State Defined**	All edits are State defined.	***E - Exact match***	
IT22	**Edits Do Not Prevent Submission**	No edit will prevent a record from being submitted to the State	***W - Workflow or System Configuration Required***	rules. Hard edit rules currently in place for ITOP would prevent submission to the state.
IT23	**Cross-Field Edits**	The system performs cross-field edit checks of the information for reasonableness of data specific to ITOP. For example, the gestational age and date of last menses should be within a range that makes sense. Exceptions must be validated by the user.	***E - Exact match***	
IT24	**Patient Age Compared to Number of Terminations and Previous Births**	The system will run an edit check on the number of previous births/terminations and the age of the patient.	***E - Exact match***	
IT25	**Year of Last Menses**	Edit checks verify the year of filing against the year of last menses.	***E - Exact match***	
IT26	**Date of Termination**	Date of termination is a mandatory field and the record cannot be submitted without this date. Mandatory fields are State defined and could include: facility name and address, county, and physician's name and address.	***E - Exact match***	

Description: OK? (Box 5); If no, edit (Box 6); If yes, Submit to State (Box 7)

Once the record is created, it is certified in the system. Once certified, the system user submits the record to the State.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
IT27	**Mark "Complete"**	The user takes a specific action to mark the record "complete."	***E - Exact match***	
IT28	**ITOP Records with "Complete" Status**	ITOP records with a "complete" status may not be altered by the system user unless rejected back to them by the State.	***E - Exact match***	
IT29	**Edits Do Not Stop Record**	The ITOP record may be submitted despite having missing data or unvalidated edits.	***W - Workflow or System Configuration Required***	rules. Any rules that are not overridden by the user would prevent the record from being submitted.
IT30	**View ITOP Record**	Once an ITOP record is submitted to the State, the system user may view the record only.	***E - Exact match***	
IT31	**Date Report Submitted**	The system automatically adds the date to the electronic record when the record is submitted to the State (Month, Day, Year).	***E - Exact match***	

Description: File and apply SFN upon submission (Box 8)

Once the record is submitted to the State, a State File Number (SFN) is applied to the record and includes the date and time stamp.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
IT32	**State File Number**	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN		
IT33	**Registration**	The system registers a record submitted to the State.	***E - Exact match***	
IT34	**Date Report Registered**	The system automatically adds the date to the electronic record when the record is registered at the State (Month, Day, Year).	***E - Exact match***	
IT35	**Original Submission**	The system will automatically mark the original submission as "Submission #1".	***F - Future***	Release Spring 2020

Description: Record with exceptions? (Box 9); If no, record is ready for extract for Vital Statistics and STEVE (Box 10); If yes, is placed in queues for review (Box 11); State reviews exception queue (Box 12); OK? (Box 13); If no, State queries facility (Box 14)

The system automatically checks to see if there are any exceptions on the record. If there are no exceptions, the Induced Termination Registry process is complete. If there are exceptions, with no human intervention, the record is automatically sent back to the facility and the rejection contains a message stating the reason for the record's rejection.

	Business Rule Name	*Business Rule Description*	*Vendor Response*	*Comments*
IT36	**Registering Record**	Please see the General Requirements section O - State File Numbers and Registration. All rules apply here.		
IT37	**State File Number**	Please see the General Requirements, section O - State File Numbers and Registration, for rules regarding the SFN.		
IT38	**Query and Rejection Cycle**	Please see Query and Rejection Cycle business rules, regarding rules related to rejection and corrections of the system records.		

IT39	**Record Ownership and Access**	Please see the General Requirements, section D - Record Access/Ownership, for rules related to record ownership and access.		
IT40	**Edit Checks**	Please see the General Requirements, section L - Data Editing, for edit check rules.		
IT41	**Checks for Exceptions**	The system will automatically run all edits against the exceptions.	***W - Workflow or System Configuration Required***	
IT42	**Exception State Defined**	All exceptions for ITOP are State defined.	***W - Workflow or System Configuration Required***	
IT43	**Automatic Rejection**	The system automatically rejects a record back to the original author if there is an exception on the record.	***W - Workflow or System Configuration Required***	
IT44	**Rejected Records Pop Up Message**	When a facility user logs on, the system provides a pop up message indicating that there are rejected records that need to be reviewed.	***W - Workflow or System Configuration Required***	
IT45	**Error Message**	The system provides a message stating the reason for the rejection.	***W - Workflow or System Configuration Required***	
IT46	**Retain State File Number**	A rejected record will retain the SFN.	***W - Workflow or System Configuration Required***	
IT47	**Retain File Date**	A rejected record will retain the original file date.	***W - Workflow or System Configuration Required***	

Description: Facility responds to query (Box 15); State updates record if needed and removes flag (Box 16)

The facility makes corrections to the rejected record as instructed and re-submits the record.

	Business Rule Name	***Business Rule Description***	***Vendor Response***	***Comments***
IT48	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
IT49	**Query Message**	Please see General Requirements, section Q - Messaging through the System, regarding rules related to query messages for system users.		
IT50	**Rejected Records Queue**	The system provides a Rejected Records Queue at the facility. This queue contains records rejected by the State back to the facility for further action/clarification.	***W - Workflow or System Configuration Required***	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
IT51	**Highlight Errors**	The system will highlight errors on the record.	***E - Exact match***	
IT52	**Allow Corrections**	The system allows the original author to make corrections on a rejected record.	***E - Exact match***	
IT53	**Rejection Opens Fields**	Rejecting the record to the facility makes the record open for further data entry.	***E - Exact match***	
IT54	**Soft ITOP Edits**	The system provides State defined soft edits for ITOP event data.	***E - Exact match***	
IT55	**Hard ITOP Edits**	The system provides State defined hard edits for ITOP event data.	***E - Exact match***	
IT56	**New Record Created**	A new secondary record is created that is linked to the original record.	***F - Future***	Release Spring 2020
IT57	**Re-Sign Record**	Once corrections are made, the system allows the record to be re-signed.	***E - Exact match***	
IT58	**Resubmit Record**	Once corrections are made, the system allows the record to be resubmitted to the State.	***E - Exact match***	
IT59	**Unlimited Submissions**	The system allows an event to go through an unlimited amount of rejections and corrections until there are no exceptions on the record.	***E - Exact match***	
IT60	**Track Submission**	The system will track the number of times a record is rejected and resubmitted for each event.	***E - Exact match***	

Additional Rules Regarding Queues, Reports, and Messages

IT61	**Exports and Imports**	Please see General Requirements, section AA - Exports and Imports, for rules on imports and exports.		
IT62	**Specific Exports and Imports**	Please see General Requirements, section BB - Specific Exports and Imports, for rules on imports and exports.		
IT63	**OOS ITOP Records**	Please see Out of State for all rules related to ITOP records received from out of state.		
IT64	**Queues Rules**	Please see the General Requirements section N - Queues for rules of queues.		
IT65	**Reports**	Please see Reports - Appendix C for rules on reports.		
IT66	**Void Record**	Please see the General Requirements, section I - Voids and Abandonment of Records, for rules on voiding a record.		
IT67	**Pending Queue**	The system provides a Pending Queue for records in process.	***E - Exact match***	
IT68	**Past Due Queue**	The system provides a Past Due Queue. This queue contains records that have not yet been submitted to the State after a State defined period of time.	***W - Workflow or System Configuration Required***	GCOM VRMS' queue system and configurations allow for quick set up of any desired queue.
IT69	**Past Due Pop Up Alert**	When a facility user logs on, the system will provide a pop up message indicating that there are records that are overdue.	***F - Future***	Release Spring 2020

IT70	**Past Due Pop Up Message**	The pop up message will remind the user of the statutory requirement to submit records within a State defined period of time after the procedure.	***F - Future***	Release Spring 2020
IT71	**Edit Any Data**	The system allows an authorized State user to edit any data on an ITOP record.	***W - Workflow or System Configuration Required***	GCOM VRMS currently prevents State users from editing data on any records that they do not have ownership.
IT72	**Query Message for Duplicate Events**	The system allows a user to generate a query message for apparent duplicate records. The query is pre-populated with information from the record.	***F - Future***	Release Spring 2020
IT73	**Query Message Configurable**	The time frame for a query message must be configurable.	***F - Future***	Release Spring 2020
IT74	**Delete Duplicates**	Duplicates may be deleted manually by an authorized user.	***W - Workflow or System Configuration Required***	Duplicates in GCOM VRMS can be either Void or Abandoned. These records are still available to view for authorized users.
IT75	**ITOP Facility**	The system allows the state user to select the facility where procedure was performed from a filtered list.	***E - Exact match***	
IT76	**Less Than 17 Years Old Report**	The system automatically runs a report that list all records in which the mother was 17 years or younger during a state defined period of time.	***W - Workflow or System Configuration Required***	GCOM VRMS features generated reports that can be set up for the desired requirements.
IT77	**Print Reports**	Various reports are available that summarize ITOP reporting for in-state and out-of-state reports.	***W - Workflow or System Configuration Required***	GCOM VRMS features generated reports that can be set up for the desired requirements.
IT78	**Report Format**	Reports used for public reporting purposes must be in a State defined format.	***W - Workflow or System Configuration Required***	GCOM VRMS features generated reports that can be set up for the desired requirements.

Appendix A - System Requirements

Rule No.	Name	Description	Vendor Response	Comments
B1	State User authentication	State users are able to access the system through a single sign-on to the Web Application for authentication. The user may also access the Web Application through a shortcut placed on the desktop.	E - Exact match	
B2	Icon automatically placed	When a new state user is set up in EVRS, the system automatically places the shortcut on their desktop.	W - Workflow or System Configuration Required	This is handled by the agency Desktop adiministrator, GCOM will able to provide the details for the application.
B3	Remote State User authentication	When State users are working remotely, they access the application through the Web Browser.	E - Exact match	
B4	Limit access by role	The system allows the State to limit access from outside the State firewall by user role.	E - Exact match	
B5	Restrict employee access	Some but not all State employees can be restricted from accessing EVRS from outside the State environment.	E - Exact match	
B6	Restrict access by time	Some but not all State employees can be restricted from accessing EVRS from outside the State environment during specific periods of time in the day.	F - Future	Release Spring 2020
B7	User ID format	The format of the user ID and password is State-defined.	W - Workflow or System Configuration Required	
B8	User authentication	Authentication to the system for both internal and external users is encrypted.	E - Exact match	
B9	Default password	A default password is set to a randomly generated password when a new user account is established.	E - Exact match	Password policy is defined by agency administrator.
B10	Password initial change	The system requires users to change their default password on the first logon.	E - Exact match	Password policy is defined by agency administrator.
B11	Password access restricted	A user's password is not available to anyone else including the State System Administrator.	E - Exact match	
B12	Reset to default	The System Administrator can reset a password back to the default and force the user to establish a new password at first logon.	E - Exact match	Password policy is defined by agency administrator.
B13	Passwords expire	User passwords expire on a State-defined schedule.	E - Exact match	Password policy is defined by agency administrator.
B14	Change password at logon	The logon screen includes an option for the user to change their password.	E - Exact match	Password policy is defined by agency administrator.
B15	Notification of password expiration	The system notifies a user ahead of time that the password is expiring.	E - Exact match	Password policy is defined by agency administrator.
B16	Days to expiration	The number of days a user password is valid is State-defined.	E - Exact match	Password policy is defined by agency administrator.
B17	Days for notice	The number of days prior to a user's password expiration at which time an expiration notice is sent is State-defined.	E - Exact match	Password policy is defined by agency administrator.
B18	Prompt to update email/phone	The system directs the user to update their email and phone number whenever the password is changed.	F - Future	Release Spring 2020
B19	Option to reset password	At logon, the system includes an option for users to request a password reset if the user forgot their password.	E - Exact match	
B20	Self-service password reset	Passwords for users can be reset based on successfully answering their pre-set security questions.	E - Exact match	
B21	Security questions	Users can select their security questions from a list.	E - Exact match	
B22	Logon attempts limited	The number of times a user can attempt to logon before locking the account can be configured by the State.	E - Exact match	

Rule No.	Name	Description	Vendor Response	Comments
B23	PIN	In addition to User ID and password, when signing or certifying a record prior to submission to the State an authorized user has a PIN that is entered at the time of signing/certifying.	E - Exact match	Next generation feature of Facial reconginition is already implemented for GCOM VRMS.
B24	Set PIN at first logon	If a user is a signer/certifier based on the role/profile they have been given, the system will prompt them to enter their PIN at first logon.	E - Exact match	
B25	Change PIN	The system provides an option for a signer/certifier to change their PIN.	W - Workflow or System Configuration Required	
B26	Multiple system sessions	The system allows users to be signed into more than one device at a time.	E - Exact match	
B27	Session timeout	Session timeout is state-defined and configurable.	E - Exact match	
B28	Timeout warning	The EVRS provides a warning prior to session timeout.	E - Exact match	
B29	Warning configurable	The time when the timeout warning message fires is configurable.	E - Exact match	
B30	Save as draft	When a session is timed out, the EVRS saves a draft of any unfinished transactions.	E - Exact match	
B31	User Profiles	Once logged in, the user's access is controlled by the role/profile that was assigned to the user.	E - Exact match	

Attachment D3 - F Specifications

Reference#	Short Description	Long Description	Vender Response	Comments
		A - System Reports		
A1	Listing of Queues	A report of the contents on any queue.	Yes	
A2	Case Lists By Role	The user may create a user defined report or display a list of records by role and /or profile. The list or report is sortable by any of the fields contained within it.	Yes	
A3	Case Lists by Status	The user may create a State defined report or display a list of records by record status. The list or report is sortable by any of the fields contained within it.	Yes	
A4	Range of SFN numbers	The system allows a user to enter a list of State File Numbers consisting of individua numbers and ranges of numbers for which to print abstracts or certificates.	Yes	
A5	Registered Users and Facilities	A listing of registered users by type of user (funeral home user, medical certifier, State employee, etc.) and the organization they are affiliated with, showing titles, levels of access, and frequency of use. Produced monthly or on demand by the application administrator. (NAPHSIS Report 39.0).	Yes	
A6	EVRS System Usage	A system usage report for an institution and individual institution users, upon request using state defined selection criteria such as date range, date and time range, case type, case number, type of activity and includes data regarding records viewed (i.e. for child services billing). This report may be viewed on screen or printed.	No	
A7	Report of Changes	A Report of all changes on a specific record, since record inception. This report may be viewed on screen or printed.	Yes	
A8	System Users	A list of all system users who have entered records in EVRS. Needs to be able to be run for one group of users (ex: Midwives) or multiple groups of users (ex: Regional Offices and State Office Front Counter.	Yes	
A9	Update Transaction Report	Audit log of any changes to a record sorted by year and SFN. This report may be viewed on the screen or printed.	Yes	
		B - Death Record Outputs		
	FORMS and CERTIFICATES			
B1	Death Abstract	A death abstract is a system form with data populated from a death record. The format and fields are State defined. This is not a legal copy and is marked with a state defined watermark.	Yes	
B2	Statement of Death	A system form populated from a death record. This form includes decedent name, date of death and county of death, and is available to genealogists. The format and fields are state defined.	Yes	

B3	**Verification of Death**	A system form populated from a death record. The format and fields are State defined. This form differs from the Statement of Death as it contains the SFN and file date.	Yes	
B4	**Institution Face Sheet**	A standard face sheet is available in the system to print, on demand, by institution. The form and fields are user defined by the State and will contain decedent demographic information, date of death cause of death, and other information from the record. While the fields on the face sheet are the same for all institutions, the system will be able to distinguish which institution is accessing the form and print the form with the institution's name and location.	Yes	
B5	**Full Certificate of Death**	Print a full certified death certificate including all medical information and with or without signatures.	Yes	
B6	**Long Form Certificate**	Print a long form full certified death certificate containing State defined fields. ("The Full Size")	Yes	
B7	**Short Form Death Certificate**	Print an abbreviated short form, legal certified copy of a death certificate. This document does not contain any medical information.	Yes	
B8	**Delayed Certificate of Death**	Print the form "Delayed Certificate of Death" on demand for a specific case. This is a State defined form.	Yes	
B9	**Delayed Certificate of Death - Abstract Supplement**	Print the form "Delayed Certificate of Death - Abstract Supplement" on demand for a specific case. This is a State defined form.	Yes	
B10	**Authorization for Final Disposition**	A form generated from a death record. Fields are user defined.	Yes	
B11	**Fetal Death Authorization for Final Disposition**	A form generated from a fetal death record. Fields are user defined.	Yes	
B12	**Cremation Abstract**	A State defined form that can be printed from a death record.	No	
B13	**Cremation Permit**	A State defined form that can be printed from a death record.	No	
B14	**Medical Examiner's Verification for Cremation Permit**	A State defined form for the medical examiner to sign, verifying that the information on the death certificate is accurate prior to authorizing a cremation permit.	No	
B15	**Disinterment/Reinterment Permit**	Print a blank disinterment permit for non-EVRS system users, including instructions.	Yes	
B16	**Disinterment/Reinterment Permit**	A State defined form containing fields such as decedent and location information.	Yes	
B17	**Full Certificate of Death (not a legal copy)**	Print a full copy of a death certificate with a watermark indicating that the copy is "not legal."	Yes	

B18	**Funeral Home Verification Death Record**	The funeral home may print a report of a death record to be used to verify the information collected from the informant. This report includes all demographic information about the decedent and provides a place for the informant to sign acknowledging that the information on the form is accurate. This form is State defined	Yes	
B19	**Death Worksheet**	A State defined form that may be printed in order to collect death data from the informant.	Yes	
B20	**Medical Certifier's Death Abstract**	A State defined form that includes minimal demographic information and all medical information about a decedent.	Yes	
B21	**Non-Resident Death Abstract**	A State defined abstract of a single death record for a non-West Virginia resident. This may be printed from the system to report death to decedent's state of residence.	Yes	
	LETTERS			
B22	**Death Certificate instructions**	A State defined letter that users can edited and print which provides instructions for completing a death certificate.	No	
B23	**Death Query Letter**	A State defined letter that users can edit asking for clarification on missing information on a death record.	Yes	
B24	**Cause of Death Query Letter**	A State defined query letter that users can edit requesting clarification on Cause of Death information.	Yes	
B25	**Death Certificate Pending Letter**	A State defined letter that users can edit which sent to requestors informing them that the cause of death is still pending due to Medical Examiner investigation. Letter may be run on-demand and is pre-populated from the death record.	Yes	
B26	**Cause of Death Letter Required**	A State defined letter that users can edit which can be printed on demand for outstanding incomplete registered death records (e.g. Pending Cause of Death) in excess of the State-defined time period.	Yes	
B27	**Non-Contagious Disease Letter**	A State defined letter for transporting bodies out of the country.	Yes	
B28	**Embalmer's Affidavit**	A State defined letter for transporting bodies out of the country.	Yes	
	REPORTS			
B29	**Out-of-State Resident Deaths**	A report of all information regarding residents of other states who have died in West Virginia. This report is produced on demand if the information has not been electronically reported through STEVE.	Yes	
B30	**WV Deaths born Out-of-State**	A report of all information regarding residents of WV who were born in other states. This report is produced on demand if the information has not been electronically reported through STEVE.	Yes	
B31	**Deaths – Under 1 Year Old of Age**	A standard report to provide a birth/death match audit list. Key data elements include record identifier, name, date of death, match/no-match. Only infant deaths that are not matched are printed.	Yes	

B32	**Missing Number Report for Death**	A list report that shows gaps in death certificate numbers.	Yes	
B33	**Prescription Drug Deaths**	A report run on demand of all ICD codes related to prescription drug deaths. ICD codes for report are editable.	Yes	
B34	**Occupational Fatality**	A report that provides all deaths that occur in state due to occupational fatalities. The fields are user defined. The recipient reviews the report in order to requests copies of death certificates of interest related to workplace deaths	Yes	
B35	**Unknown Cause of Death**	A report of all death records with a cause of death based on ICD Code R99.	Yes	
B36	**Rare Cause of Death**	A report of death records with rare causes of death for a specified period of time. User may specify one or more rare causes of death to be included in the report.	Yes	
B37	**Cause of Death Error Listing**	Listing of records to be queried because of cause of death errors, showing the name of medical institution, medical certifier, name of the decedent, date of death, county or city of occurrence, and cause of death as listed on the certificate, produced upon demand. This report is user defined.	No	
B38	**Pending Cause of Death Listing**	Listing of death certificates with pending cause of death, showing the name of decedent, the certifier, county or city of occurrence, date of death, and length of time registered, and SFN, produced on demand. (NAPHSIS Report 16.0)	Yes	
B39	**Print History of a Record**	Print a complete history of a record including all the corrections or amendments associated with the record, searches on the record, requests for the record, and copies made. The report shows the chronological order of these activities and identifies the changes made to the record.	No	
B40	**Institution's Incomplete Records**	A report, upon request, by an authorized user of an institution's incomplete or orphaned records for any event type for a specified time period. Lists all cases in the institution that meet the criteria, and includes the name of the last user to work on the case.	Yes	
B41	**Death Certificate Query Report**	Number and percentage of death certificates queried by type of query and data provider, produced with month and year-to-date figures that print by geographic area. Report does not include cause of death information. Data providers can print the report for their own institution only. The fields in this report are state defined. Report can be run on demand and user may specify date range report should cover.	Yes	
B42	**Cause of Death Query Report**	Number and percentage of death certificates queried for cause of death errors by data provider and type of query, produced on demand with year-to-date totals. May be shown by geographic area. The fields in this report are state defined. (NAPHSIS Report 15.5)	Yes	
B43	**Audit Report of Changes to Death Certificate after SSN Verification**	On-demand listing of key fields used for SSN verification that were changed on the death certificate (as defined by SSA and the State) after the SSN number had been verified. The listing shows the user id of the user who changed the key fields and the specific fields changed. (NAPHSIS Report 18.5)	Yes	

B44	**Death Institution Registration Audit Report**	Listing of deaths registered by hospital/inst. . and internal record number. Includes timeliness includes filing deaths with completed demographic information and timeliness on the medical certification by physicians in the institution. Shows total number and percentage of late registrations. May be produced for a user-specified time period.	Yes	
B45	**Funeral home Registration and Timeliness Report**	Number of registered deaths by funeral home, the average time between death and registration of event, the overall number and percent of late registrations, and comparison of funeral home with state overall timeliness average. Produced monthly with year-to-date totals. Report is accessible to funeral homes.	Yes	
B46	**Funeral Home Quality Report**	Number and rate of unknowns by funeral home for selected death certificate items, with comparison of the funeral home versus state overall rate. Available monthly or as needed with year-to-date totals. Report is accessible by funeral homes.	Yes	
B47	**Medical Certifier Home Quality Report**	Number and rate of unknowns by medical certifiers for selected death certificate items, with comparison of the medical certifier versus state overall rate. Available monthly or as needed with year-to-date totals. Report is accessible by medical certifiers.	Yes	
B48	**Individual Medical Certifier Timeliness Report**	Number of registered deaths by medical certifier (including Medical Examiners), the average time between death and certification of the event, the overall number and percent of late registrations, and comparisons of medical certifiers with state overall timeliness average. Produced on demand with year-to-date totals. Report is accessible by the State. This report is configurable and compares the date of notification (or death if no automated notification) to the date certified.	Yes	
B49	**NCHS Timeliness Report**	Number of registered deaths by medical certifier, the average time between date of death and submission to NCHS with cause of death included. Produced on demand with year-to-date totals. Report is accessible by the State.	Yes	
B50	**Individual Funeral Director Timeliness Report**	Number of registered deaths by funeral director, the average time between death and registration of event, the overall number and percent of late registrations, and comparison of funeral directors with state overall timeliness average. Produced monthly with year-to-date totals. Report is accessible by funeral homes.	Yes	
B51	**Funeral Home Query Report**	Number and percentage of death records queried and number of times each data item is queried by funeral home and user, geographic area and/or error code. Produced monthly with year-to-date totals.	Yes	
B52	**MICAR Sent Report**	A standard report to provide an audit list of sent MICAR records. Key data elements include record identifying info, total count.	Yes	
B53	**Reportable Diseases**	Lists cases of reportable diseases listed as primary or contributing causes of death. Report may be run on-demand. This list is user defined and managed by authorized users through a table.	No	
B54	**Cremation Report**	A report that provides the number of cremation authorization printed for a specific funeral establishment for a specified period of time. If run by funeral directors, the report is provided for their establishment only.	Yes	
B55	**Disinterment Report**	The system provides a list of approved Disinterment Permits for a user specified period of time, and for their establishment/institution.	Yes	

B56	**Deaths by date (specified time frame)**	An ad hoc report for funeral director or medical certifiers that lists the deaths by date for a specific timeframe. The fields of this report are user defined. This report can be run only for records completed by the user creating the report. An authorized user a the State may run the report by specific funeral director, medical certifier or by institution.	No	
B57	**Deaths by date and manner (specified time frame)**	An ad hoc report for funeral director or medical certifiers that lists the deaths by date and manner of death for a specific timeframe. The fields of this report are user defined. This report can be run only for records completed by the user creating the report. An authorized user at the State may run the report by specific funeral directo, medical certifier or by institution.	Yes	
		C - Birth Record Outputs		
	FORMS			
C1	**Birth Worksheet**	Print a form to be filled out by the mother or parents to collect the birth data.	Yes	
C2	**Institution Birth Verification**	A form with birth information on it for verification by the parents. The form istate defined and provides a space for the mother to sign. This is not a certified legal copy and is marked as such.	Yes	
C3	**Home Birth Verification**	A form with birth information on it for verification by the parents. The form is state defined and provides a space for the mother to sign. This is not a certified legal copy and is marked as such.	Yes	
C4	**Full Certificate of Live Birth (includes medical information)**	Print a birth certificate for internal use only that is state defined and includes all relevant medical data and other birth information. This is not a legal copy and is clearly marked as such.	Yes	
C5	**Complete Legal Certified Copy of Birth Certificate**	Print a complete legal certified copy containing minimal event data (but more than short form) and no medical information of a birth certificate after certification by the Registrar for parents and other authorized requestors. This form is state defined.	Yes	
C6	**Verification of Birth**	Print an abstract of birth record data (called a Verification of Birth), generally used to confirm a birth event for government agenciesThis is not a certified legal copy and is marked as such.	Yes	
C7	**Certificate of Foreign Birth**	Print "Certificate of Foreign Birth" on demand for a specific case. This is a State defined document.	No	
C8	**Delayed Certificate of Birth**	Print a birth certificate that was registered more than one year after the date of birth. This type of certificate is different in format from the standard birth certificate. Prints DELAYED over the SFN.	Yes	
C9	**Delayed Certificate of Birth Abstract**	Print an abstract of Delayed Certificate of Birth, generally used to confirm a birth event for government agencies. This is not a certified legal copy and is marked as such.	Yes	
C10	**Birth Transcript (non-resident birth abstract)**	A report of Birth Transcripts is printed and sent to other states for residents of those states who are born in West Virginia. They are a report for each birth with child, mother, and father and medical information as well as a specific SFN. This report only includes original records; it never gets updated as records are corrected or amended. This report is produced on demand if the information has not been electronically reported through STEVE.	Yes	
C11	**Paternity Affidavit Form (PAF)**	Pre-populate Paternity Affidavit (PAF) form from the completed birth record. This includes a complete set of rights and responsibilities (instructions). Users may print the PAF and rights and responsibilities (instructions) separately.	Yes	

C12	**Certificate of Paternity**	Print a form to be filled out by the Clerk o. ircuit Court and Petitioner's Attorney to establish paternity, remove a father, or change a child's last name on a birth certificate.	Yes	
C13	**Certificate of Adoption**	Print a form to be filled out by the Clerk of the Circuit Court for the filing of a new birth certificate following an adoption.	Yes	
C14	**Paternity report**	On a quarterly basis, a Paternity Report is sent to the Department of Social Services (DSS) with state defined information such as number of births, number of out of wedlock births, number of Paternity Acknowledgments by hospital. The Paternity report to the Department of Social Services (DSS) is State-configurable.	Yes	
C15	**Non-Paternity Affidavit (Non-PAF)**	Pre-populate Affidavit of Nonpaternity (Non-PAF) form from the completed birth record.	Yes	
C16	**Newborn Admissions List Report**	Provide facilities with a report or on screen listing of all newborns by a specified birth date range. The fields on this report are state defined. Each facility may see only their births. Reports are printable.	No	
C17	**Transfers - Newborn Transfers (Out) Report**	Provide facilities with a report or on screen listing of all newborn transfer outs by a specified birth date range. The fields on this report are user defined. Each facility may see only their births. Reports are printable.	Yes	
C18	**Transfers - Mother Transfers (In) Report**	Provide facilities with a report or on screen listing of all mothers who transfer into their facility by a specified birth date range. The fields on this report are user defined. Each facility may see only their births. Reports are printable.	Yes	
C19	**Adequacy of Prenatal Care Listing**	Provide facilities with a report or on screen listing for all mothers who gave birth at their facility by a specified birth date range. The fields on this report are user defined and will include identifying information and prenatal care adequacy. Each facility may see only their births. Reports are printable.	Yes	
C20	**Pregnancy Risk Monitoring Assessment**	A State defined monthly report for Maternal Health Risk Assessment.	No	
C21	**Teen Mother Listing**	Provide facilities with a report or on screen listing of all teen mothers who gave birth at their facility by a specified birth date range. The fields on this report are user defined. Reports are printable.	Yes	
	LETTERS			
C22	**Query Letter**	A state defined query letter asking for clarification or missing information on the birth certificate. Portions of the letters are editable by the user.	Yes	
C23	**Infant Letters**	A State defined query letter to hospitals requesting additional information on at-risk infants. Portions of the letters are editable by the user.	Yes	
C24	**Affidavit of Paternity Incomplete**	Create a letter to the parents notifying them that the affidavit of paternity received at the State is not complete and cannot be processed. The letter includes information from the Paternity record, birth record and also indicates the denial reasons with notes.	Yes	
C25	**Affidavit of Non-Paternity Incomplete**	Create a letter to the parents notifying them that the affidavit of non-paternity received at the State is not complete and cannot be processed. The letter includes information from the Paternity record, birth record and also indicates the denial reasons with notes.	Yes	
C26	**Affidavit of Paternity Reminder**	Create a State defined letter to the parents reminding them to submit their affidavit o paternity.	Yes	
C27	**Home Birth Instructions**	Instructions for filing a birth certificate for a planned home birth.	Yes	

C28	**Home Birth Query Letter**	Create a State defined and user editable letter to the parents or midwife requesting additional information for a home birth.	Yes	
C29	**Request for list of Children Letter**	Create a State defined and user editable letter to the parents requesting additional information about all related children.	No	
	REPORTS			
C30	**Institution's Incomplete Records**	A report, upon request, by an authorized user of an institution's incomplete or orphaned records for any event type for a specified time period. Lists all cases in the institution that meet the criteria, and includes the name of the last user to work on the case.	Yes	
C31	**Missing Number Report for Birth**	A list report that shows gaps in birth certificate numbers.	Yes	
C32	**Affidavit of Paternity Completed**	Lists or summarizes birth records for which an affidavit of paternity was filed by the parents. Generated for a specified period of time, List of Paternities by type and status (completed, rejected, rescissions) that are processed by facility.	Yes	
C33	**Birth Institution Registration Audit Report**	Listing of births registered by hospital/institution, internal record number, fathers first and last name, child's name, mother's first, maiden and last name, date of birth and name of attendant. Shows total number. May be produced for a user-specified time period (daily or weekly). (NAPHSIS Report 7.0)	Yes	
C34	**Birth Institution Registration and Timeliness Report**	Number of registered births by hospital/institution, the average time between date of birth and registration of event, the overall number and percent of late registrations, and comparison of institution with state overall timeliness average. Produced monthly with year-to-date totals. Report is accessible by medical facilities. (NAPHSIS Report 8.0)	Yes	
C35	**Birth Institution Quality Report**	Number and rate of unknowns by hospital for selected birth certificate items, with comparison of institution versus state overall rate. Available monthly or as needed with year-to-date totals. Report is accessible by medical facilities. (NAPHSIS Report 10.0).	Yes	
C36	**Birth Records Completed Report**	List of birth records completed by an office, institution, or date range. Generated on demand.	Yes	
C37	**Birth Institution Query Report**	Number and percentage of birth records queried and number of times each data item is queried by birth institution and user, geographic area and/or error code. Produced monthly with year-to-date totals. (NAPHSIS Report 9.0)	Yes	
C38	**Babies Less than 500 Grams or Not Weighed (9999)**	A State defined report, for each institution, on all births with a birth weight of '9999', not weighed or under 500 grams, sorted by Birth Certificate Number. Printed on demand.	Yes	
C39	**Unmatched Multiple Births**	Records where the plurality code was greater than one but where there was not a record for the other birth(s) (i.e., there is a record for one twin without the other). The report is used to determine if there was an error in entry or an unreported fetal death	Yes	
C40	**Summary of Deliveries**	A report of the number of live births per physician/midwife for specific birthing institution for a specified range of dates. Users may run this report for their institution only.	Yes	
C41	**Detailed Delivery Report**	A report of live births reported or attended by a specific physician or midwife for a specified period of time. This report is user defined and will included fields such as: child's name, mothers full name, date of birth. Facilities may run this report only for physicians/midwives associated with their facility.	Yes	

C42	PAF and Out-of-Wedlock Births	A State defined report comparing the number of Paternity Affidavits with the number of out-of-wedlock birth, by each birthing institution. Run on demand.	Yes	
C43	Compare West Virginia to Out of State Births	The system runs a query on demand that compares out-of-state births to West Virginia birth records in order to find any births that may have been reported twice. The fields used to match records are State defined. The output may be a report or a screen listing. .	Yes	
C44	Records with Query Items	Summary count of the number of records with birth query items.	Yes	
C45	Total Query Items	Number of total birth query items by facility and error code.	Yes	
C46	Query Listing	A listing of birth query items and their frequency by facility or certifier followed by a report of the specific birth query items by certificate.	Yes	
		D - Birth-Death Cross Match Reports		
	REPORTS			
D1	Listing of Unmatched Births with High Probability of Death	A listing of birth records with no matching death certificate and containing selected medical risk factors (e.g., low birth weight and gestation age, selected congenital anomalies) suggesting a high probability of infant death. This listing will be State defined and include, at minimum, name of child, mother's maiden name, certificate number, date of birth, city or county of occurrence, and flag indicating whether child is alive at time of reporting, and birth institution. Produced quarterly or on demand. (NAPHSIS Report 37.5).	Yes	
D2	Birth/Death Linkage Report for Persons Aged 1+	Number and percentage of records of persons aged 1+ linked by method (automated or manual). Produced as needed. (NAPHSIS Report 37.0).	Yes	
D3	Death with no corresponding birth	A list of infant death records with no corresponding birth record.	Yes	
D4	Summary of Deliveries	A report of the number of deliveries per physician/midwife for a specific birthing institution for a specified range of dates. Users may run this report for their institution only.	Yes	
D5	Detailed Delivery Report	A report of deliveries reported or attended by a specific physician or midwife for a specified period of time. This report is user defined and will included fields such as: child's name, mothers full name, date of birth. Facilities may run this report only for physicians/midwives associated with their facility.	Yes	
		E - Fetal Death Reports (Missing Supplemental Report of Cause of Fetal Death)		
	FORMS			
E1	Report of Fetal Death	On demand, print a report of all data in the Fetal Death record.	Yes	
E2	Facility Worksheet for the Report of Fetal Death	Print a blank Facility Worksheet for the Report of Fetal Death at a hospital.	Yes	
E3	Patient's Worksheet for the Report of Fetal Death	Print a blank Patient's Worksheet for the Report of Fetal Death at a hospital	Yes	
E4	Fetal Death Verification Form	Print a State defined form for the parents to review.	Yes	
E5	Non-Resident Fetal Death Transcript	Abstract of a single fetal death report for a non-West Virginia resident. Used to report fetal death to mother's state of residence.	Yes	
E6	Certificate of Birth Resulting a Stillbirth	Print the form "Certificate of Birth Resulting in Stillbirth" on demand for a specific case. This does not contain cause of death information and fields are State defined.	Yes	
	LETTERS			
E7	Fetal Death Query Letter	A letter sent to hospitals requesting information on missing or contradictory items.	No	
	REPORTS			

E8	**Fetal Death Registration and Timeliness Report**	Number of fetal deaths and the number and percent of late registrations by medical institution. Produced on demand with year-to-date totals. May be produced by geographic area. (NAPHSIS Report 20.0)	Yes	
E9	**Fetal Death Query Report**	Number and percentage of fetal death reports queried by type of query, weeks of gestation or birth weight, medical institution and by person completing the report. Produced monthly with year-to-date totals. May be produced by geographic area. (NAPHSIS Report 21.0)	Yes	
E10	**Fetal Data Quality Report**	Number of registered fetal deaths and rate of unknown for selected data items by medical institution, by person completing the report and weeks of gestation (or birth weight). Produced monthly with year-to-date totals. (NAPHSIS Report 22.0).	Yes	
E11	**Fetal Death and Birth**	A report that lists all fetal deaths that matches a live birth (subsequent infant death).	Yes	
E12	**Fetal Death and Death**	A report that lists all fetal deaths that matches a death record.	Yes	
		F- ITOP Reports		
	FORMS			
F1	**Non-Resident ITOP Transcript**	An abstract of a single ITOP report for a non-West Virginia resident. Used to report ITOP to patient's state of residence.	Yes	
F2	**Report of ITOP**	On demand, print a report of all data in the ITOP record.	Yes	
F3	**Blank Report of ITOP**	On demand, print a blank Report of ITOP at a hospital.	Yes	
	LETTERS			
F4	**Error Query Cover Letter**	On demand, print a cover letter to the clinic requesting corrected/additional information. Letter is pre-populated based on information in the record.	No	
	REPORTS			
F5	**ITOP Registration and Timeliness Report**	Number of ITOPs and the number and percent of late registrations by institution. Produced on demand with year-to-date totals. May be produced by geographic area.	Yes	
F6	**ITOP Error Report**	A list of records containing errors or out-of-range values that may be verified before acceptance by the State. Report is generated on demand for an individual clinic/user.	Yes	
F7	**ITOP Gestational Weeks Report**	A list of records with gestation above 24 weeks (and above 20) to be verified before acceptance by the State. The number of gestational weeks is configurable. Report is generated on demand for an individual clinic/user.	Yes	
		I - Legal Correction and Amendment Reports and Legal Letters		
	FORMS			
I1	**Affidavit to Correct West Virginia Death Certificate**	EVRS supports the generation of an affidavit for the correction of a death record, pre-populated with information from the event record. It also allows the user to enter the evidence information prior to printing.	Yes	
I2	**Affidavit to Correct West Virginia Birth Certificate**	EVRS supports the generation of an affidavit for the correction of a birth record, pre-populated with information from the event record. It also allows user to enter the evidence information prior to printing.	Yes	
I3	**Amended certificate of birth by legitimation**	EVRS supports generation of an affidavit for the correction of a birth record by legitimation, pre-populated with information from the event record. It also allows user to enter the evidence information prior to printing.	Yes	
I4	**Supplemental Report**	EVRS supports the generation of a medical item amendment (Supplemental Report) form, which contains pre-populated data from the death record.	Yes	

I5	**Removal Slip**	For legacy records, print a single page w new State File Number, removal date, and code citation.	No	
	LETTERS			
I6	**Form Letter for Affidavit of Correction**	A form letter containing instructions to requestors on how to submit an affidavit of correction so that their transaction can be processed.	Yes	
I7	**Death Supplemental Form Letter**	A letter regarding errors in the medical portion of a death certificate and requesting the recipient's concurrence to correct.	Yes	
I8	**Delayed Death Form Letter**	A request for additional information to process a delayed death certificate.	Yes	
I9	**Instructions for name change Court Order**	Instructions for requesting a name change on a birth record.	Yes	
I10	**Instructions to Correct Death Form Letter**	A letter informing the recipient that information on the death certificate is incorrect and providing instructions for making the correction.	Yes	
I11	**Court Order Letter**	A letter requesting missing information or fees for processing a court order.	Yes	
I12	**Adoption Form**	A letter requesting missing information or fees for processing an adoption.	No	
I13	**PAF More Information**	A letter requesting missing information or fees for processing an affidavit of paternity	Yes	
I14	**Delayed Birth Certificate Instructions**	Instructions for filing a delayed certificate of birth.	Yes	
I15	**Affidavit for Delayed Birth Certificate**	A supporting affidavit for filing a delayed certificate of birth	Yes	
I16	**Delayed Birth Letter**	A request for additional information to process a delayed birth certificate.	Yes	
I17	**Delayed Birth filed with No Evidence Letter**	A letter stating that the birth record has been filed as a "delayed record" because it was filed 1 year or more after the birth. Letter states no evidence was used; or not enough evidence was provided. Letter is user defined and editable.	Yes	
I18	**Court Order to Establish Delayed Birth Letter**	A letter stating that the requestor must have a court order to establish a delayed birth certificate.	Yes	
I19	**Additional/insufficient Information Letter**	A letter indicating additional information is needed to process an amendment.	Yes	
I20	**Out of State Amendment letter**	A letter to the requestor indicating that the amendment must be processed in a different state and that documents are being returned.	Yes	
I21	**Out of State Adoption Letter for Requestor**	A letter to the requestor indicating that the adoption must be processed in the child's state of birth and that documents are being forwarded.	Yes	
I22	**Out of State Adoption Letter for State**	A letter to the child's state of birth, forwarding the adoption request received from adoptive parents.	Yes	
I23	**Additional Letters**	Additional letter templates may be generated by the State and added to EVRS by the Application Administrator or Configuration Manager.	Yes	
	REPORTS			
I24	**General Corrections and Amendments Report**	A report containing the number and timeliness of corrections/amendments completed by amendment code, produced on demand with month-to-date and year-to-date totals. Report needs to be broken out by user (and transaction type) and contain State office totals. Report can be run by employees showing type of transaction or by transaction type. Report contain subtotals and totals at appropriate breaks based on the sequence selected by the user. (NAPHSIS Report 28.0)	Yes	
I25	**Sealed Record Report**	Report printed on demand, by user, listing all case envelopes produced for the specified period of time (generally daily). Information on report includes: number of sealed records by user, type amendment and should include totals.	Yes	

I26	Cause of Death Amendments	Provide a report of all death certificate cause of death amendments registered within a user specified period of time. Includes numbers by user and totals for specified time period. Report is run on demand.	Yes	
	J - Request Letters and Reports			
	FORMS			
J1	Application for Search of Census Records	Application and instructions for a census search.	No	
J2	Apostille and Certification	A letter of instruction on how to obtain an apostille certification.	Yes	
	LETTERS			
J3	Letter to Requestor no more amendments	A letter to requestor indicating that amendments have previously been made on a certificate, and no further amendments may be made without a court order.	Yes	
J4	No Record Found for birth	Print a letter when a request for a certified copy results in no record being found in the database for birth.	Yes	
J5	No Record Found for death	Print a letter when a request for a certified copy results in no record being found in the database for death.	Yes	
J6	No Record Found for marriage	Print a letter when a request for a certified copy results in no record being found in the database for marriage.	Yes	
J7	No Record Found for divorce	Print a letter when a request for a certified copy results in no record being found in the database for divorce.	Yes	
J8	Missing Information or Money Due Letter	Print a letter to a customer who mailed in a request, explaining why the request cannot be processed and what to do to correct the situation.	Yes	
J9	Returned Money Letter	Print a letter to a customer who mailed in a request, explaining why the payment was returned and what to do to correct the situation.	Yes	
J10	Information Letter for Requests	A letter stating the types of records that are on file for each event type and the fee associated with each.	Yes	
J11	Letter of Ineligibility	A letter to a requestor indicating that the requestor is not eligible to receive a copy of the requested record.	Yes	
	REPORTS			
J12	Routine Requests Outstanding	A report used as a tracking tool to follow up on incomplete requests to find out why they are not complete.	Yes	
J13	Total Sales	Totals sales by month by request type, including searches that resulted in a record not found. The report indicates total sales in dollars and quantity.	Yes	
J14	Requests Filled Report	A report that provides, for a user-specified time period, the number of requests filled by the type of record (birth/death) for each user, including month-to-date and year-to-date figures. (NAPHSIS Report 23.0)	Yes	
J15	Problem Request Report	A report of the number of problem requests by status, type of problem, and length of time in the queue, for a selected time periods and employee. Problem types may include: bad address, ineligible applicant, fraud attempt, frequently requested record name failure, etc. (NAPHSIS Report 27.0)	Yes	
J16	Request Receipt	A document to accompany a completed request, listing the items produced and the associated fees. Document format must conform to the format of existing mailing envelopes.	Yes	
J17	Report of Requests for copies of a Certificate	A report for a given record, showing the certified copies produced from the record, who requested them, and when.	Yes	
J18	Report of Requests by Requestor	A report showing all the certified copies produced as a result of a request from a particular requestor.	Yes	

J19	**Certification and Verification Report**	An on-demand report that provides, for a ed time period, the number of requests for certification/verification searches by selected requestors (genealogy, social services, child support, etc.) including the ability to report year-to-date figures. (NAPHSIS Report 25.0)	Yes	
		K - Accounting Reports		
K1	**Invoices**	Print invoices for funeral homes and state agencies who have charged services to their account, showing the open invoices and the amount due. Invoices include SFN and name of registrant. Invoices clearly distinguish between current balance and past due amount. Invoices include an invoice number.	No	
	REPORTS			
K2	**Detailed Employee Receipts Report**	A report showing each applicant for certificates (name, form/amount of payment, how request was received--walk-in, mail, etc.-- date/time entered into system, date/time closed), registrant requested (type of record--births and deaths--number of copies requested, name on record, date of event, how request was received, and who entered), and recipient of request (name, home and mailing address, and how provided), method of payment (cash, check, money order, etc.) and the safety paper number issued. Produced on demand for each employee. May also be produced by groups of staff or for all staff. This report is State defined. (NAPHSIS Report 3.0).	Yes	
K3	**Daily Transactions on Account**	A report showing each order that was charged to the account of a funeral home or other state agency. May be run for a specific day and/or date range.	Yes	
K4	**Daily Payments on Account**	A report showing each payment made for an accounts-receivable account (funeral home or state agency paying by interdepartmental billing claim).	Yes	
K5	**Statement**	Print a statement for internal use only, by a funeral establishment or state agency, listing orders, payments and closing balance for the period.	Yes	
K6	**Breakdown of Fees Report**	A report showing the day's business according to the breakdown of fees. Can be summary or detailed.	Yes	
K7	**Sequential List of Receipts**	A sequential list of receipts for the day for a given location (county, State). It includes check name and number for checks, and the request information.	Yes	
K8	**Accounts Receivable Listing**	A listing of all charges owed by a funeral home or agency. For internal use only.	No	
K9	**Accounts Receivable History**	An on-demand report showing the charges and payments made on selected account(s) for a selected period of time. For internal use only.	No	
K10	**No Record Found Report**	Number and receipts for "No Record Found" searches by type of event (birth, death, fetal death, amendments) and method of delivery (walk-in, standard mail, expedited, VitalChek, web). Produced on demandwith year-to-date totals or for other time periods based on user selection at the time the report is run. (NAPHSIS Report 4.0)	Yes	
K11	**Research Request Receipts**	Number of research requests (government and other) processed and the dollars received by type of study (birth studies, death studies, other). Produced monthly with year-to-date totals. (NAPHSIS Report 6.0).	Yes	
K12	**Invoice for fees**	Invoices for selected counties showing fees assessed for processing of records, and to funeral homes for payment on account for death certificates. The invoices may be mailed or emailed.	Yes	
K13	**Fees billed**	A total of all fees billed for certified copies to governmental entities, by organization for a specified time period. For internal use only.	Yes	

K14	**Monies Received by Event Type**	Number and receipts by event type and type of payment for a specified date range and/or receipt number range. Produced on demand.	Yes	
K15	**Monies Received by Event Type**	Number and receipts by event type and type of payment for a specified date range and/or receipt number range. Produced on demand.	Yes	
K16	**Refund report**	Total refunds provided by event type and the user who provided the refund.	Yes	
		L - Inventory Reports		
	FORMS			
L1	**Packing Slip**	On demand, print a packing slip for inventory of items ordered through EVRS. Security paper orders include paper number range and/or numbers.	Yes	
L2	**Receipt of Shipment**	Produce a receipt of shipment that can be sent to State office by email/message or be printed.	Yes	
L3	**Order Form**	On demand, produce an order form for system users (hospitals, regional offices, etc.) to request forms or DCN paper from the State. Order form can be printed or emailed.	No	
	REPORTS			
L4	**Detailed Monthly Usage**	A monthly usage report listing the number of certified copies issued, voided forms, second copies, and optionally includes details of all certificates used or voided. Summarized by location and is generated for a designated period of time.	Yes	
L5	**Summary Usage**	A report summarizing security paper usage and voids. Generated on demand by site for a range of dates.	Yes	
L6	**Security Paper Assignment**	Identification of forms assigned to a specific system user or location.	Yes	
	LETTERS			
L7	**Discrepancy letter**	A letter indicating discrepancy in security paper inventory, and requesting information to resolve the discrepancy. Letter may be printed or emailed.	Yes	
		M - Productivity/Audit Reports		
	REPORTS			
M1	**Track Users With > 12 Death Records Per Year**	The system provides a way to identify institutions or individuals who file more than 12 paper death records per year. System users or institutions that file more than 12 records per year to include an indicator of whether user of system and if so, breakdown of number of electronic vs. paper.	Yes	
M2	**Report on Duplicate Records**	A listing of potential duplicate records, selectable by event type. Produced on demand. (NAPHSIS Report 45.0).	Yes	
M3	**Transmission reports**	Beginning and ending certificate numbers of records sent to NCHS for births, deaths fetal deaths. Also includes number ranges of missing records. Count of birth and death records sent to SSA. Reports are printed at the time each file is produced.	Yes	
M4	**Import Reports**	A report listing the number of records included in an import file and any errors for records not being imported. Report is electronic and may be printed each time a file is imported.	Yes	
M5	**Staff Workload and Efficiency Listing**	A listing of each document action in the queue showing the employee assigned, the type of record, service to be provided, date entered into the system or assigned, date closed and by whom, and the time for closure (in days). Produced on demand by user. (NAPHSIS Report 32.0)	Yes	
M6	**Soft Edit Report**	A standard report to provide an audit list of soft edits. Key data elements include record identifier and applicable fields.	Yes	
M7	**NCHS Monthly Report**	A report, produced on a monthly basis for NCHS, of the total monthly number of births, deaths, fetal deaths, marriages and divorces in the State.	Yes	

M8	"No answer/unknown" values management report	A management report allowing supervisors to identify users who consistently over-use "no answer/unknown" values, in order to provide additional training.	Yes	
M9	Staff Workload and Efficiency Report	Number of services provided and the average completion time (in days) by type of record and service. Produced weekly by user and monthly and/or annually on demand. (NAPHSIS Report 32.5).	Yes	
M10	Staff Acceptance and Rejection Report	Number of corrections/amendments processed and number and percent of corrections/amendments that were rejected by type of record. Produced on demand for each employee. (NAPHSIS Report 33.0).	Yes	
M11	System compiles statistics for completed transactions	A series of reports summarizing completed transactions and procedures, including number of certificates or records processed, number of amendments processed, number of incomplete requests, and number of requests filled for a given time period. Produced on demand.	Yes	
M12	Key Entry of Vital Certificates Report	Number of certificates key entered at Vital Statistics by type of certificate (birth, death, fetal death), showing the number and percentage of records flagged for correction and/or query. Produced by user showing daily, month-to-date, and year-to-date totals. May also be produced on demand. (NAPHSIS Report 35.0).	Yes	
M13	Invalid Attempts Report	A listing of users with invalid attempts equal to the threshold during login, showing name of user, user id, and institution. Produced on demand by the application administrator. (NAPHSIS Report 40.0).	Yes	
M14	Log of Rejected Records	A report, by event type, of records that were rejected for registration, and records which were "unlocked" at the State. Generated on demand, for a specified time period. State defined format and able to run by user.	Yes	
M15	Death Registration Audit Report	A summary of death records filed by funeral home and medical institution and by type of disposition, showing the average length of time between date of death and date of registration, the number and percentage of late registrations, and a comparison of the institution versus the State's overall timeliness average. The report is run on demand, and includes quarter-to-date, month-to-date and year-to-date totals for each funeral home and medical institution. This same report may be produced by medical certifier	Yes	
M16	Birth Registration Audit Report	Number of birth records filed by medical institution and by type of disposition, showing the internal record number, the average length of time between date of birth and date of registration, the number and percentage of late registrations, and a comparison of the institution versus the state overall timeliness average. The report is run on demand and includes quarter-to-date, month-to-date and year-to-date totals for each medical institution.	Yes	
M17	SFN Gaps	Print a report of gaps in the SFN by event type including, voided certificate numbers. Voided certificates are clearly identified in the report. This report is done in Excel format.	Yes	

Section 5 – Preliminary MS Project Plan

GCOM has accepted the proposed milestone schedule and associated deliverables are set forth in RFP documents. GCOM's Project Plan will clearly identify the project's Major Milestones, which are markers or points in the project that signify a key accomplishment or stage in the project's lifecycle. Milestones are powerful components of the Project Plan because they show key events and track forward movement. They act as signposts through the course of the project and help to ensure that the Electronic Vital Records System (EVRS) project stays on track.

The Project Plan will also identify the project's Major Deliverables. These are the key products or outputs that the project is intended to produce. Deliverables will be tangible, quantifiable, and measurable. They will be clearly identified because if they are not met the project will not be considered successful.

It is important that the Project Plan also describe what will NOT be delivered. This is a way to limit "scope creep" and motivates stakeholders to really think through what is being committed to Acceptance criteria will be established for the project's Major Milestones and Deliverables to ensure thorough vetting and successful completion of the project. Meeting the acceptance criteria will help ensure success for the project:

5.1 Work Breakdown Structure

A Work Breakdown Structure ("WBS") is the basic building block of the project plan and schedule. It is used to decompose the project into easily manageable components of work that can be effectively estimated, managed, and tracked. The WBS:

- Assists with accurate project organization
- Helps with assigning responsibilities
- Shows the control points and project milestones
- Allows for more accurate estimation of cost, risk and time
- Helps explain the project scope to stakeholders
- Provides an effective way to relate project tasks to one another

While GCOM, working with DHHR, will develop a WBS specific to the WV DHHR EVRS project, we do not need to start from ground zero with a blank slate. Through our deep experience with projects and clients similar to DHHR, GCOM has developed a WBS and project schedule template that will enable us to quickly build and complete an effective and efficient WBS for this project.

Our template provides a near implementation ready execution plan which delivers the product, user interfaces, reports, interface, and source system data conversions to support the WV DHHR requirements. Our template also includes detailed steps for the planning, configuration, testing, and delivery of the system.

Once the tasks in the WBS have been finalized, the project timeline is determined by adding the relationships between the tasks (dependencies), assigning resources to each task, and adding the estimated duration and work effort for each task.

The result is a fully functional and dynamic project plan and schedule that will be used to manage the WV VRMS DHHR project throughout its entire lifecycle. As estimated task start and end dates change and actual start and end dates are entered into the plan, their impact to the project timeline can be immediately determined.

Following table represents the WBS. Please refer to GCOM Exhibit 2 - Project Plan PDF and Microsoft Project format.

TASK SHEET

	WBS	Task Name	Duration	Start	Finish	Predecessors
1	1	WV DHHR EVRS Master Release Plan	1828 days	Wed 5/1/19	Sun 5/3/26	
2	1.1	Project Start Date	0 days	Wed 5/1/19	Wed 5/1/19	
3	1.2	Manage	739 days	Wed 5/1/19	Tue 3/1/22	
11	1.3	Phase 1 Death and Point of Sale (POS)	1826 days	Wed 5/1/19	Wed 4/29/26	
12	1.3.1	Planning and Administration (Milestone 1)	10 days	Wed 5/1/19	Tue 5/14/19	
18	1.3.2	Business and System Requirements (Milestone 2)	31 days	Wed 5/1/19	Wed 6/12/19	
30	1.3.3	Implementation of Hosted Environment (Milestone 3)	35 days	Wed 5/1/19	Tue 6/18/19	
44	1.3.4	Design and Configuration of Solution (Milestone 4)	160 days	Wed 6/19/19	Tue 1/28/20	
55	1.3.5	Data Conversion and Migration (Milestone 5)	79 days	Wed 5/1/19	Mon 8/19/19	
68	1.3.6	User Acceptance Testing (UAT) (Milestone 6)	210 days	Thu 6/13/19	Wed 4/1/20	
95	1.3.7	Training (Milestone 7)	30 days	Wed 1/15/20	Tue 2/25/20	
103	1.3.8	Documentation (Milestone 8)	0 days	Tue 2/11/20	Tue 2/11/20	
107	1.3.9	Parallel Pilot (Milestone 9)	39 days	Mon 3/9/20	Thu 4/30/20	
116	1.3.10	Production Implementation (Milestone 10)	62 days	Fri 4/3/20	Mon 6/29/20	
126	1.3.11	System Warranty (Milestone 11)	256 days	Thu 4/30/20	Sun 4/25/21	
128	1.3.12	System Maintenance Support (Milestone 12)	1308 days	Sun 4/25/21	Wed 4/29/26	
130	1.4	Phase 2 Birth and Fetal Death	1524 days	Tue 6/30/20	Sun 5/3/26	116
227	1.5	Phase 3 Induced Termination of Pregnancy (ITOP)	1219 days	Mon 8/30/21	Fri 5/1/26	214

Section 6 – Proposed Project Team

D6-1. Proposed Project Team Question 1

Provide and organizational chart that depicts the Vendor Project Team that the Offeror is proposing for this specific project. The organizational chart should specify the personnel assigned to accomplish the work called for in this RFP, including subcontractors, if used. Lines of authority should be clearly illustrated.

GCOM believes a collaborative and transparent approach is essential to delivering technology projects successfully. GCOM project delivery teams are selected to meet the unique needs of the project and client by assigning specialists in key areas to ensure we provide the best and most targeted solutions possible.

Delivering the WV Electronic Vital Records System (EVRS) requires a highly skilled and experienced project team who works in collaboration with the WV Department of General Services, not only in adapting and extending a proven Vital Records Product, but in establishing a sound governance and technical management process for supporting the application postproduction. In addition, the DHHR's ideal solution partner should have proven experience implementing a current and similar vital records system. The success of any project depends substantially on the quality and experience of the people involved in its day-to-day management. Only GCOM can offer the Commonwealth a team who has years of experience delivering vital events records solutions, and extensive enterprise in project delivery and application operations support.

GCOM understands the size and importance of this project, and has determined it is in our and the Commonwealth's best interest to include multiple members of our senior level management team throughout the implementation of the vital records management system.

The Organization Chart below depicts how our Project Team will be setup, with support as needed from our Synergy Team.

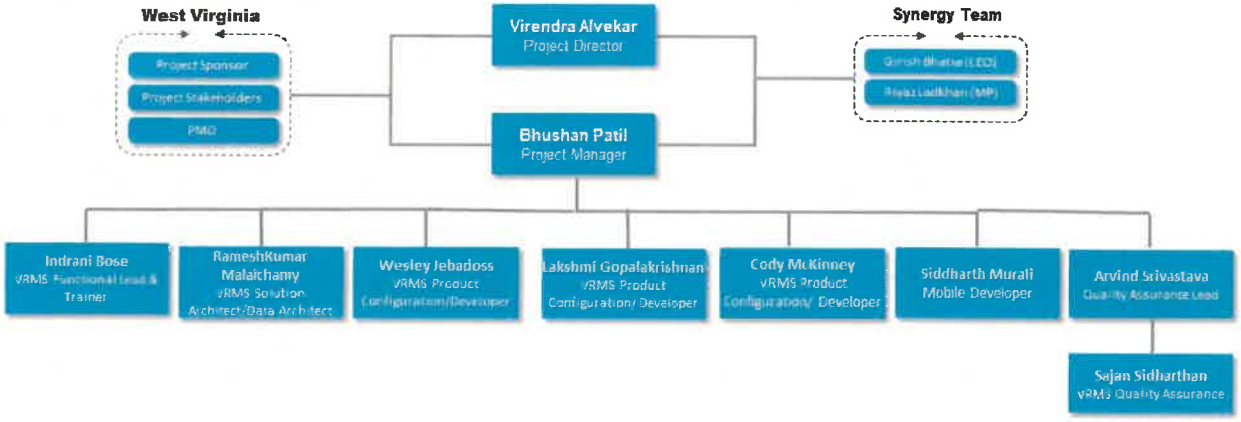


Figure 4: Project Team Organization Chart

In addition to a GCOM project delivery team, every GCOM project has access to the breadth, expertise, and experience of the entire GCOM Software Organization; an organization with over 550 business and technology resources and a reputation for delivering elegant solutions for City

and State Agencies for over 10 years. Mr. Virendra Alvekar and Mr. Bhushan Patil (Project Director and Project Manager respectively) will have access to GCOM's organizational capabilities through the GCOM Synergy Team. For this project, the GCOM Synergy Team includes GCOM executives and most senior technologists, Girish Bhatia and Riyaz Ladkhan. **Mr. Virendra Alvekar**, **Project Director**, has over twenty years of experience in managing systems and technology projects that deliver and transform services in enterprise environments. He has a successful record of accomplishment in delivering IT Projects for public and private sector clients that serve a variety of functional areas such as banking, healthcare, finance, legal, and accounting. Viren brings creative and analytical thinking to the team with strong technical acumen and passion for impacting business outcomes. Viren holds a MBA degree from Binghamton University, Bachelor's Degree in Computer Science, and PMP certification from the Project Management Institute. Viren leads GCOM enterprise project delivery via a multi-disciplinary, highly skilled digital team and targeted business development activities.

Mr. Girish Bhatia, Chief Executive Officer (CEO), founded GCOM Software in 2005 as a boutique custom software development shop serving New York State and Municipal governments. Under the leadership of Mr. Bhatia, GCOM has expanded its geographic presence to NY, NJ, FL, MA and MN. GCOM has achieved phenomenal growth; CAGR of 20% for past five years; Fastest growing IT Company in the Capital Region for the past five years and revenue of $104 million for FY 2018. Mr. Bhatia, as Project Manager & Enterprise Architect Team Member, managed and oversaw the modernization of CCH systems for New York State and Florida, using GCOM's CCH Product, CRRMS.

Mr. Riyaz Ladkhan, Managing Partner, has more than 21 years' experience in the IT industry; his core technical strength is delivering solutions using Microsoft Technologies (.Net, Dynamics, SharePoint, BizTalk, SQL/Server). Mr. Ladkhan guided GCOM through the rigorous process necessary to obtain our Microsoft Gold Partnership Status, and leads our Microsoft practice. He has been instrumental in delivering many key GCOM projects. Riyaz has worked in various roles (Programmer, Analyst, Architect, Project Manager, and Account Manager) for NYS agencies such as Department of Health, Office of Mental Health, Office of General Services, Empire State Development, NY Business Express, and Agriculture & Markets.

D6-2. Proposed Project Team Question 2

In the table below designate the individual responsible and accountable for the completion of each of the major component and deliverable of the RFP.

Reference #	Components	Staff
1	Project Plan and Schedule	Bhushan Patil
2	Set up technical environment for GAP	RameshKumar Malaichamy
3	Conduct Gap Analysis	Indrani Bose
4	Facilitate onsite GAP Analysis	Indrani Bose
5	Set up and Configure Test, Training and Production Environments	RameshKumar Malaichamy

6	Configuration of the EDRS	Wesley Jebadoss
7	Configuration of the Point of Sale	Lakshmi Gopalakishnan
8	Configuration of Reports and Extracts	Cody Mckinney
9	Configuration of Interfaces	RameshKumar Malaichamy
10	Data Conversion	Cody Mckinney
11	Migration of Images	Cody Mckinney
12	Assistance with User Acceptance Testing	Arvind Srivastava
13	Development of Application Training Packets for Phase 1	Indrani Bose
14	Delivery Application Training for State Users	Indrani Bose
15	Delivery Technical Training for System Administrators and Business Configurators	Indrani Bose
16	Delivery of Application Training to Stakeholders	Indrani Bose
17	Creating User Documentation for Phase 1	Indrani Bose
18	Creating Technical Documentation for Phase 1	Indrani Bose
19	Assistance with Pilot	RameshKumar Malaichamy
20	Assistance for Go Live for Phase 1	RameshKumar Malaichamy
21	Project Management Activities	Bhushan Patil

D6-3. Proposed Project Team Question 3

Complete the following table for all staff, including contractors, that will participate on the project.

Ref #	Name	Title or Position	% of time dedicated to WV	Work Location
1	Virendra Alvekar	Project Director	20%	On Site: For any critical decision-making meetings or, as required Off Site: GCOM office New York City, NY
2	Bhushan Patil	Project Manager	50%	On Site: For meetings and sessions defined in Project Plan

				Off Site: GCOM office Albany, NY
3	Indrani Bose	VRMS Functional Lead	100%	On Site: For meetings and sessions defined in Project Plan Off Site: GCOM office New York City, NY
4	RameshKumar Malaichamy	VRMS Solution Architect/Data Architect	50%	Off Site: GCOM office Albany, NY
5	Wesley Jebadoss	VRMS Product Configurator/Developer	100%	Off Site: GCOM office Albany, NY
6	Lakshmi Gopalakrishnan	VRMS Product Configurator/Developer	100%	Off Site: GCOM office Albany, NY
7	Cody Mckinney	VRMS Product Configurator/Developer	100%	Off Site: GCOM office Albany, NY
8	Siddharth Murali	VRMS Mobile Developer	50%	Off Site: GCOM office Albany, NY
9	Arvind Srivastava	VRMS Quality Assurance Lead	50%	Off Site: GCOM office Albany, NY
10	Sajan Sidharthan	VRMS Quality Assurance	100%	Off Site: GCOM office Albany, NY
11	Indrani Bose	Trainer	50%	On Site: For meetings and sessions defined in Project Plan Off Site: GCOM office New York City, NY

D6-4. Proposed Project Team Question 4

Include a resume for each person listed in the table for Question 3 above.

The following table provides a summary of the qualifications each team member brings to the project. In **GCOM Exhibit 1 - Resumes**, the project team resumes are provided for GCOM Project Staff.

Table 12 Summary of GCOM's proposed project team

Name	Title or Position	Resource Summary
Virendra Alvekar	Project Director	Viren led GCOM's NYC DOHMH eVital, vital records project, to a successful, on-time and on-budget delivery.
Bhushan Patil	Project Manager	Bhushan has worked on the NYC DOHMH eVital vital records project since August of 2014. In addition to his ample vital records experience, Bhushan is a highly skilled .NET professional with 20 years of design and development experience.

Indrani Bose	VRMS Functional Lead	Indrani has nearly four years of vital records experience and also brings over years' experience in Information Technology focusing on requirement elicitation and gathering, business process analysis, system analysis, functional analysis, data modeling, and critical analysis.
RameshKumar Malaichamy	VRMS Solution Architect/Data Architect	RameshKumar brings 4 years of vital records experience to this project. Additionally, RameshKumar offers 22 years of experience and has excellent experience working as a System Architect.
Wesley Jebadoss	VRMS Product Configurator/Developer	Wesley has worked on the successful vital records project since August 2014. He also offers over 14 years of Information Technology experience in software architecture, design, programming and project delivery management.
Lakshmi Gopalakrishnan	VRMS Product Configurator/Developer	Lakshmi has worked on a vital records project since October 2015. She brings 16 years of overall IT experience and is skilled in areas of the product development cycle from core product architecture design and development to customizing the product at different client sites.
Cody Mckinney	VRMS Product Configurator/Developer	Cody has worked on the successful vital records project since August 2014. He brings 6 years of overall programming experience to the team.
Siddharth Murali	VRMS Mobile Developer	Siddharth is a highly-skilled software development professional who brings more than 6 years of experience in mobile app design, development and integration.
Arvind Srivastava	VRMS Quality Assurance Lead	Arvind is an accomplished, result-oriented and meticulous Software Quality Professional with proven leadership, management and technical expertise in a career spanning across more than 22 years, using strong leadership, business planning, solution development, communication and facilitation skills.
Sajan Sidharthan	VRMS Quality Assurance	Sajan has over two years' experience as a QA on a vital records project. He also brings nearly15 years of experience in software quality assurance and testing managing remote and local test teams.
Indrani Bose	Trainer	In past projects, Indrani was responsible to develop Training Manuals and other training materials. She also worked with training and enrolling (800+) external facility users

Security Proposal (Attachment I)

The RFP, Section 4.2.2.19 requires the vendor to adhere to specified security controls as well as state and federal regulations as outlined in the Attachment I. Please provide a narrative expressing your conformity to the requirements and associated tasks along with any details you wish to provide explaining your approach to conducting the associated activities.

Vendor shall conform all relevant Federal regulations, which will include at a minimum:

1. HIPAA Compliance for Business Associates.
2. Records Usage, Duplication, Retention, Re-disclosure, and Timely Destruction Procedures/Restrictions 5 U.S.C. 552a (o)(1)(F), (H), and (I).
3. Privacy Act of 1974 at 5 U.S.C. 552a
4. SSA Online Verification System and Security Requirements
5. SSA Agreement with WV HSC regarding SSN Disclosure Authority. (Exhibit A)
6. Federal Information Security Management Act (FISMA), National Institute of Standards Technology's Special Publication (NIST SP) 800-53, NIST SP 800-17 which serve as the baseline

Vendor shall conform all relevant State regulations, which will include at a minimum:

1. West Virginia Computer Crime and Abuse Act (West Virginia Code, Chapter 61, Art. 3C).
2. West Virginia Code Breach of Security of Consumer Information - (West Virginia Code, Chapter 46A, Art. 2A).
3. The vendor and proposed solution must comply with the West Virginia Executive Branch Privacy Policy: Security Safeguards.

GCOM confirm that its proposed EVRS Solution will adheres to all relevant Federal and WV State regulations regarding the protection of personal data and enable secure, electronic recording of births & death, including electronic authentication by certifiers. It will also facilitate the protection of confidentiality and security of birth and death data. The system will be HIPAA-compliant, and have security features such as access control, encryption, secure data transmission and non-repudiation mechanisms through the use of electronic authentication devices. GCOM proposed EVRS solution is Highly secure. The system supports 128-bit HTTPS connection, using the SSL 3.0 protocol and restricts inbound access from the internet to a specified port. This is the driving criteria for choosing the particular technical platform and architecture which conforms to the higher standard of security. It has Robust authentication implemented and all system functions are secured by role-based security

Security component:

Security is a key requirement of any application. In order to make sure that the application is guarded from any malicious attack or unauthorized access; it is important to secure both the infrastructure as well as the application. GCOM will be responsible for implementing the application security.

Security component will be responsible for managing authentication and authorization of e-Vital users. Internal Agency users and external registered users will be authenticated against the WV DHHR portal secure access. External public users (if desired) will be subject to identity

verification using third party service (e.g. VeriSign, ACHDirect.com, LexisNexis etc.); identity verification can also be used to mitigate typical enrollment problem for new users.

Authorization information (User Roles and resources) will be stored in SQL Server database. The following diagram illustrates how user roles and resources will be stored in the e-Vital System:

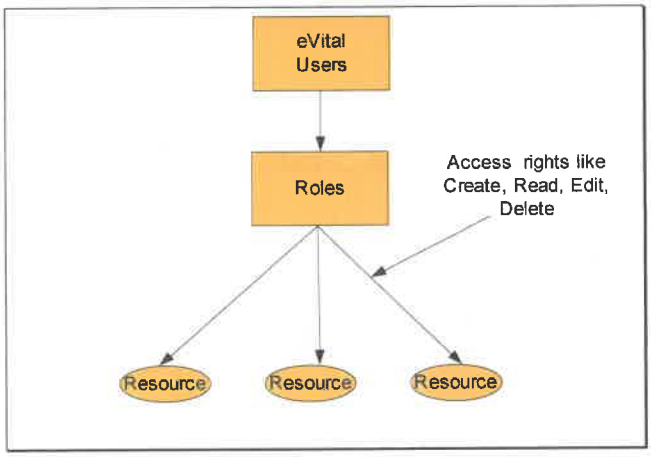


Figure 8: Security for e-Vital System Users

User roles (user profiles) can be configured by the DHHR security admin based on resources which will:

- Restrict user from accessing specific subset of information vs. all information
- read-only access vs. read/write access
- read/write access (only change) vs. read/write access (create, change and delete)

Auditing component: GCOM's developed solution will use an Auditing component to audit all admin, business, override transactions. User name, Date & Time and IP address for the transaction is captured for each transaction. This information can be later reviewed by a user with proper authorization to browse audited data. An auditing service is a generic implementation across all applications in an enterprise. The structure of audit information will be decided once a high-level system design is complete. Auditing services can be configured to audit messages synchronously and asynchronously.

GCOM has successfully implemented Auditing component for "Enterprise Auditing and Search NYS - Division of Criminal Justice Services". Below is the illustration of audit search functionality. The fields on the 'Search Criteria' are configurable and any field from e-Vital Form can be shown, similarly the fields on 'Search Results' are all configurable.

Search Criteria:

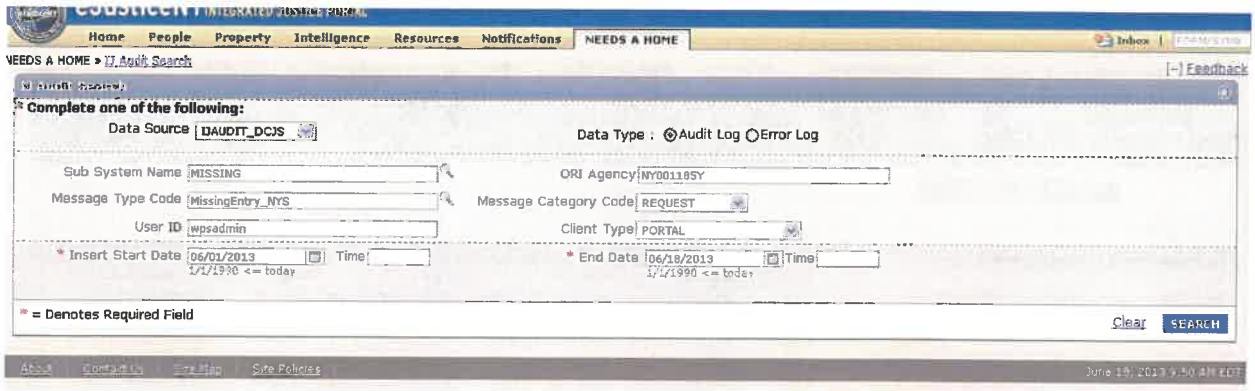
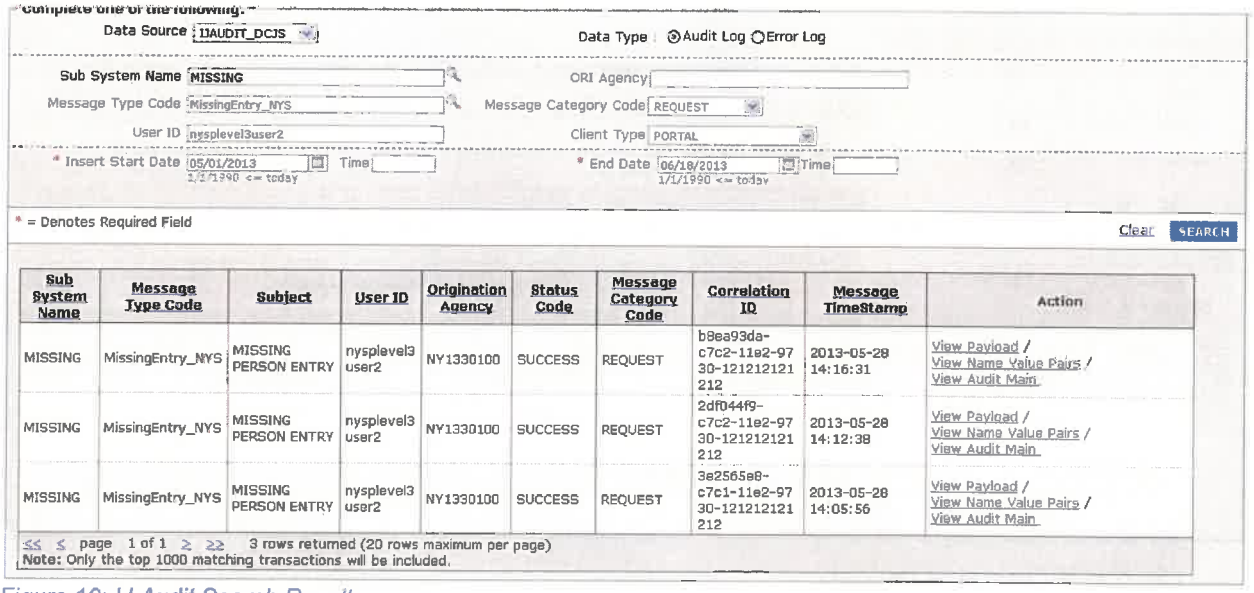


Figure 9: IJ Audit Search

Search Results:



Sub System Name	Message Type Code	Subject	User ID	Origination Agency	Status Code	Message Category Code	Correlation ID	Message TimeStamp	Action
MISSING	MissingEntry_NYS	MISSING PERSON ENTRY	nysplevel3 user2	NY1330100	SUCCESS	REQUEST	b8ea93da-c7c2-11e2-9730-121212121212	2013-05-28 14:16:31	View Payload / View Name Value Pairs / View Audit Main
MISSING	MissingEntry_NYS	MISSING PERSON ENTRY	nysplevel3 user2	NY1330100	SUCCESS	REQUEST	2df044f9-c7c2-11e2-9730-121212121212	2013-05-28 14:12:38	View Payload / View Name Value Pairs / View Audit Main
MISSING	MissingEntry_NYS	MISSING PERSON ENTRY	nysplevel3 user2	NY1330100	SUCCESS	REQUEST	3e2565e8-c7c1-11e2-9730-121212121212	2013-05-28 14:05:56	View Payload / View Name Value Pairs / View Audit Main

<< < page 1 of 1 > >> 3 rows returned (20 rows maximum per page)
Note: Only the top 1000 matching transactions will be included.

Figure 10: IJ Audit Search Results

Additionally, 'Unstructured Search' & 'Guided Search' is also possible; user with proper authorization can drill down into the data and perform filtering by any key values and then performing the search within the filtered view.

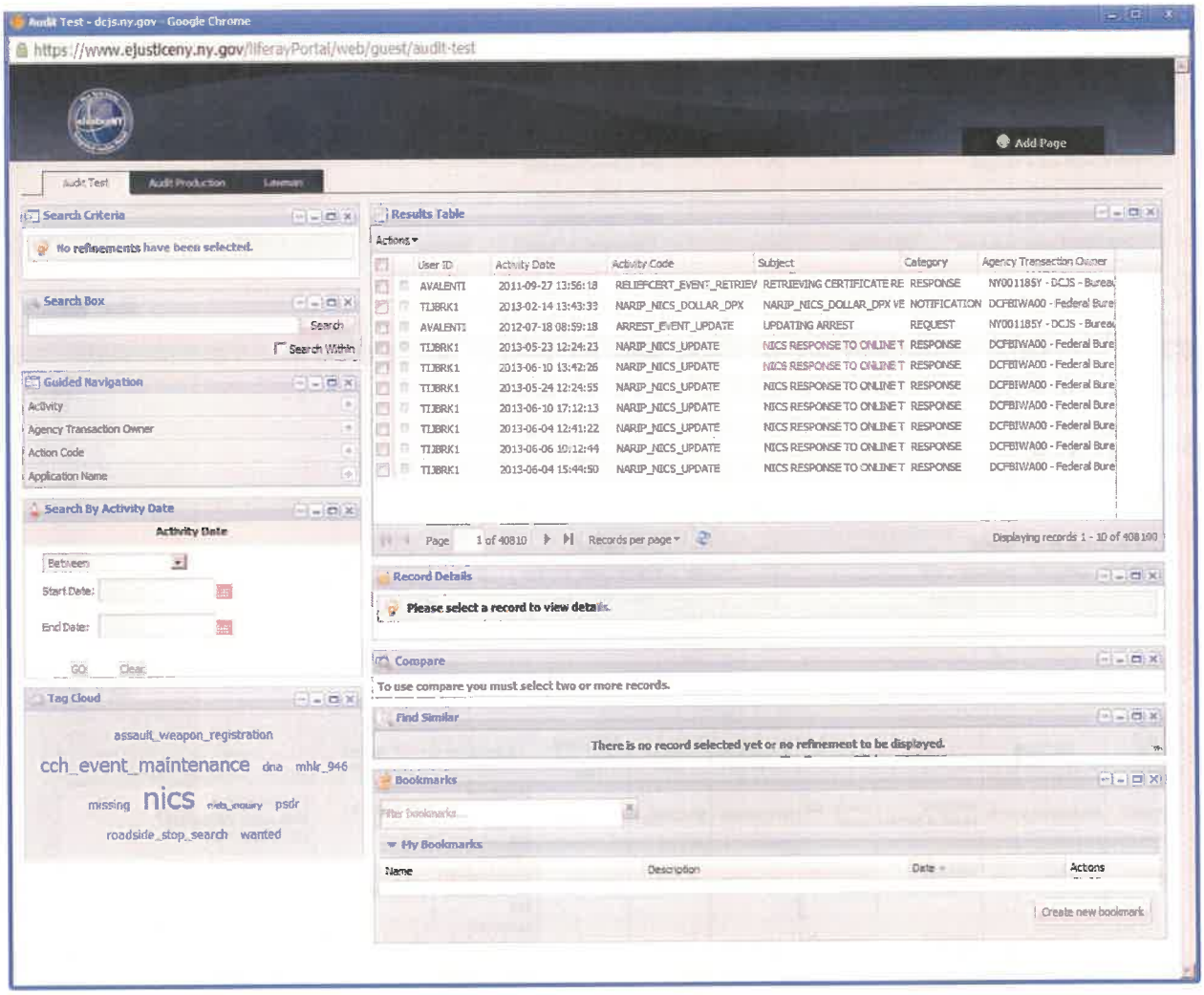


Figure 23 IJ Audit Unstructured Search

GCOM agree to draft NIST Incident management plan and audit management plan. And adhere to personnel Security requirement.

Attachment J

Software as a Service Addendum

1. Definitions:

Acceptable alternative data center location means a country that is identified as providing equivalent or stronger data protection than the United States, in terms of both regulation and enforcement. DLA Piper's Privacy Heatmap shall be utilized for this analysis and may be found at https://www.dlapiperdataprotection.com/index.html?t=world-map&c=US&c2=IN.

Authorized Persons means the service provider's employees, contractors, subcontractors or other agents who have responsibility in protecting or have access to the public jurisdiction's personal data and non-public data to enable the service provider to perform the services required.

Data Breach means the unauthorized access and acquisition of unencrypted and unredacted personal data that compromises the security or confidentiality of a public jurisdiction's personal information and that causes the service provider or public jurisdiction to reasonably believe that the data breach has caused or will cause identity theft or other fraud.

Individually Identifiable Health Information means information that is a subset of health information, including demographic information collected from an individual, and (1) is created or received by a health care provider, health plan, employer or health care clearinghouse; and (2) relates to the past, present or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present or future payment for the provision of health care to an individual; and (a) that identifies the individual; or (b) with respect to which there is a reasonable basis to believe the information can be used to identify the individual.

Non-Public Data means data, other than personal data, that is not subject to distribution to the public as public information. It is deemed to be sensitive and confidential by the public jurisdiction because it contains information that is exempt by statute, ordinance or administrative rule from access by the general public as public information.

Personal Data means data that includes information relating to a person that identifies the person by first name or first initial, and last name, and has any of the following personally identifiable information (PII): government-issued identification numbers (e.g., Social Security, driver's license, state identification card); financial account information, including account number, credit or debit card numbers; or protected health information (PHI).

Protected Health Information (PHI) means individually identifiable health information transmitted by electronic media, maintained in electronic media, or transmitted or maintained in any other form or medium. PHI excludes education records covered by the Family Educational Rights and Privacy Act (FERPA), as amended, 20 U.S.C.

1232g, records described at 20 U.S.C. 1232g(a)(4)(B)(iv) and employment records held by a covered entity in its role as employer.

Public Jurisdiction means any government or government agency that uses these terms and conditions. The term is a placeholder for the government or government agency.

Public Jurisdiction Data means all data created or in any way originating with the public jurisdiction, and all data that is the output of computer processing or other electronic manipulation of any data that was created by or in any way originated with the public jurisdiction, whether such data or output is stored on the public jurisdiction's hardware, the service provider's hardware or exists in any system owned, maintained or otherwise controlled by the public jurisdiction or by the service provider.

Public Jurisdiction Identified Contact means the person or persons designated in writing by the public jurisdiction to receive security incident or breach notification.

Restricted data means personal data and non-public data.

Security Incident means the potential or actual unauthorized access to personal data or non-public data the service provider believes could reasonably result in the use, disclosure or theft of a public jurisdiction's unencrypted personal data or non-public data within the possession or control of the service provider. A security incident may or may not turn into a data breach.

Service Provider means the contractor and its employees, subcontractors, agents and affiliates who are providing the services agreed to under the contract.

Software-as-a-Service (SaaS) means the capability provided to the consumer to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin-client interface such as a Web browser (e.g., Web-based email) or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

2. Data Ownership: The public jurisdiction will own all right, title and interest in its data that is related to the services provided by this contract. The service provider shall not access public jurisdiction user accounts or public jurisdiction data, except (1) in the course of data center operations, (2) in response to service or technical issues, (3) as required by the express terms of this contract or (4) at the public jurisdiction's written request.

3. Data Protection and Privacy: Protection of personal privacy and data shall be an integral part of the business activities of the service provider to ensure there is no inappropriate or unauthorized use of public jurisdiction information at any time. To this end, the service provider shall safeguard the confidentiality, integrity and availability of public jurisdiction information and comply with the following conditions:

a) The service provider shall implement and maintain appropriate administrative, technical and physical security measures to safeguard against unauthorized access, disclosure or theft of personal data and non-public data. In Appendix A, the public jurisdiction shall indicate whether restricted information will be processed by the service provider. Such security measures shall be in accordance with recognized industry practice and not less stringent than the measures the service provider applies to its own personal data and non-public data of similar kind. The service provider shall ensure that all such measures, including the manner in which personal data and non-public data are collected, accessed, used, stored, processed, disposed of and disclosed, comply with applicable data protection and privacy laws, as well as the terms and conditions of this Addendum and shall survive termination of the underlying contract.

b) The service provider represents and warrants that its collection, access, use, storage, disposal and disclosure of personal data and non-public data do and will comply with all applicable federal and state privacy and data protection laws, as well as all other applicable regulations and directives.

c) The service provider shall make multi-factor authentication available to the public jurisdiction to safeguard personal data and non-public data.

d) If, in the course of its engagement by the public jurisdiction, the service provider has access to or will collect, access, use, store, process, dispose of or disclose credit, debit or other payment cardholder information, the service provider shall at all times remain in compliance with the Payment Card Industry Data Security Standard ("PCI DSS") requirements, including remaining aware at all times of changes to the PCI DSS and promptly implementing all procedures and practices as may be necessary to remain in compliance with the PCI DSS, in each case, at the service provider's sole cost and expense.

e) All data obtained by the service provider in the performance of this contract shall become and remain the property of the public jurisdiction.

f) All personal data shall be encrypted at rest and in transit with controlled access. Unless otherwise stipulated, the service provider is responsible for encryption of the personal data.

g) Unless otherwise stipulated, the service provider shall encrypt all non-public data at rest and in transit, in accordance with recognized industry practice. The public jurisdiction shall identify data it deems as non-public data to the service provider.

h) With delivery of the software and instructions, the service provider shall provide guidelines to the public jurisdiction detailing the public jurisdiction's specific security roles and responsibilities and best practices for implementation of security controls for the service provider's application. These guidelines shall be made a part of this contract.

i) At no time shall any data or process – that either belong to or are intended for the use of a public jurisdiction or its officers, agents or employees — be copied, disclosed or retained by the service provider or any party related to the service provider for subsequent use in any transaction that does not include the public jurisdiction.

j) The service provider shall not use or disclose any information collected in connection with the service issued from this proposal for any purpose other than fulfilling the service.

k) Data Location. For non-public data and personal data, the service provider shall provide its data center services to the public jurisdiction and its end users solely from data centers in the U.S. Storage of public jurisdiction data at rest shall be located solely in data centers in the U.S. The service provider shall not allow its personnel or contractors to *store* public jurisdiction data on portable devices, including personal computers, except for devices that are used and kept only at its U.S. data centers. With agreement from the public jurisdiction, this term may be met by the service provider providing its services from an acceptable alternative data center location, which agreement shall be stated in Appendix A. The service provider shall permit its personnel and contractors to access public jurisdiction data remotely only as required to provide technical support.

4. Security Incident or Data Breach Notification: The service provider shall inform the public jurisdiction of any security incident or data breach.

a) Incident Response: The service provider may need to communicate with outside parties regarding a security incident, which may include contacting law enforcement, fielding media inquiries and seeking external expertise as mutually agreed upon, defined by law or contained in the contract. Discussing security incidents with the public jurisdiction shall be handled on an urgent as-needed basis, as part of service provider communication and mitigation processes as mutually agreed upon, defined by law or contained in the contract.

b) Security Incident Reporting Requirements: The service provider shall report a security incident as soon as practicable, but no later than twenty-four (24) hours after the service provider becomes aware of it, to: (1) the department privacy officer, by email, with a read receipt, identified in Appendix A; and, (2) unless otherwise directed by the public jurisdiction in the underlying contract, the WVOT Online Computer Security and Privacy Incident Reporting System at https://apps.wv.gov/ot/ir/Default.aspx. The following information shall be shared with the public jurisdiction: (1) incident phase (detection and analysis; containment, eradication and recovery; or post-incident activity), (2) projected business impact, and, (3) attack source information.

c) Breach Reporting Requirements: Upon the discovery of a data breach or unauthorized access to non-public data, the service provider shall immediately report to: (1) the department privacy officer, by email, with a read receipt, identified in Appendix A; and, (2) unless otherwise directed by the public jurisdiction in the underlying contract, the WVOT Online Computer Security and Privacy Incident Reporting System at https://apps.wv.gov/ot/ir/Default.aspx.

5. Breach Responsibilities: This section only applies when a data breach occurs with respect to personal data within the possession or control of the service provider.

a) The service provider shall provide the public jurisdiction with the name and contact information for an employee of service provider who shall serve as the public jurisdiction's primary security contact and shall be available to assist the

public jurisdiction twenty-four (24) hours per day, seven (7) days per week as a contact in resolving obligations associated with a data breach. The service provider shall provide this information in Appendix A.

b) Immediately following the service provider's notification to the public jurisdiction of a data breach, the parties shall coordinate with each other to investigate the data breach. The service provider agrees to fully cooperate with the public jurisdiction in the public jurisdiction's handling of the matter, including, without limitation, at the public jurisdiction's request, making available all relevant records, logs, files, data reporting and other materials required to comply with applicable law, regulation, industry standards or as otherwise reasonably required by the public jurisdiction.

c) Within 72 hours of the discovery, the service provider shall notify the parties listed in 4(c) above: (1) date of discovery; (2) list of data elements and the number of individual records; (3) description of the unauthorized persons known or reasonably believed to have improperly used or disclosed the personal data; (4) description of where the personal data is believed to have been improperly transmitted, sent, or utilized; and, (5) description of the probable causes of the improper use or disclosure.

d) The service provider shall (1) cooperate with the public jurisdiction as reasonably requested by the public jurisdiction to investigate and resolve the data breach, (2) promptly implement necessary remedial measures, if necessary, and prevent any further data breach at the service provider's expense in accordance with applicable privacy rights, laws, regulations and standards and (3) document responsive actions taken related to the data breach, including any post-incident review of events and actions taken to make changes in business practices in providing the services, if necessary.

e) If a data breach is a direct result of the service provider's breach of its contract obligation to encrypt personal data or otherwise prevent its release, the service provider shall bear the costs associated with (1) the investigation and resolution of the data breach; (2) notifications to individuals, regulators or others required by state or federal law; (3) a credit monitoring service (4) a website or a toll-free number and call center for affected individuals required by state law — all not to exceed the average per record per person cost calculated for data breaches in the United States (currently $141 per record/person) in the most recent Cost of Data Breach Study: Global Analysis published by the Ponemon Institute at the time of the data breach; and (5) complete all corrective actions as reasonably determined by service provider based on root cause. The service provider agrees that it shall not inform any third party of any data breach without first obtaining the public jurisdiction's prior written consent, other than to inform a complainant that the matter has been forwarded to the public jurisdiction's legal counsel. Further, the service provider agrees that the public jurisdiction shall have the sole right to determine: (1) whether notice of the data breach is to be provided to any individuals, regulators, law enforcement agencies, consumer reporting agencies or others, as required by law or regulation, or otherwise in the public jurisdiction's discretion; and (2) the contents of such notice, whether any type of remediation

may be offered to affected persons, and the nature and extent of any such remediation.

6. Notification of Legal Requests: The service provider shall contact the public jurisdiction upon receipt of any electronic discovery, litigation holds, discovery searches and expert testimonies related to the public jurisdiction's data under this contract, or which in any way might reasonably require access to the data of the public jurisdiction. The service provider shall not respond to subpoenas, service of process and other legal requests related to the public jurisdiction without first notifying the public jurisdiction, unless prohibited by law from providing such notice.

7. Termination and Suspension of Service:

a) In the event of a termination of the contract, the service provider shall implement an orderly return of public jurisdiction data in a CSV or another mutually agreeable format at a time agreed to by the parties and the subsequent secure disposal of public jurisdiction data.

b) During any period of service suspension, the service provider shall not take any action to intentionally erase any public jurisdiction data.

c) Unless otherwise specified in the Contract, in the event of termination of any services or agreement in entirety, the service provider shall not take any action to intentionally erase any public jurisdiction data for a period of:

- 10 days after the effective date of termination, if the termination is in accordance with the contract period
- 30 days after the effective date of termination, if the termination is for convenience
- 60 days after the effective date of termination, if the termination is for cause

After such period, the service provider shall have no obligation to maintain or provide any public jurisdiction data and shall thereafter, unless legally prohibited, delete all public jurisdiction data in its systems or otherwise in its possession or under its control.

d) The public jurisdiction shall be entitled to any post-termination assistance generally made available with respect to the services, unless a unique data retrieval arrangement has been established as part of the Contract.

e) The service provider shall securely dispose of all requested data in all of its forms, such as disk, CD/ DVD, backup tape and paper, when requested by the public jurisdiction. Data shall be permanently deleted and shall not be recoverable, according to National Institute of Standards and Technology (NIST)-approved methods. Certificates of destruction shall be provided to the public jurisdiction.

8. Background Checks: The service provider shall conduct criminal background checks and not utilize any staff, including subcontractors, to fulfill the obligations of the contract who have been convicted of any crime of dishonesty, including but not limited to criminal fraud, or otherwise convicted of any felony or misdemeanor offense for which incarceration for up to 1 year is an authorized penalty. The service provider shall

promote and maintain an awareness of the importance of securing the public jurisdiction's information among the service provider's employees and agents.

9. Oversight of Authorized Persons: During the term of each authorized person's employment or engagement by service provider, service provider shall at all times cause such persons to abide strictly by service provider's obligations under this Agreement and service provider's standard policies and procedures. The service provider further agrees that it shall maintain a disciplinary process to address any unauthorized access, use or disclosure of personal data by any of service provider's officers, partners, principals, employees, agents or contractors.

10. Access to Security Logs and Reports: The service provider shall provide reports to the public jurisdiction in CSV format agreed to by both the service provider and the public jurisdiction. Reports shall include latency statistics, user access, user access IP address, user access history and security logs for all public jurisdiction files related to this contract.

11. Data Protection Self-Assessment: The service provider shall perform a Cloud Security Alliance STAR Self-Assessment by completing and submitting the "Consensus Assessments Initiative Questionnaire" to the Department privacy officer. The service provider shall first submit its self-assessment to the public jurisdiction as part of its response to the solicitation and, upon request, annually thereafter, on the anniversary of the date of contract execution.

12. Data Center Audit: The service provider shall perform an audit of its data centers at least annually at its expense and provide a redacted version of the audit report upon request. The service provider may remove its proprietary information from the redacted version. A Service Organization Control (SOC) 2 audit report or approved equivalent as detailed below sets the minimum level of a third-party audit.

13. Change Control and Advance Notice: The service provider shall give 30 days, advance notice (to the public jurisdiction of any upgrades (e.g., major upgrades, minor upgrades, system changes) that may impact service availability and performance. A major upgrade is a replacement of hardware, software or firmware with a newer or better version in order to bring the system up to date or to improve its characteristics. It usually includes a new version number.

14. Security:

a) At a minimum, the service provider's safeguards for the protection of data shall include: (1) securing business facilities, data centers, paper files, servers, back-up systems and computing equipment, including, but not limited to, all mobile devices and other equipment with information storage capability; (2) implementing network, device application, database and platform security; 3) securing information transmission, storage and disposal; (4) implementing authentication and access controls within media, applications, operating systems and equipment; (5) implementing appropriate personnel security and integrity

procedures and practices, including, but not limited to, conducting background checks consistent with applicable law; and (6) providing appropriate privacy and information security training to service provider's employees.

b) The service provider shall execute well-defined recurring action steps that identify and monitor vulnerabilities, notify the individuals listed in 4(b) above, of critical or high risk vulnerabilities (where remediation cannot occur within 30 days or the service provider elects not to fix the vulnerability), and provide remediation or corrective measures. Where the service provider's technology or the public jurisdiction's required dependence on a third-party application to interface with the technology creates a critical or high risk, the service provider shall remediate the vulnerability as soon as possible, but no later than 30 days. Should remediation within the prescribed time-period not be feasible, the service provider shall notify the parties listed in section 4(b) above. The service provider must ensure that applications used to interface with the service provider's technology remain operationally compatible with software updates.

c) Upon the public jurisdiction's written request, the service provider shall provide a network diagram with respect to connectivity to the public jurisdiction's network that illustrates the service provider's information technology network infrastructure.

15. Non-disclosure and Separation of Duties: The service provider shall enforce separation of job duties, require commercially reasonable non-disclosure agreements, and limit staff knowledge of public jurisdiction data to that which is absolutely necessary to perform job duties.

16. Import and Export of Data: The public jurisdiction shall have the ability to securely import, export or dispose of data in standard format in piecemeal or in entirety at its discretion without interference from the service provider. This includes the ability for the public jurisdiction to import or export data to/from other service providers.

17. Responsibilities and Uptime Guarantee: The service provider shall be responsible for the acquisition and operation of all hardware, software and network support related to the services being provided. The technical and professional activities required for establishing, managing and maintaining the environments are the responsibilities of the service provider.

18. Subcontractor Disclosure: The service provider shall identify all of its strategic business partners related to services provided under this contract, including but not limited to all subcontractors or other entities or individuals who may be a party to a joint venture or similar agreement with the service provider, and who shall be involved in any application development and/or operations. These subcontractors shall be disclosed to the public jurisdiction as part of the service provider's response to the solicitation.

19. Right to Remove Individuals: The public jurisdiction shall have the right at any time to require that the service provider remove from interaction with public jurisdiction any service provider representative who the public jurisdiction believes is detrimental to

its working relationship with the service provider. The public jurisdiction shall provide the service provider with notice of its determination, and the reasons it requests the removal. If the public jurisdiction signifies that a potential security violation exists with respect to the request, the service provider shall immediately remove such individual. The service provider shall not assign the person to any aspect of the contract or future work orders without the public jurisdiction's consent.

20. Business Continuity and Disaster Recovery: The service provider shall provide a business continuity and disaster recovery plan upon request.

21. Compliance with Accessibility Standards: The service provider shall comply with and adhere to Accessibility Standards of Section 508 Amendment to the Rehabilitation Act of 1973.

22. Web Services: The service provider shall use Web services exclusively to interface with the public jurisdiction's data in near real time when possible.

23. Encryption of Data at Rest: The service provider shall ensure hard drive encryption consistent with validated cryptography standards as referenced in FIPS 140-2, Security Requirements for Cryptographic Modules for all personal data.

24. Subscription Terms: Service provider grants to a public jurisdiction a license to:

a. Access and use the service for its business purposes;
b. For SaaS, use underlying software as embodied or used in the service; and
c. View, copy, upload, download (where applicable), and use service provider's documentation.

25. Equitable Relief: Service provider acknowledges that any breach of its covenants or obligations set forth in Addendum may cause the public jurisdiction irreparable harm for which monetary damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the public jurisdiction is entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance and any other relief that may be available from any court, in addition to any other remedy to which the public jurisdiction may be entitled at law or in equity. Such remedies shall not be deemed to be exclusive but shall be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Addendum to the contrary.

AGREED:

Name of Agency:_____ Name of Vendor: Gcansoftware LLC

Signature:_____ Signature:

Title:_____	Title: CEO
Date:_____	Date: 2/25/19

Form - WVSaaSAddendum-5.29.18
Amended N/A

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFP 0506 EHP1900000002

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

- [x] Addendum No. 1
- [x] Addendum No. 2
- [ ] Addendum No. 3
- [ ] Addendum No. 4
- [ ] Addendum No. 5
- [ ] Addendum No. 6
- [ ] Addendum No. 7
- [ ] Addendum No. 8
- [ ] Addendum No. 9
- [ ] Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Gcansoftware LLC
Company

Authorized Signature

2/25/19
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

West Virginia Ethics Commission

Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of $1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

(1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
(2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
(3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of W. Va. Code § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

Revised June 8, 2018

West Virginia Ethics Commission

Disclosure of Interested Parties to Contracts

(Required by *W. Va. Code* § 6D-1-2)

Name of Contracting Business Entity: Gcomsoftware LLC **Address:** 24 madison ave Ext Albany NY 12203

Name of Authorized Agent: GinsnBnata **Address:** same as above

Contract Number: CRFP#HP1900000002 **Contract Description:** ElectronicVitalRecordsSystem

Governmental agency awarding contract: _____

☐ **Check here if this is a Supplemental Disclosure**

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below *(attach additional pages if necessary)*:

1. **Subcontractors or other entities performing work or service under the Contract**
   ☐ Check here if none, otherwise list entity/individual names below.

2. **Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**
   ☐ Check here if none, otherwise list entity/individual names below.
   See attached

3. **Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**
   ☑ Check here if none, otherwise list entity/individual names below.

Signature: _____ Date Signed: 2/25/19

Notary Verification

State of New York, County of Albany.

I, GinsnBnata, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 25 day of February, 2019

Holly Savarese
Notary Public's Signature

To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____

HOLLY SAVARESE
NOTARY PUBLIC-STATE OF NEW YORK
No. 01SA6172893
Qualified In Albany County
My Commission Expires August 20, 19

Revised June 8, 2018

Confidential Information

GCOM Companies
Ownership Structure
December 1, 2017

GCOM Software LLC

Description The operating entity of assets under the holding company
EIN 20-2902922

- 100% owned by GCOM IntermediateCo LLC

GCOM IntermediateCo LLC

Description Intermediate company between holdco and the operating entities
EIN 82-3272379

- 100% owned by GCOM HoldCo LLC

GCOM HoldCo LLC

Description Holding company where the operating entity sits in. As we do acquisitions, they will all fall under this structure
EIN 82-3269652

- 70% owned by GCOM InvestCo LP
- 30% owned by GCOM Albany Holdings Inc.

GCOM Albany Holdings Inc.

Description The original shareholders of GCOM Software, Inc.
EIN
Note: Owns 30% of GCOM HoldCo LLC
Source: GCOM Software, Inc. Cap Table prior to 11-14-2017 acquisition. Ratios of ownership were transferred to this legal entity

- 41.2% owned by Girish Bhatia
- 18.5% owned by Abid Bargeer
- 15.6% owned by Riyaz Ladkhan
- 24.7% owned by shareholders who individually own less than 10%

GCOM InvestCo LP

Description The shareholders of GCOM HoldCo LLC per the LPA
EIN 82-3220349

Note: Owns 70% of GCOM HoldCo LLC

- 23.6% owned by Brandywine Private Equity Investors SML LLC
- 23.6% owned by Pomona Capital IX, L.P.
- 14.6% owned by Steve Lefkowitz
- 11.8% owned by Arcadia Waterfall Investors
- 26.4% owned by shareholders who individually own less than 10%

GCOM InvestCo GP LLC

Description The general partners of the transaction. Steve Lefkowitz is the sole managing member and chairperson of this entity, and therefore controls 100% of this entity management decisions.
EIN 82-3213475

Note: Ownership of this entity for the purposes of profits and investment interests follow:

- 42.5% owned by Steve Lefkowitz
- 50.0% owned by Bagnols GCOM Investments, LLC
- 7.5% owned by Raj Kanodia

REQUEST FOR PROPOSAL

West Virginia Department of Health and Human Resources
CRFP EHP1900000002

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7. **Section 6: Evaluation and Award**
8. **Certification and Signature Page**

SECTION 1: GENERAL INFORMATION

1.1. Introduction:

The West Virginia Department of Administration, Purchasing Division (hereinafter referred to as the "Purchasing Division") is issuing this solicitation as a request for proposal ("RFP"), as authorized by W. Va. Code §5A-3-10b, for the Department of Health and Human Resources, Bureau for Public Health, Health Statistics Center (hereinafter referred to as the "Agency") to select a vendor that can satisfy the State's need for web-based electronic vital records software, including installation and configuration of the software, as well as conversion of data and images from multiple legacy systems. In addition, the vendor will assist the State to test and pilot the software, provide training to end users and provide go live assistance to the State and stakeholders. It is the intent of the Office of Vital Registration to contract with a vendor that provides a fully web-based system adaptable to multiple types of devices, such as tablets and mobile devices, which is highly configurable by the end-user after being moved into the production environment.

The RFP is a procurement method in which vendors submit proposals in response to the request for proposal published by the Purchasing Division. It requires an award to the highest scoring vendor, rather than the lowest cost vendor, based upon a technical evaluation of the vendor's technical proposal and a cost evaluation. This is referred to as a best value procurement. Through their proposals, vendors offer a solution to the objectives, problem, or need specified in the RFP, and define how they intend to meet (or exceed) the RFP requirements.

NOTE: This request is covered in part or in whole by federal funds. All bidders will be required to acknowledge and adhere to Attachment 1 - "Provisions Required for Federally Funded Procurements."

NOTE: The WVDHHR has developed an Equal Employment Opportunity Plans (EEOP) Utilization Report and it is available at:
http://www.wvdhhr.org/pdfs/H1.5%20Utilization%20Report%20and%20EEO%20policy.pdf

REQUEST FOR PROPOSAL

West Virginia Department of Health and Human Resources
CRFP EHP1900000002

1.2. RFP Schedule of Events:

RFP Released to Public	1/23/19
Pre-bid Conference	NA
Vendor's Written Questions Submission Deadline	2/5/19
Addendum Issued	TBD
Technical Bid Opening Date	3/5/19
Technical Evaluation Begins	TBD
Oral Presentation	TBD
Cost Bid Opening	TBD
Cost Evaluation Begins	TBD
Contract Award Made	TBD

1.3. Project Summary:

The West Virginia State Department of Health and Human Resources, Bureau for Public Health, Health Statistics Center, Vital Registration Office is the official repository for all vital event data. The Vital Registration Office is currently using a State developed system for electronic processing of birth records. Deaths, fetal deaths and induced termination of pregnancy (ITOP) are processed through a combination of paper and separate state developed systems. Marriages are registered at the County level with a County system. The State handles all foreign-born adoptions, adoptions, delayed registrations, and court ordered parentage. At times they receive amendments and paternities to process.

The State Office fulfils requests for birth, death and marriage certificates through walk-in and mail in requests and through a third-party vendor, VitalChek.

All marriage applications and certificates are registered at the county level. Customers can request county copies of birth, death, and marriage certificates from their local county vital record office. There are 55 independent county offices.

Some counties use their own system for issuing certified, county copies. These certified copies are issued on county security paper. The birth and death records will sometimes have a State File Number (SFN) as well as a county indexing reference (usually book and page). Counties may only issue certificates for vital events that have taken place in their county – however, a death to a resident of one county that occurs in another county may technically be issued by the county of residence, also. Each county is required to maintain their own set of records.

The purpose of the Electronic Vital Registration System (EVRS) Project is to purchase, configure and install a Commercial off the Shelf (COTS) system for vital records events. The EVRS will be Internet-based and will provide real time access to and registration of birth, death, and fetal death, and ITOP data. Additionally, the EVRS will allow users to amend records, track and fulfill requests, and meet national, state and agency reporting requirements.

1.4. Implementation Approach:

1.4.1. Phase One – Death and Point of Sale: The first phase of the project will be the configuration and roll out of the Electronic Death Registration System (EDRS) and the Point of Sale (POS) modules. The EDRS includes all the "front of the house" functions such as creating and certifying a death record and authorization for dispositions, and all the "back of the house" functions such as registration, issuance, amendments, and accounting. Worksheets and other documents may be attached to the electronic record. The corresponding data conversion and image migration for death and POS will occur in this phase. The State is looking to the vendor to provide the end-user training through in person regional training, live webinars and e-learning. The state also expects the successful vendor to provide Train-the-Trainer training for a select group of State trainers. The state estimates 12 months from project initiation to go live.

After go live of the system, there will be a two-month stabilization period in which any remaining configuration issues will be remedied. During this time the State project team will also focus on remedial training of stakeholders, ensuring that all manual processes and logs that were necessary in the past have been eliminated and refining new policies and procedures.

1.4.2. Phase Two – Birth and Fetal Death: After the two-month EDRS / POS stabilization period, the State and the successful vendor will embark on the second phase of the project with the implementation of the Electronic Birth Registration System (EBRS) and Electronic Fetal Death System (EFDS). This implementation is anticipated to take approximately 12 months. There will also be a two-month stabilization period after go live.

1.4.3. Phase Three – ITOP: The final implementation will be Induced Termination of Pregnancy (ITOP). This is expected to take approximately 6 months.

SECTION 2: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

☑ A pre-bid meeting will not be held prior to bid opening

☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: February 5, 2019, at 3:00 PM EST

Submit Questions to: April Battle, File #22
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
Email: april.e.battle@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID: Electronic Vital Records System (EVRS) Implementation
BUYER: April Battle, File #22
SOLICITATION NO.: CRFP 0506 EHP1900000002
BID OPENING DATE: March 5, 2019
BID OPENING TIME: 1:30 PM EST
FAX NUMBER: N/A

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

For Request For Proposal ("RFP") Responses Only: In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus 5 convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)
☑ Technical
☑ Cost

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: March 5, 2019, at 1:30 PM EST

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATE MODEL OR BRAND: Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

☐ This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and should include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at:
http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. A request form to help facilitate the request can be found at:
http://www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance."

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b."

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

22. INTERESTED PARTY DISCLOSURE: West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least $1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

23. WITH THE BID REQUIREMENTS: In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

SECTION 3: GENERAL TERMS AND CONDITIONS

Terms and conditions begin on next page.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or **"Proposal"** means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☑ **Term Contract**

Initial Contract Term: Initial Contract Term: This Contract becomes effective on award and extends for a period of Seven (7) Years year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to Three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. NOTICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☑ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☑ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☑ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☑ Certified Management Consultant (CMC) or Project Management Professional (PMP)

☐

☐

☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

☑ **Commercial General Liability Insurance** in at least an amount of: 1,000,000.00 per occurrence.

☑ **Automobile Liability Insurance** in at least an amount of: 1,000,000.00 per occurrence.

☑ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: 1,000,000.00 per occurrence.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.

☑ **Cyber Liability Insurance** in an amount of: 3,000,000.00 per occurrence.

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

☐

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Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

9. WORKERS' COMPENSATION INSURANCE: The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ _____ for _____

☐ Liquidated Damages Contained in the Specifications

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

14. PAYMENT IN ARREARS: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence with regard to all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

> **SUBCONTRACTOR COMPLIANCE:** Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/default.html.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a

"substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

44. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least $1 million, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

SECTION 4: PROJECT SPECIFICATIONS

4.1. Background and Current Operating Environment: The State Vital Registration Office (VRO) is the repository and are responsible for filing of all vital event records. The VRO is currently using a State developed system for electronic processing of birth records. Deaths, fetal deaths and induced termination of pregnancy (ITOP) are processed through a combination of paper and separate state developed systems. The State handles all foreign-born adoptions, adoptions, delayed registrations, and court ordered parentage. At times they receive amendments and paternities to process.

The State began storing records on microfilm as far back as 1903 (Birth) up until 2006, and late 1800s (Death) up until 2010 when the State began imaging records with their imaging system. Most all microfilm has been inserted into the current imaging system. In 2009, Vital Search, a State developed system, was introduced. Now, the Vital Search system houses all records and allows staff to search for records electronically. Prior to Vital Search, Index cards and Key punch cards were utilized for batch records. Vital Search is searchable by Year, Date of Birth, First/Last/MI, Mother's Maiden name, County where birth occurred and State file number as well as many other variables

There are various systems in use at the State for the processes which fall under four main umbrellas. For a complete list and full description of all systems and databases used by the State, please refer to Attachment F – Current System and Data Information.

1. Entry Systems

a. Systems within this category are Birth, Death, Fetal Death, Adoptions, ITOP, and Affidavit of Paternity (PAF). With the exclusion of Adoptions, all events listed above use a Windows-based .EXE data entry system that was developed in C#, and also in Access.
b. Hospitals and facilities have access to the Birth and Fetal Death systems and can enter data electronically and print completed forms to mail to the State. All other systems contain a subset of data that mirrors information found on the original certificates.
c. To enter the cause of death (COD) for a death certificate, the State uses SuperMicar, a program provided by the National Center for Health Statistics (NCHS).
d. For adoptions and corrections to a birth certificate, an .EXE program written in C# is used. It reads the existing birth certificate information from the current entry system. Data is split into several parts with part in text files, part in .dbf (dBASE IV), part in a Microsoft Access file, and the rest on one of the SQL servers.
e. Once records are data entered, they are indexed in the Vital Search program.

2. Indexes

a. Vital Search is a Windows-based .EXE search engine, written in C#, VB6 and VB.net. This program searches the entry system nightly for new changes to records. It can flag

records as Pending, Do Not Issue, and Missing Children.

b. Additional indexes/logs:

   i. For home births there is a tracking program which tracks home births before they are registered. It is a .EXE program, written in VB6, and is stored in a Microsoft Access file.
   ii. Birth certificates have a barcode printed on the top of the certificate and once scanned with barcode reader the date is captured. The program is an .EXE, written in C#, and the date is stored in a table on the SQL server.
   iii. Paternities, and the status of queries on paternities, are tracked through a Microsoft Access file.
   iv. Amendments are entered through an .EXE program, which was written in VB6. This is used to add flags to records that were amended, enter amended information into records, and note copies requested. The data is stored in a table on the SQL server.
   v. There is a Corrections Log used to flag death certificates as pending void, or other changes to that record. It is an .EXE program written in VB6, with the data stored partially in a Microsoft Access file and partially in a table on one of the SQL servers.
   vi. A separate Do Not Issue Flag program, also .EXE written in VB6, allows the user to mark the record with a do not issue flag. The data is also stored in a table on the SQL server.
   vii. A Search Change program allows the user to display a change log and assorted flags; this also allows the user to remove the do not issue flag. This is a .EXE program, written in VB6, and the data is stored in a table on the SQL server.

3. Imaging

a. The Quick Print program images the documents received in vital records. This system keeps single or double-sided copies of all documents. Also, known as Quick Print, this system checks indexes for flagged records and is used to generate certified certificates. The Quick Print program is an .EXE program written in VB6 and VB6.net.
b. The Programmers/Analysts, State Registrar, Program Manager, Deputy Registrar, Corrections, and Registration can view all current as well as previous images that have been scanned into the system. Other staff are only able to view the most current version of a document. This program moves data to a shared imaging drive and embeds in the file name a code for all of the data the image contains.

4. Order Entry

a. This system includes Order Management System (OMS) and Point of Sale (POS), which tracks and prints all order and sales activities for the day. These are both .EXE programs, written in VB.net and VB6. Both OMS and POS use the same data. The data is currently split, with most of it stored in a Microsoft Access database, and the remainder in tables in one of the SQL servers. OMS is used for mail orders and runs on a Windows 10, whereas POS is used for counter orders and is written in VB.net and as such, is unable to run on Windows 10.

There are 55 counties in West Virginia. Counties are responsible for issuing county copies of birth and death records. Some counties use their own system for issuing certified, county copies. Death and birth records issued by direct copy images or abstracted are printed on county security paper, with the SFN and a county index, usually book and page. Counties may only issue certificates for vital events that have taken place in their county – however, a death to a resident of one county that occurs in another county may technically be issued by the county of residence, also. Each county is required to maintain their own set of records. Counties charge for their certified county copies and take their own money, separate from the State POS system. The amount charged for a county copy of a record is less than the amount charged at the State for a certificated copy of that record. Amendments should not, and to the best of the State's knowledge, do not take place at the county level. Amendments to records is solely a function of the State.

All servers are housed by State Office of Technology (OT). OT provides service, or directly supports the service for IT related products that are purchased by state agencies. All programmers for the Department of Health and Human Resources (WVDHHR), sit under MIS and MIS staff are all DHHR employees. Four (4) of them sit in Vital Statistics, but only (3) will be playing a role in this project.

4.2. Project Goals and Mandatory Requirements: The goals of the EDRS are to design and rollout a new vital records system that is highly configurable and can evolve as State and Federal mandates and laws change; to allow for streamlining of processes; improve data quality specifically on the front end of the process; and implement a system that integrates all events, is user friendly and, to the degree possible, can serve not only the needs of the state but those of the counties as well. In addition, the EDRS system will eliminate non-value-added steps by streamlining a multitude of paper processes and manual tracking, and by doing so allow staff to be more efficient in their duties, exponentially decrease the time it takes to register and issue records to the public, as well as a decrease in the opportunity for human error in the process. Finally, it will facilitate submission of records to NCHS and other agencies within the federally mandated time to do so. Vendor should describe its approach and methodology to providing the service or solving the problem described by meet the goals/objectives identified below. Vendor's response should include any information about how the proposed approach is superior or inferior to other possible approaches.

4.2.1. Goals and Objectives – The project goals and objectives are listed below.

4.2.1.1. To have one single web-based system for the entire state with an integrated database and workflow.

4.2.1.2. To have a system that performs to current response standards and is available 24X7.

4.2.1.3. To have a system that is Configurable by a designated State Vital Records user.

4.2.1.4. To have a Customer Centric system that provides at a glance a complete picture of any given individual in the system.

4.2.1.5. To have a system that streamlines processes and fosters a once and done approach.

4.2.1.6. To have centralized registration and amendments for all vital events, except marriages and divorces.

4.2.1.7. To have the vendor host the system

4.2.1.8. To have the vendor train end users, state staff users, and provide comprehensive training documentation

4.2.1.9. To have a Project Management Plan provided by the vendor

4.2.1.10. To have comprehensive responses to milestones in Attachment D
- **4.2.1.10.1.** Planning and Administration (Milestone 1)
- **4.2.1.10.2.** Confirmation of Business and System Requirements (Milestone 2)
- **4.2.1.10.3.** Implementation of Technical Environment (Milestone 3)
- **4.2.1.10.4.** Design and Configuration of Proposed Solution (Milestone 4)
- **4.2.1.10.5.** Data Conversion and Migration (Milestone 5)
- **4.2.1.10.6.** User Acceptance Testing (UAT) (Milestone 6)
- **4.2.1.10.7.** Training (Milestone 7)
- **4.2.1.10.8.** Documentation (Milestone 8)
- **4.2.1.10.9.** Parallel Pilot (Milestone 9)
- **4.2.1.10.10.** Production Implementation (Milestone 10)
- **4.2.1.10.11.** System Warranty (Milestone 11)
- **4.2.1.10.12.** System Maintenance Support (Milestone 12)

4.2.1.11. Vendor should respond to Technical Questions One through Twelve in Attachment D

4.2.1.12. Vendor should respond to Business and System Functional Specifications:
- **4.2.1.12.1.** Functional Specifications, Attachment D1
- **4.2.1.12.2.** General System Specifications, Attachment D2
- **4.2.1.12.3.** Forms Specifications, Attachment D3

4.2.2 Mandatory Project Requirements – The following mandatory requirements relate to the goals and objectives and must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it will comply with the mandatory requirements and include any areas where its proposed solution exceeds the mandatory requirement. Failure to comply with mandatory requirements will lead to disqualification, but the approach/methodology that the vendor uses to comply, and areas where the mandatory requirements are exceeded, will be included in technical scores where appropriate. The mandatory project requirements are listed below.

4.2.2.1. The vendor must have successfully implemented a web EBRS that is currently in production in at least 2 states within the United States, or 2 countries, or 2 Canadian provinces within the last 5 years.

4.2.2.2. The vendor must have successfully implemented a web EDRS that is currently in production in at least 2 states within the Unites States, or 2 countries, or 2 Canadian provinces within the last 5 years.

4.2.2.3. The vendor must have successfully implemented a web Fetal Death Registry that is currently in production in at least 2 states within the United States, or 2 countries or 2 Canadian provinces within the last 5 years.

4.2.2.4. The vendor must have successfully implemented a web ITOP that is currently in production in at least 2 states within the United States, or 2 countries or 2 Canadian provinces within the last 5 years.

4.2.2.5. The vendor must have successfully implemented a web Point of Sale system that is currently in production in at least 2 states within the United States, 2 countries or 2 of the Canadian provinces within the last 5 years.

4.2.2.6. Items 1 – 5, at a minimum, must be fully web based and must have an integrated database.

4.2.2.7. All functions within the system must be appropriately adaptive (mobile ready) to function properly on a desk top; a tablet and a mobile device.

4.2.2.8. The vendor must have successfully migrated historical images from multiple sources and linked them with the appropriate event records in at least 2 states within the Unites States, or 2 countries, or 2 Canadian provinces within the last 5 years.

4.2.2.9 The vendor must have successfully migrated vital records data from multiple systems and sources into the Electronic Vital Registration System (EVRS) in at least 2 states within the Unites States, or 2 countries, or 2 Canadian provinces within the last 5 years.

4.2.2.10. The system must have and maintain all the National Center for Health Statistics (NCHS) edits.

4.2.2.11. The solution must interface with the State and Territorial Exchange of Vital Events (STEVE).

4.2.2.12. The solution must interface with Electronic Verification of Vital Events (EVVE).

4.2.2.13. The solution must interface with VitalChek certificate ordering.

4.2.2.14. The solution must interface with On-line Verification System (OVS).

4.2.2.15. The solution must work in Safari, Chrome, Internet Explorer (IE).

4.2.2.16. The vendor shall provide to the State, simultaneous with its initial installation, and any subsequent enhancements, upgrades, fixes, etc., software tools (including, but not limited to compilers, editors, etc.) that the State would require to maintain or enhance the customized software. The price for said tools and the cost to train State personnel to maintain and/or to enhance the customized software shall be noted separately and included in the proposer's cost proposal submitted to the State in response to the State's solicitation.

4.2.2.17. Escrow for Source Code: In the event the vendor at any point during the continued installation and operation of the software herein acquired discontinues the conduct of business or for any other reason fails to continue to support the software, the state shall be provided a copy of the source code for said software within thirty days at no expense to the State.

4.2.2.18. The vendor shall provide a list of at least three (3) clients for whom the vendor has provided products and/or services that are the same or similar to those products and/or services requested in this RFP. References provided will be contacted to during evaluation of the vendor submitted RFP.

4.2.2.19. The vendor shall adhere to specified security controls as well as state and federal regulations identified in Attachment I.

4.2.2.20. The vendor shall agree to the Software as a Service Addendum as described in Attachment J.

4.2.2.21. The vendor shall use the response templates provided in section 5.3 for their proposal.

4.3. Qualifications and Experience: Vendor should provide information and documentation regarding its qualifications and experience in providing services or solving problems similar to those requested in this RFP. Information and documentation should include, but is not limited to, copies of any staff certifications or degrees applicable to this project, proposed staffing plans, descriptions of past projects completed (descriptions should include the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.), references for prior projects, and any other information that vendor deems relevant to the items identified as desirable or mandatory below.

4.3.1 Qualification and Experience Information: Vendor should describe in its proposal how it meets the desirable qualification and experience requirements listed below.

4.3.1.12. All project staff have a minimum of 2 years of experience working on vital records system project.

4.3.1.13. All configuration staff are cross trained in configuration of the various vital event modules.

4.3.1.14. The assigned project manager has a Project Management Profession (PMP) or Certified Management Consultant (CMC) certification in addition to 2 years of experience working on a vital records project.

4.3.1.15. The assigned vendor staff responsible for data conversion has 5 years of data conversion experience working with multiple legacy data sources and image files.

4.3.2. Mandatory Qualification/Experience Requirements – The following mandatory qualification/experience requirements must be met by the Vendor as a part of its submitted proposal. Vendor should describe how it meets the mandatory requirements and include any areas where it exceeds the mandatory requirements. Failure to comply with mandatory requirements will lead to disqualification, but areas where the mandatory requirements are exceeded will be included in technical scores where appropriate. The mandatory qualifications/experience requirements are listed below.

4.3.2.1. The Vendor Project Manager must have a minimum of 2 years of experience managing a vital records project

4.3.2.2. A key project staff must be identified for each event module (EDRS, EBRS, EFDS, ITOP, POS, and data conversion) and must have a minimum of 2 years of experience adapting the event workflows and configuring the event for other states within the United States, or Canadian Provinces or other countries.

4.4. Oral Presentations (Agency Option): The Agency has the option of requiring oral presentations of all Vendors participating in the RFP process. If this option is exercised, it would be listed in the Schedule of Events (Section 1.3) of this RFP. During oral presentations, Vendors may not alter or add to their submitted proposal, but only clarify information. A description of the materials and information to be presented is provided below:

Materials and Information Requested at Oral Presentation:

4.4.2. In person presentation of project team

4.4.3. Demonstration of workflow of the major event modules (a detailed script will be provided 10 working days prior to oral presentation date)

4.4.4. Demonstration of configurability (a detailed script will be provided ahead of time10 working days prior to oral presentation date)

4.4.5. Providing a state staff with the opportunity to use and configure the system

4.4.6. Questions and Answers specific to the proposal

4.4.7. Specific topics as identified through the evaluation process

SECTION 5: VENDOR PROPOSAL

5.1. Economy of Preparation: Proposals should be prepared simply and economically providing a concise description of the items requested in Section 4. Emphasis should be placed on completeness and clarity of the content.

5.2. Incurring Cost: Neither the State nor any of its employees or officers shall be held liable for any expenses incurred by any Vendor responding to this RFP, including but not limited to preparation, delivery, or travel.

5.3. Proposal Format: Vendors should provide responses in the format listed below:

5.3.1. Two-Part Submission: Vendors must submit proposals in two distinct parts: technical and cost. Technical proposals must not contain any cost information relating to the project. Cost proposal must contain all cost information and must be sealed in a separate envelope from the technical proposal to facilitate a secondary cost proposal opening. Vendor must utilize the provided attachments with their proposals. Failure to utilize the attachments may disqualify the respondent.

5.3.1.1.Mandatory Requirements (Attachment B)

Please use the template provided to indicate the degree to which the Respondent's proposal will meet the mandatory requirements. Vendors that do not meet all the mandatory requirements will be disqualified and their responses will not receive further review.

5.3.1.2.Business Proposal (Attachment C)

Please use the template provided to carefully answer each question regarding the Respondent's company, financial stability and corporate structure. Please respond to each component of each question.

5.3.1.3.Technical Proposal (Attachment D)

Please use the template provided to carefully answer each question regarding the Respondent's proposed solution. Take care to address each item that is requested.

5.3.1.4.Functional Requirements Response (Attachment D1)

The purpose of this attachment is to determine the degree of fit of the COTS solution against the State's business requirements. This attachment is password protected except for the fields in which the Respondent must provide an answer. DO NOT MANIPULATE THE SPREADSHEET. You may be disqualified.

5.3.1.5.General Requirements Response (Attachment D2)

The purpose of this attachment is to determine the degree of fit of the COTS solution against the State's general system requirements. This attachment is password protected except for the fields in which the Respondent must provide an answer. DO NOT MANIPULATE THE SPREADSHEET. You may be disqualified.

5.3.1.6.Reports Response (Attachment D3)

The purpose of this attachment is to determine the degree of fit of the COTS solution against the State's reports, letters and forms requirements. This attachment is password protected except for the fields in which the Respondent must provide an answer. DO NOT MANIPULATE THE SPREADSHEET. You may be disqualified.

5.3.1.7.Cost Proposal (Attachment E)

The Cost Proposal must be submitted in the original format. Any attempt to manipulate the format of the Cost Proposal document, attach caveats to pricing, or submit pricing that deviates from the current format will put your proposal at risk.

5.3.1.8.Security Proposal (Attachment I)

The purpose of this attachment is to identify the security expectations of the state and allow a vendor response as to the degree they and their solution fit the requirements.

5.3.1.9.Software as a Service Addendum (Attachment J)

This attachment is an addendum that provides terms and conditions for hosted/cloud based software solutions.

5.3.2. Title Page: State the RFP subject, number, Vendor's name, business address, telephone number, fax number, name of contact person, e-mail address, and Vendor signature and date.

5.3.3. Table of Contents: Clearly identify the material by section and page number.

5.3.4. Response Reference: Vendor's response should clearly reference how the information provided applies to the RFP request. For example, listing the RFP number and restating the RFP request as a header in the proposal would be considered a clear reference.

5.3.5. Proposal Submission: All proposals must be submitted to the Purchasing Division **prior** to the date and time stipulated in the RFP as the opening date. All submissions must be in accordance with the provisions listed in Section 2: Instructions to Bidders Submitting Bids.

SECTION 6: EVALUATION AND AWARD

6.1. Evaluation Process: Proposals will be evaluated in two parts by a committee of three (3) or more individuals. The first evaluation will be of the technical proposal and the second is an evaluation of the cost proposal. The Vendor who demonstrates that it meets all of the mandatory specifications required, attains the minimum acceptable score and attains the highest overall point score of all Vendors shall be awarded the contract.

6.2. Evaluation Criteria: Proposals will be evaluated based on criteria set forth in the solicitation and information contained in the proposals submitted in response to the solicitation. The technical evaluation will be based upon the point allocations designated below for a total of 70 of the 100 points. Cost represents 30 of the 100 total points.

Evaluation Point Allocation:

Project Goals and Proposed Approach (§ 4.2)	
- Approach & Methodology to Goals/Objectives (§ 4.2.1)	
- Project Plan (4.2.1.9)	(5) Points Possible
- Milestones (4.2.1.10)	(10) Points Possible
- Technical Response (4.2.1.11)	(15) Points Possible
- Functional Response (4.2.1.12)	(25) Points Possible
- Approach & Methodology to Compliance with Mandatory Project Requirements (§ 4.2.2)	(0) Points Possible
Qualifications and experience (§ 4.3)	
- Qualifications and Experience Generally (§ 4.3.1)	(5) Points Possible
- Exceeding Mandatory Qualification/Experience Requirements (§ 4.3.2)	(5) Points Possible
Oral interview (§ 4.4)	(5) Points Possible
Total Technical Score:	70 Points Possible
Total Cost Score:	30 Points Possible
Total Proposal Score: 100 Points Possible	

6.3. Technical Bid Opening: At the technical bid opening, the Purchasing Division will open and announce the technical proposals received prior to the bid opening deadline. Once opened, the technical proposals will be provided to the Agency evaluation committee for technical evaluation.

6.4. Technical Evaluation: The Agency evaluation committee will review the technical proposals, assign points where appropriate, and make a final written recommendation to the Purchasing Division.

6.5. Proposal Disqualification:

6.5.1. Minimum Acceptable Score ("MAS"): Vendors must score a minimum of 70% (49 points) of the total technical points possible in order to move past the technical evaluation and have their cost proposal evaluated. All vendor proposals not attaining the MAS will be disqualified.

6.5.2. Failure to Meet Mandatory Requirement: Vendors must meet or exceed all mandatory requirements in order to move past the technical evaluation and have their cost proposals evaluated. Proposals failing to meet one or more mandatory requirements of the RFP will be disqualified.

6.6. Cost Bid Opening: The Purchasing Division will schedule a date and time to publicly open and announce cost proposals after technical evaluation has been completed and the Purchasing Division has approved the technical recommendation of the evaluation committee. All cost bids received will be opened. Cost bids for disqualified proposals will be opened for record keeping purposes only and will not be evaluated or considered. Once opened, the cost proposals will be provided to the Agency evaluation committee for cost evaluation.

The Purchasing Division reserves the right to disqualify a proposal based upon deficiencies in the technical proposal even after the cost evaluation.

6.7. Cost Evaluation: The Agency evaluation committee will review the cost proposals, assign points in accordance with the cost evaluation formula contained herein and make a final recommendation to the Purchasing Division.

Cost Evaluation Formula: Each cost proposal will have points assigned using the following formula for all Vendors not disqualified during the technical evaluation. The lowest cost of all proposals is divided by the cost of the proposal being evaluated to generate a cost score percentage. That percentage is then multiplied by the points attributable to the cost proposal to determine the number of points allocated to the cost proposal being evaluated.

Step 1: Lowest Cost of All Proposals / Cost of Proposal Being Evaluated = Cost Score Percentage

Step 2: Cost Score Percentage X Points Allocated to Cost Proposal = **Total Cost Score**

Example:

Proposal 1 Cost is $1,000,000
Proposal 2 Cost is $1,100,000
Points Allocated to Cost Proposal is 30

Proposal 1: Step 1 – $1,000,000 / $1,000,000 = Cost Score Percentage of 1 (100%)
Step 2 – 1 X 30 = Total Cost Score of 30

Proposal 2: Step 1– $1,000,000 / $1,100,000 = Cost Score Percentage of 0.909091 (90.9091%)
Step 2 – 0.909091 X 30 = Total Cost Score of 27.27273

6.8. Availability of Information: Proposal submissions become public and are available for review immediately after opening pursuant to West Virginia Code §5A-3-11(h). All other information associated with the RFP, including but not limited to, technical scores and reasons for disqualification, will not be available until after the contract has been awarded pursuant to West Virginia Code of State Rules §148-1-6.3.d.

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Gcomsoftware LLC
(Company)

Girish Bhatia, CEO
(Representative Name, Title)

518 869 1671 | 518 869 1673
(Contact Phone/Fax Number)

2/25/19
(Date)

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Viren Alvekar, Managing Partner
(Name, Title)
Viren Alvekar managing Partner
(Printed Name and Title)
24 Madison Ave Ext Albany NY 12203
(Address)
267-980-6099 / 518 869 1673
(Phone Number) / (Fax Number)
[redacted] rfp@gcomsoft.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Gcomsoftware LLC
(Company)

(Authorized Signature) (Representative Name, Title)

Girish Bhatia, CEO
(Printed Name and Title of Authorized Representative)

2/05/19
(Date)

518 869 1671 ext 2225 / 518 869 1673
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Gcemsoftware LLC

Authorized Signature: _____ Date: 2/25/19

State of New York

County of Albany, to-wit:

Taken, subscribed, and sworn to before me this 25 day of February, 2019

My Commission expires 8/20, 2019

AFFIX SEAL HERE

NOTARY PUBLIC Holly Savarese

HOLLY SAVARESE
NOTARY PUBLIC-STATE OF NEW YORK
No. 01SA6172893
Qualified in Albany County
My Commission Expires August 20, 19

EXHIBIT 1 - RESUMES

EXHIBIT 1 - RESUMES

GCOM has assembled a team for the West Virginia Department of Health and Human Resources Electronic Vital Records System (EVRS), comprised of senior level resources, all possessing public sector experience and deep expertise in their specialty areas. This team is displayed in the figure below:

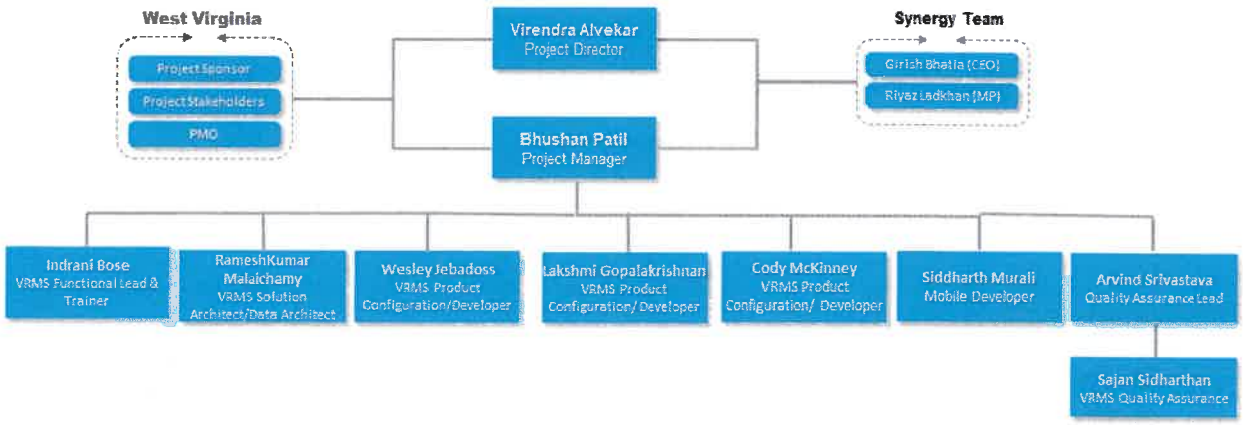

Figure 1: GCOM Project Team Organization Chart

In the remainder of this section, we provide full resumes for our key staff. We have organized key staff resumes to follow our project organization structure.

- GCOM Project Leadership
- GCOM Work Stream Leads

The resumes of GCOM's proposed staff can be found below.

GCOM PROJECT LEADERSHIP

Bhushan Patil, Project Manager

Certifications

- Microsoft Certified Professional

Education

- Master of Science, University of Bombay, India.

Professional Summary

- Senior Software Engineer who has successfully designed and developed commercial quality, enterprise applications
- Proficient in troubleshooting application and database related performance issues and tuning to meet the system non-functional requirements.
- Highly skilled .NET professional with 20 years of design and development experience
- Over 15 years involved in the design, development and unit testing of web-based applications using .NET framework 5.0, 4.5, 4.0/3.5/3.0/2.0/1.1
- Excellent understanding of latest .Net Framework (MVC, WPF, WCF, WWF, LINQ)
- Experienced in utilizing C#, ASP.Net, MVC /Razor, REST/SOAP services and Entity Framework.
- Knowledge in JavaScript and JS Libraries (Angular 2/4/5/6, Bootstrap, jQuery) as well as HTML5 and CSS3.
- Proficient in database designing, developing and migrating data using Oracle and Microsoft SQL Server
- Proficient in analyzing and translating business requirements to technical requirements, design and development

Technical Skills

- **Platform:** MS Windows Server 2012, 2008 R2, 2008, 2003, 2000, Windows 7, Windows XP and MS-DOS and Microsoft Active Directory
- **Framework:** Microsoft.Net Framework version 5.0, 4.5, 4.0, 3.5, 2.0, 1.1, 1.0 and Microsoft Entity Framework 6
- **Technology:** ASP.NET MVC 5.0, ASP.NET, ADO.Net, WPF, WCF, WWF, LINQ, COM+, DCOM, MSMQ, ASP 3.0, XML and XSLT

- **Databases:** Oracle 11g,10g, 9i, 7.3, MS SQL-Server 2012, 2008, 2005, 2000, 7.0, 6.5 & Access 97, 2000
- **Languages:** C#, VB.Net, Visual Basic, Java, JavaScript, UML, PL/SQL

Professional Experience

GCOM Software LLC
August 2014 to Present

Client: New York City Department of Health and Mental Hygiene (NYC DOHMH)
Project: eVital
Date: August-2014 to Present
Role: Project Manager

Scope: The eVital application is about registering the Birth and Death events within NYC's limits and generating the respective Birth and Death Certificate. The eVital application is replacing the COTS product of EVERS, which limits the ability of DOHMH for any modifications. EVERS is approximately a 10-15-year-old product and has some performance issues.

Responsibilities

- As a Senior Software Engineer, involved in the architecture, design and development of the system.
- Develop .NET web application using ASP.NET MVC 5/razor, C# using Visual Studio 2013.
- Develop various end to end business functionality including HTML 5.0 Compatible UI Screens, Presentation Models, Controllers, Business logic components and Restful Services supporting the complex business requirements.
- Write SQL Server stored procedures and use Data Modeling skills to design databases.
- Responsible for improving application performance and scalability by finding performance bottlenecks by profiling both .Net code and data access layer.
- Involved in analysis and tuning of SQL queries by SQL Profiler for faster and better performance of the SQL queries.
- Involved in debugging and analyzing production issue and fixing them as part of normalizations.
- Provided extended support to help and fix the performance issues in production occurrences.

Environment: Visual Studio 2013, MS SQL Server 2012, MVC Framework 5, .Net Framework 4.5, Entity Framework 5.0, C#, JQuery, Windows 2008 Server.

Client: New York State Funeral Directors Association (NYSFDA)
Project: Odyssey II
Date: September-2010 to August 2012

Role: Senior Software Engineer

Scope: Odyssey II is a financial application which allows New York State Funeral Directors Association (NYSFDA) to enhance the environment in which their members operate and promote the highest standards of funeral service to the public. NYSFDA is currently representing over 900 funeral firms in New York State, providing a number of services including Pre-Plan Services, which is administered by Funeral Director Support Services, Inc. (FDSS).

Responsibilities

- As a project manager, was responsible for all delivery aspects of the project.
- Managed project plan and delivery team.
- Worked closely with the client (NYSFDA) throughout all phases of the project through regular meetings, status reporting and risk management.
- Was actively involved in the architecture, design and development of the system.
- Actively participated in database modeling, database design and database creation using ER-Win and MS Visio
- Developed .NET web application using ASP.NET, C#, JQuery using Visual Studio 2010
- Developed various end to end business functionality, Compatible UI Screens, Presentation Models, Controllers, Business logic components and Restful Services supporting the complex business requirements.
- Wrote SQL Server stored procedures and used Data Modeling skills to design databases.
- Responsible for improving application performance and scalability by finding performance bottlenecks by profiling both .Net code and data access layer.
- Involved in analysis and tuning of SQL queries by using EXPLAIN PLAN and TKProf for faster and better performance of the SQL queries.
- Provided extended support to help and fix the performance issues in production instance.

Environment: Visual Studio 2010, .Net Framework 4.0, C#.Net, ASP.Net, WPF, WCF, Oracle 11g, LDAP, WCF, ADO.Net Entity framework, XML, JavaScript, JSON, JQuery, Infragistics, Windows 2008 Server

Client: VEL Systems LLC.
Project: Streamlend Velocity
Date: September-2012 to July 2014
Role: Senior Software Engineer

Scope: StreamLend Velocity is a completely web-based product, end-to-end loan processing solution, uniquely integrates decision support, business process control, and document management into a single, seamless system. It enables lending institutions to streamline their lending process, maximize staff productivity and increase loan volumes.

Responsibilities

- As a Senior Software Engineer, was involved in the architecture, design and development of the system
- Actively participating in database modeling, database design and database creation using ER-Win and MS Visio
- Involved in creation of user controls to produce reusable user interface UI and encapsulating the functionality
- Creation of User interface using Asp.net, style sheets, graphics (images gif) and XML/XSLT
- Applying Ajax website to enhance user experience and performance
- Designing of WCF based Service, Data, Fault and Message Contracts
- Configuration of Bindings
- Application of Design Patterns
- WCF was designed with Service oriented architecture to support Distributed computing where services were consumed by end users
- Used Various Design Pattern Techniques.
- Responsible for improving application performance and scalability by finding performance bottlenecks by profiling both .Net code and data access layer.
- Provided extended support to help and fix the performance issues in production instance.

Environment: Visual Studio 2010, .Net Framework 4.0, VB.Net, ASP.Net, WCF, Oracle 11g, XML, JavaScript, JQuery, Infragistics, Windows 2008 Server.

Client: HDFC Standard Life Insurance.
Project: Hdfclife Web Portal, Online Policy Selling, Sales Activity Manager
Date: September-2009 to August 2010
Role: Project Lead

Scope: HdfcInsurance.com is a web-based customer portal for HDFC Standard Life Insurance with all the Information for various insurance products offered by HDFC SL. It provides various features such as NAV data, premium payment, commercial ads for the products, click to call, etc. The Online Policy Selling application allows customers to buy policies online. It has an automated proposal form generation functionality and integrates with an online payment gateway for online buying.

Responsibilities

- Responsible for estimation & work break down during the initiation stage
- Team building and coordinated knowledge transfer sessions
- Managed team of 20+ during the project execution
- Client communication
- Daily stand up meetings & weekly status reports to the client
- Generated matrix for tracking the project

- Dealt with & integrated with third party vendors
- Involved in design related discussions with Architect
- Involved in analysis and tuning of SQL queries by using EXPLAIN PLAN and TKProf for faster and better performance of the SQL queries

Environment: Visual Studio 2008, .Net Framework 3.5, C#.Net, ASP.Net, ADO.Net, Oracle 10g, Web Services, Ajax, XML, JavaScript, JQuery, Windows 2003 Server.

Client: Open Solutions IA Systems Inc.
Project: Streamlend NextGeneration
Date: April-2004 to June 2009
Role: Senior Consultant

Scope: StreamLend NextGeneration is a completely web-based future to StreamLend™, IA Systems' paperless, end-to-end loan processing solution that uniquely integrates decision support, business process control, and document management into a single, seamless system. It enables lending institutions to streamline their lending process, maximize staff productivity and increase loan volumes.

Responsibilities

- As a Senior Consultant, was involved in the architecture, design and development of the system
- Actively participated in database modeling, database design and database creation using ER-Win and MS Visio
- Successfully implemented Subversion for version control
- Responsible for various design changes for the enhancement of the product
- Monitored and provided solutions for the performance related issues
- Performed extensive study on Infragistics web controls for performance related issues and made recommendations for appropriate use.

Environment: Visual Studio 2005, .Net Framework 2.0, VB.Net, ASP.Net, ADO.Net, SQL Server 2005, Web Services, Ajax, XML, JavaScript, VBScript, Infragistics, Windows 2003 Server.

Client: IC Source Inc., USA.
Project: ICSource Web Portal
Date: May-2003 to March 2004
Role: Senior Software Engineer

Scope: ICSource.com is a web site which brings IC brokers around the world together to communicate and conduct complex business transactions with ease. The system includes uploading and maintaining the inventory, requirements, old requirements, offers, most wanted, matching, sending and receiving RFQs, posting comments about other companies, posting news, managing profiles, accounts and Escrow. The key feature of the site is the Search feature which includes conducting searches of the inventory with managing preferences, specific inclusions and exclusions.

Responsibilities

- As a Senior Developer, was involved in the design and development of the project
- Used ASP.NET to develop the web pages and VB.Net for the business components
- Was responsible for designing the web pages, coding the search functionality and various other functionalities in the site
- Wrote SQL Server stored procedures and used Data Modeling skills to design databases
- Added various new features to the site using .NET technologies
- Created graphical data representation for the site using GDI+
- Was responsible for optimizing the database queries for performance.

Environment: Visual Studio 2003, .Net Framework 1.1, VB.Net, ASP.Net, ADO.Net, SQL Server 2000, MSMQ, XML, JavaScript, VBScript, DTHML, Windows 2000 Server.

PRIOR PROJECTS:

Client: Flow Management Technologies Inc, USA.
Project: Patient Source
Date: August 2002 - May 2003
Role: Senior Software Engineer

Client: Schering Plough Pharmaceuticals.
Project: MyHealth Data Entry
Date: October 2001 - August 2002
Role: Senior Software Engineer

Client: Schering Plough Pharmaceuticals.
Project: www.MyHealth.com
Date: March 2001 - October 2001
Role: Senior Software Engineer

Client: Schering Plough Pharmaceuticals.
Project: www.asthmasupportcenter.com
Date: October 2000 - March 2001
Role: Senior Software Engineer

Client: Enabled Market.
Project: www.trackplan.com
Date: July 2000 - October 2000
Role: Senior Software Engineer

Client: OneMade Inc.
Project: www.OneMade.com
Date: April 2000 - July 2000
Role: Senior Software Engineer

Client: The Hercules Hoist Group.
Project: Network Distribution System
Date: September 1999 - March 2000
Role: Software Developer

Client: The Rashtriya Metal Industries.
Project: 21st Century Trading System
Date: October 1998 - June 1998
Role: Software Developer

WORK STREAM LEADS

Indrani Bose, VRMS Functional Lead and Trainer

Professional Summary

- 15+ years' experience in Information Technology focusing on requirement elicitation and gathering, business process analysis, system analysis, functional analysis, data modeling, and critical analysis.
- Solid background in business analysis of large scale and enterprise web applications (.NET, Java, J2EE) and in project management.
- Skilled in business process engineering and software development life cycle, including analysis, design, development, testing, and implementation of software applications.
- Knowledge of architectural concepts and experienced in writing technical specifications.
- Competent in Use Cases, RUP, UML, SDLC lifecycles (agile) and JAD Sessions.
- Excellent written and oral communication skills.

Technical Skills

- Languages: VBA, VB. Net, C Sharp, Arc Objects, HTML, XML.
- Packages: MS Office, MS Project, VISIO, SAS Application, UNIX and MES.
- Databases: MS Access, SQL Server, ArcSDE, Oracle.
- Requirements Tools: Agile SD, Object-oriented analysis and design, Rational Unified Process (RUP), Use Case, SDLC, JAD.
- Reporting Tools: Business Objects (Crystal Reports), Cognos, and SAS.
- Web Designing Tools: Front Page, Dreamweaver, Fireworks, Macromedia Flash, and Cold Fusion MX
- Others: ESRI related software and mapping systems such as ArcView (Network Analyst, Spatial Analyst, 3D Analyst, and Model Builder), ArcGIS, ArcObjects and ArcInfo. Orion OnPoint, Remote Sensing, Digital Image Analysis, Erdas Imagine, Idrisi Kilimanjaro, and Pictometry.

Professional Experience

Client: Department of Health and Mental Hygiene, City of New York
Date: May 2015 to Present
Role: Senior Business Analyst

Scope: Evital stands for Electronic Vital Event Reporting, the Issuance and Records Management System implemented for NYC's Department of Health and Mental Hygiene for their Bureau of Vital Records (BVS). The project involved improvement in the areas of business rules validations, workflows, queue management, notifications, and role based access and user administration, and standardized data exchange interfaces. The Evital solution includes the

following eight modules: Vital Events Reporting and Registration (Birth, Death, ISTOP and ITOP), Vital Records Amendments/Corrections Management, Order Management/ Issuance and Customer Order Intake, Financial Reconciliation, Accounting Reports, Document Management, Interfaces and System Administration, and Security and Auditing.

Responsibilities:

- Worked with business stakeholders in gathering the requirements for Order Management and Issuance and Customer Order Intake and Vital Records Amendments/Corrections Management modules.
- Developed process flow diagrams and suggested improvements to current business processes for internal and external users.
- Authored and solicited the detailed Business Requirements Document to capture all the finalized decisions within the document.
- Created Data Elements spreadsheet for each module and included the business rule validation for each field.
- Held on site and off site meetings with (15+) Development team members to review the business requirements for each module.
- Acted as a liaison to communicate the proposed solutions to business stakeholders based on the development team's feedback.
- Created and tracked defects using Microsoft Team Foundation Server.
- Prepared test cases and conducted Knowledge Transfer sessions to hand the system over to on shore and off shore (10+) QA team members.
- Conducted demonstration of Evital Modules to a team of business stakeholders, SMEs, and PM's.
- Created short video clips on critical business processes to aid the users in understanding the new functions.
- Developed Training Manuals for Order Processing and Correction and Amendment Modules.
- Reviewed and provided feedback on the manuals/materials on other modules.
- Worked with the data migration team to map the data elements and workflow statuses from the existing system to the new Evital solutions.
- Facilitated and participated in weekly meeting between Development Team, Business Stakeholder and IT Department to monitor the progress of the project.
- Coordinated meetings with third party vendor and business stakeholder for payment solutions and aligned the financial process within Evital.
- Worked in training and enrolling (800+) external facility users for Facial Recognition Software for certifying the Vital events prior to submission to NYC-DOHMH.
- Conducted 1st round of successful Integrated User Acceptance Testing with 30 users using various peripherals like scanner, printer, credit card reader, and bar code readers.

Client: Department of Consumer Affairs, City of New York
Date: November 2010 to April 2015
Role: Business Analyst for Information Technology Services Division

(IT'S Lead - Adjudication and Legal Division)

Scope: Agency Licensing Business Automation (ALBA) and ACCELA Implementation- DCA was using a mainframe application (CAMIS) for its licensing and permitting system for the past 25 years. DCA had planned to migrate from mainframe to web based enterprise licensing and permitting system for three years and chose ACCELA-government software. The new web based application went live on October 2014 and has been running successfully. For a smooth migration and transition to the new system for imparting knowledge and training to its current users, DCA chose ITS (Information Technology Services) Leads for each of its primary divisions: Licensing, Legal, Adjudication, Collections and Enforcement, who shouldered the responsibility of drafting the requirements, participated in the design and configuration sessions, and implemented the system after a successful UAT session along with third party vendors Accela and Accenture.

Responsibilities:

- Elicited requirements from various units of the Adjudication Division (Settlements, Hearing, and Appeals).
- Conducted requirements confirmation sessions and updated the Requirements Matrix document.
- Conducted current-state vs. future-sate GAP and impact analyses and provided solutions to the business units of the Adjudication division.
- Managed the requirements specifications, worked as part of the team of in house staff and outside Consultants (System integration headed by Accenture and Accela) to confirm and implement the required changes.
- Provided user stories and detailed divisional functions and processes to System Integrators to support building the to Be Process Flows utilized for configuration sessions.
- Participated in the configuration sessions with Accela and Accenture teams in designing the workflow configuration, workflow business rules, notifications, and EMSE and Batch scripts for three distinct record types (Adjudication Record, Adjournment Record and Appeal Record).
- Provided all relevant documents for the Accela Implementation Analysis Workshop Worksheet.
- Reviewed and provided feedback on different sections of the Accela Implementation Analysis Workshop Worksheet, mostly on Workflow configuration and Workflow business rules, notifications, scripts, Application Specific Information (ASI) and Application Specific Information tables (ASIT) and Standard Choices.
- Demonstrated the draft version of configured workflow task and task statuses of Accela (using the Development Environment) to the agency stakeholders in a series of Business Review Sessions by staging record types and user scenarios for validations.
- Worked with the Reporting Team in designing the Reports to auto generates system correspondences upon selection of certain workflow task and task statuses.
- Reviewed and provided feedback on the Report and Correspondence Detail Design Deliverable document which included Correspondence usage, description, data mapping, correspondence parameters, and common component mapping.

- Worked with the Data Conversion Team in defining the data elements for Permit History, Permit Workflow, and Permit ASI tables from Migration Database to Accela Standard Map table.
- Initiated and headed the Data Mapping Translation from CAMIS to Accela configured workflow task and task statuses based on business knowledge and processes for three distinct record types in ALBA working with Accela and Accenture Conversion Lead's and DCA's Technical and Functional Leads.
- Reviewed and helped in preparing training materials (PPT) for the ALBA system for various business units for adjudication division based on user specific scenarios working along with the Training Team.
- Performed System Integration Testing (SIT) for the ALBA (Agency Business Licensing Automation) Project.
- Identified and raised defects to System Integrators via Rational Clear Quest (Defect Tracking Tool) by documenting detail description, stage found, define defect priority, target release and proposing expected solution by identifying the impacted WF script and impacted record types.
- Assisted with UAT preparation and scheduling in readiness for UAT execution
- Participated in UAT for the Go Live, First and Service Pack Release.
- Documented the desired enhancements after Go Live by analyzing each of them and providing the rationale for such enhancements.
- Ranked and prioritized the enhancements based on complexity of scripting and other system impacts.
- Conducted Knowledge Transfer meetings with DCA Developers, Operations. Quality Assurance team to impart the knowledge on system configuration, design, business rules, and scripting.
- Designed and drafted the high level requirements for Cognos reports by analyzing the currently configured ALBA data model. Examples how many decisions are assigned to ALJ's, how many cases are being settled and paid, etc.
- Provided DCA Program Manager, Director of Systems Integration, and Chief Technology Officer with timely updates on the progress of the assigned tasks.

Environment: Windows XP (Office 2007), MS Access, Power Point, Excel, Word, Visio, Snag it, Tree Size Professional, SharePoint, Cognos, ACCELA-Government Software, Documentum, Oracle 10 g, Rational Clear Quest.

Client: Kaplan Test Prep and Admissions
Date: June 2010 to September 2010
Role: Senior Business Analyst

Scope: Kaplan Test Prep and Admissions planned to implement a strict requirements gathering and process analysis in collaboration with both the business and technology teams as part of a large organizational transformation initiative for two of their important program areas like MCAT and USMLE.

Responsibilities:

- Elicited requirements from the business community using interviews, document analysis, requirements workshops, business process descriptions, use cases, scenarios, business analysis, and task and workflow analysis.
- Gathered and documented business requirements from stakeholders, reviewed, analyzed, and evaluated user needs;
- Collaborated with technology teams to convey, clarify, and/or improve the stated requirements and solutions.
- Created detailed Requirements Specifications Documents including text examples, workflows, and other diagrams where appropriate to facilitate understanding of the requirements.
- Managed the requirements specifications, working as part of a team of in-house staff and outside consultants to confirm and implement the required changes
- Critically evaluated information gathered from multiple sources, reconciled conflicts, decomposed high-level information into details, and distinguished user requests and solution ideas from the underlying true requirements.
- Worked closely with the project leadership to document the product's future-state vision and the project's scope to analyze systems and document current-state processes
- Conducted current-state vs. future-state gap analysis, identified gaps and opportunities; and documented steps to remediate gaps.
- Acquired and imparted business knowledge to the development team regarding the functionality of assigned applications and workflow processes
- Provided project/program manager with timely updates on the progress of assigned tasks.

Environment: Windows XP (Office 2007), MS Access, Power Point, Excel, Word, Visio, Share Point.

Client: Department of Consumer Affairs, City of New York
Date: March 2010 to May 2010
Role: Senior Business Analyst for Records Management

Scope: The Department of Consumer Affairs of the City of New York enforces all the laws to make markets fair and vibrant places. There are laws in place to protect both consumers and honest businesses. The following laws are enforced by DCA: Licensing Laws, Consumer Protection Laws, Weights and Measures Law, Truth in Pricing Laws, etc. To ensure proper functioning of its divisions, DCA is established policies and procedures for their Electronic Records Management. This work was integrated with enterprise wide operational systems and their document management system.

Responsibilities:

- Identified the current issues in various Network Drives and documented how records/information are stored.

- Classified and categorized the records/information based on Content, Context and Structure (C.S.S) and analyzed that information.
- Performed Inventory Data Analysis (structure, permissions, File types, owner, Unique path, create year, last access) using advanced tools in Excel (pivots tables) and documented them.
- Identified what information should be stored on which Network Drives and documented the reasons for such.
- Captured business requirements from different divisions regarding their records usage, shared processes, operations to define new business processes, and workflows.
- Researched best practices on Electronic Records Management across the nation.
- Recommended policies and procedures regarding creating universal naming standards, permission and roles, archiving and purging, audit policy, etc., for storing records on various network drives.
- Defined methods and processes to achieve the desired goal (from as is to future state)
- Created user manual for training users on new policies and procedures.
- Prepared Transition Plan objectives to maximize compatibility with new document management system, determined costs and benefits, and recommend measures to minimize total cost and maximize benefit (quality, completeness).

Environment: Windows XP (Office 2007), MS Access, Power Point, Excel, Word, Visio, Snag It, Tree Size Professional, SharePoint.

Client: Atlas Software Technologies, Tenafly, New Jersey
Date: December 2008 to February 2010
Role: Senior Business Analyst

Scope: Atlas Software provides web based ecommerce business services and software application development to various non-profit organizations across the globe. The breadth of services offered encompasses areas such as information technology (including donation management, volunteer management, content management, advertisement, management, etc.) application development, and maintenance and procurement services. With its affordable offshore solutions, it offers hard working and dedicated web design and database professionals to implement eCommerce website and application development, and database administration into their existing web business using cost effective solutions and in time delivery.

Responsibilities:

- Prepared Vision and Scope document, Project Proposals, and Project Plan.
- Responsible for capturing business requirements and system resource specifications based on client needs through various stages of concept, planning, development and implementation.
- Captured current process flow, create new design flow and prepared project schedule using Microsoft Project and Visio.

- Analyzed client requirements and created functional documents, Business Requirements Document, Data Dictionaries, Software Requirements Specifications, wire frames, data flow diagrams, and was responsible for achieving the milestones at each stage.
- Reengineered business process according to new requirements/changed business workflow & strategy.
- Identified research and corrected electronic data quality issues, which included data that was created by manual input by client users, as well as data created by various automated processes and applications.
- Worked closely with both users and developers to determine source and correction for electronic data problems. Imported, exported and assisted in report queries using reporting tools to create reports on an as needed basis.
- Created helpful hints, job aids, and reference materials
- Developed content for communications to end users and assisted end users with modifications and/or customizations to reports.
- Recommended best industry policies and procedures for new avenues in Donation Management, Volunteer Management, Content Management, Advertisement Management, etc.
- Supported testing team to review and provide feedback to test scripts, and assisted with testing.
- Provided support to end users with troubleshooting and questions. Supported technical team with peer reviews and post-implementation support of the data warehouses.
- Performed client data audits, market research, and developed knowledge base of latest industry trends in Social Media and Marketing strategies.
- Ensured coordination of the ongoing web development projects within U.S. and off shore office in Kolkata, India.
- Provided timely Status Reports and deliverables to the clients.
- Served as primary point of contact for the client regarding documentation, proposal writing, weekly meetings, and conference calls between U.S. and India offices.

Environment: Windows XP, MS Access, Excel, Word, Visio, MS Project, SharePoint, SQL Server, Oracle 10g, .Net framework, Survey Monkey, Trillium, Viral Heat, Test Director, HTML, XML, FrontPage, Photoshop.

American Management Association (AMA), New York Office
Project: Web and e-Marketing Division
Date: May 2008 to October 2008
Role: Business Analyst

Scope: The goal of the American Management Association (AMA) was to enhance their Website's Content Management with a personality driven marketing platform by implementing a shopping cart based e-commerce platform and service oriented architecture. To achieve the desired goal, AMA worked towards assimilating all their backend legacy systems and migrate them to an enterprise system to align with the new functionalities.

Responsibilities:

- Described business practices in the Project Scope Document.
- Documented the current business processes with Visio diagrams, flow charts, and validated them in interviews with the business users.
- Led the SDLC process for the requirements definition phase and assisted in all subsequent phases (design, implementation and testing).
- Prepared SRS documents with detailed functional requirements.
- Created use cases, validated them with business users, and detailed them.
- Extensively involved in the detailed enterprise database (web store) design and testing cycles.
- Performed business process and data analysis of all the existing legacy and backend systems.
- Executed back-to-back data mapping from the legacy systems to the new enterprise database (web store) model.
- Made suitable data corrections and modifications based on new findings of data mappings.
- Audited the corrected data to ensure it was clean and met the organization standards.
- Initiated meetings between business users and third party vendors to resolve pending issues.
- Prepared feasibility and gap analysis document and reported to Software Director.
- Defined specifications for database queues as they related to the new web store database.
- Defined best practices and formulated policies and procedures for maintaining web based electronic data quality standards (conformance).
- Managed development, UAT testing, and delivery of product in subsequent phases.
- Performed traceability of project artifacts (full coverage) and ensured QA standards were maintained.
- Coordinated with third party vendors for proper software application integration.

Environment: Windows XP, MS Access, Excel, Word, Visio, MS Project, SharePoint, SQL Server, Oracle 10g, .Net framework, Survey Monkey, Test Director, HTML, XML, FrontPage, Photoshop.

Client: Department of IT & Telecommunications, City of New York, NY
Date: August 2007 to March 2008
Role: Business Analyst

Scope: The Doing Business Accountability Project (DBAP) encompassed three important agencies of New York City, namely: The Mayor's Office of Contract Services (MOCS), Department of Information Technology and Telecommunications (DOITT), and Campaign Finance Board (CFB). MOCS collects all non-lobbyist data about organizations and individuals covered by the NYC Local Law 34. DOITT and MOCS were jointly responsible for creating the Doing Business Database, which covers organizations that hold contracts, franchises, and concessions with the City, and the principal officers and owners of those organizations. This database was shared with CFB to implement the NYC Local Law 34.

Responsibilities:

- Led the requirements elicitation process via interviewing, document analysis, and brainstorming with the stakeholders (CFB, DOITT, and Mayor's Office).
- Extracted Business Rules from the City's Local Law 34 and facilitated short workshops to develop functional requirements.
- Conducted focus group meetings and created a Business Data Dictionary for the Mayor's Office and CFB, conforming to the XML data sharing standards and records management.
- Demonstrated leadership and managed business and functional Requirements for the project.
- Created use cases model / text base use cases to extract user functions and documented them along with Business Process Diagrams and associated functional requirements.
- Facilitated realization sessions to communicate functional requirements with the Development and Test Teams and created a Traceability Matrix.
- Helped Database Team with enterprise data modeling (conceptual and logical).
- Managed Change Management (CM) process for requirements which helped the CCB to streamline the approval process.
- Worked very closely with the Project Manger to scope requirements and performed Impact Analysis for changes.
- Facilitated prototype efforts by developing mock user interfaces using Visio / Excel.
- Created business scenarios and validated them with the stakeholders.
- Worked closely with the DBA to create the test data.
- Made appropriate data corrections and modifications based on new findings and data mappings.
- Worked closely with the Test Team in creating the test scenarios / test cases and also was actively involved in the UAT testing.
- Performed data audits to ensure corrected data was clean and it met New York City's data sharing standards.
- Demonstrated ability to efficiently manage client relationships.
- Coordinated work effort within the cross-functional team (Business, Technology & Testing).

Environment: Windows XP, MS Access, Excel, Word, Visio, MS Project, SharePoint, Oracle 10g, Java, J2EE framework, Test Director, HTML, FrontPage, Photoshop, Web application.

Client: Office of Management and Budget, City of Newark, New Jersey
Date: March 2006 to July 2007
Role: Business Analyst / GIS Coordinator

Scope: The IT Services of OMB forms an integral part in delivering key information about the City of Newark's efforts and contributions towards the utilization of Geospatial Technology to assist in city-wide strategic planning, emergency preparedness, and government process analysis.
NEWGIN Implementation Project: Building the NEWGIN infrastructure, development of web

application, enhancement of existing web applications, loading current imagery, adding new functionalities for business users, integrating it with other third party and internal applications.

Responsibilities:

- Defined and designed NEWGIN (Newark Geographic Information Network) requirements using SDLC methodology.
- Conducted requirements workshops and short interview sessions with City departments like Fire Department, Engineering, Police, Water and Sewer, Neighborhood and Recreation Services, Economic and Housing, and Health and Human Services to gather, share, and exchange GIS data along with NJDEP.
- Led JAD sessions with specific departments for explaining the benefits of using ARC-IMS based GIS applications like 'New View'.
- Studied current process and defined desired business process to streamline workflows
- Used the transportation data in creating a Pilot Project on Safe Route to Schools by using ESRI's Spatial Analyst Tool.
- Identified opportunities to utilize existing infrastructure, improving business methods to streamline work processes and initiated guidelines for GIS data records management.
- Created Software Requirements Specifications (SRS) and maintained Functional Design Specifications for different department-specific sub-applications and documented them.
- Aided the citywide hands on training for in-house users of 'New View' application.
- Participated in Orion On Point training along with NJDEP staff to enhance the functionalities of Internet based mapping applications like 'New View'.
- Prepared a pilot project proposal to utilize Mobile GIS applications in capturing accurate electronic data (GIS) for Traffic Signals, Traffic Sign, and pavement marking operations for Department of Public Works and submitted it to the IT Manager.
- Created flow charts, process diagrams, data dictionary, and traceability documents and was actively involved in UAT testing and acceptance.
- Monitored the functioning of the Newark Traffic Cameras and submitted reports to the IT Manager
- Coordinated the roll out of Pictometry Imagery Application to 22 municipalities in Essex County.
- Recommended, prepared, and launched the online Map Request web form for the internal departments to request maps.
- Presented the City's GIS goals and achievements at the New Jersey Geo Spatial Forum and New Jersey Digital Government Summit on topic "GIS in Government Today".

Environment: Windows XP, MS Access, Excel, Word, Visio, MS Project, ArcGIS 9.1, ArcIMS, ArcSDE, Orion OnPoint, Pictometry SQL Server, VB.Net, HTML, XML, FrontPage, Photoshop.

Client: IT Team, Environmental Services Division, Environmental Protection Agency, Region 7, Kansas City, Kansas.
Date: July 2005 to January 2006
Role: Business Analyst/GIS Programmer Analyst

Scope: The Information Technology Team, as part of the Data Integration Team in the Environmental Services Division at EPA Region 7, worked to provide the Region the necessary spatial data to assist in environmental decision-making. The Team offered custom development of maps, tools, and applications. In addition, the team provided technical assistance to support all program areas at Region 7 with their information and technology needs.
Hazardous Site Locator Project: Worked on building an internet mapping application using Cold Fusion MX to track the location information of hazardous environmental sites.

Responsibilities:

- Facilitated requirements workshops to gather requirements.
- Coordinated with different development groups for application integration, GIS data, and records exchange and conducted JAD sessions to elicit requirements.
- Created flow charts and Functional Design Specifications for different applications.
- Created business process diagrams, System Requirements Specifications (SRS) and use cases.
- Aided the team in designing the high level system design of the internet mapping application.
- Used custom JavaScript coding within the application to serve imagery from Teraserver, USGS for the current users by adding layers of information from OGC Backgrounds.
- Acted as liaison among the working partners of the project (vendor, business users, developers, and testers).
- Worked with business to determine gaps and items to identify needs and recommended action items and procedures to be done in relation to the project.
- Involved in creating test documentation and validated them to suit the user requirements.
- Performed manual testing of fixes for critical issues identified from Production.
- Performed system testing, integration testing, and UAT.
- Performed GUI testing on various screens and verified the properties and functionality of the objects on various windows.
- Prepared traceability documents, Glossary and data dictionary.

Environment: Windows XP, MS Access, Excel, Word, Visio, ArcGIS 9.0, ArcIMS, ArcSDE, Globe Explorer, Erdas Imagine, Oracle, Cold Fusion, HTML, XML, FrontPage, Photoshop.

Client: Middle-Tier Support, Division of Information Services, New York Department of Environmental Conservation (DEC), Albany, NY
Date: August 2003 to June 2005
Role: Business Analyst / GIS Programmer Analyst

Scope: The Division of Information Services provides professional management of the information technology (IT) resources of the DEC. It delivers timely, value added services through trusted partnerships, seeks to improve the effectiveness of information technology resources by advancing the delivery of services to the public while maintaining the security and confidentiality of State-managed information.

Citrix and Arc View Implementation Project: Performed Citrix Arc View Implementation Project through various phases of SDLC in Central Office and Regional Offices.

Responsibilities:

- Reviewed system capabilities, business workflow, and scheduled limitations and recommended changes when appropriate.
- Defined business problems, driving feature identification and prioritization, outlining and defining business requirements, objectives, and priorities.
- Understood user requirements and prepared functional and technical specifications, user manual and Training materials for NYSDEC Staff
- Actively participated in Imagery Collection for Real Property Services and provided information support to the users within DEC of different divisions who used Real Property Services Data (Polygons/Points) to make analysis and reports.
- Facilitated project team improvement workshops to provide project quality assurance reports and reviews.
- Made departmental presentations, trained staff, and developed new avenues and methodologies for presenting geospatial data to users.
- Developed a records storage plan, which included the short and long-term housing of physical records of GIS data and images.
- Coordinated with different development groups for application integration.
- Provided information support to the users within DEC of different divisions who were using Real Property Services Data to make analysis and reports.
- Participated in workshop for planning future direction of environmental sustainability with Department of Transportation (this is currently referred to as GreenLite).

Environment: Windows XP, MS Access, Excel, Word, ArcGIS 9.0, ArcIMS, ArcSDE, Idrisi Kilimanjaro, Globe Explorer, Cold Fusion, HTML, FrontPage, Photoshop.

RameshKumar Malaichamy, VRMS Solution Architect/Data Architect

Education

- Bachelor of Engineering from Bharadhidasan University (1992-96) - (First Class with Distinction)

Professional Summary

- 22 years of experience in the IT industry, excellent experience working as a System Architect, Tech Lead, programming with Object oriented technologies, Microsoft technologies (Visual Basic, ASP, Access, MS SQL Server and Microsoft.Net), Analysis, Migration Specialist.
- Highly Skilled in designing .NET Enterprise level applications.
- 12+ years' experience in developing both Windows and Web applications using C#.NET, VB.NET, ASP.NET, REST API, WCF and ADO.NET
- 12+ years' experience being involved in the architecture, design and development of web based applications using .NET framework 4.5/4.0/3.5/3.0/2.0/1.1
- Excellent understanding of the latest .Net Framework
- Highly skilled in designing API based applications using Angular JS, .NET REST API.
- Proficient in database designing, developing and migrating data using Microsoft SQL Server
- Proficient in analyzing and translating business requirements to technical requirements, design and development
- Exploring a challenging career in the field of .NET Technologies with database, inter-/intra- net, e-commerce development or application
- Excellent skills in developing recommended solutions for enterprise applications.
- Highly skilled in designing interface based systems using WCF, REST API, and Web Services.

Technical Skills

- Framework: Microsoft.Net Framework version 4.5.2, 4.5, 4.0, 3.5, 2.0, 1.1
- Technology: ASP.NET, ADO.Net, WCF, REST API, LINQ, COM+, DCOM, MSMQ, ASP 3.0, XML and XSLT
- Languages: C#, VB.Net, Visual Basic, UML, TSQL
- Web Skills: Ajax, JQuery, JavaScript, Angular JS, VBScript, HTML, DHTML.
- IDE: Microsoft Visual Studio 2013, 2010, 2008, 2005, 2003, Visual Basic 6.0, 5.0, 4.0, XML Spy
- Servers: Microsoft IIS 7.0, 6.0, 5.1 and 5.0

- Database: SQL-Server 2012, 2008, 2005, 2000, 7.0, 6.5, Oracle 11g, 10g, 9i, 7.3 & Access 97, 2000.
- Operating Systems: Windows Server 2012 R2, 2008 R2, 2008, 2003, 2000, Windows 7, Windows XP, MS-DOS, and Microsoft Active Directory
- Tools: Microsoft Project, Microsoft Office, Microsoft Visio, Erwin and Infragistics
- Version Control: Microsoft Visual SourceSafe, Subversion and Tortoise, TFS

Professional Experience

eVital
Feb 2015 – Current
Client: New York City Department of Mental and Hygiene, New York City, NY
Role: Migration Specialist, Solution Architect

Scope: The eVital application is about registering the birth and death events within the City of New York limits and generating the respective birth and death certificate. The eVital application is replacing the COTS product of EVERS, which limits the ability of DOHMH for any modifications. EVERS is about a 10-15-year-old product and has some performance issues.

Responsibilities:

- Design architecture for the eVital-CMS interface. This interface solution allows eVital and CMS system to exchange data between using xml messages.
- Design CMS listener service to process inbound message from CMS system.
- Design architecture for reporting solution for eVital system using SSRS. Implement authorization based on role based security for reports.
- Design architecture for ad-hoc reporting tool that allows defining ad-hoc reports and generating report in excel.
- Design architecture for extract and load process.
- Design and develop SSIS packages for extracting data from legacy database into eVital database.
- Develop and maintain indexes, stored procedures, functions and views for development team.
- Fine tune database for performance improvement.

Environment: Visual Studio 2013, MVC Framework 5, JQuery, Bootstrap, .Net Framework 4.5, Entity Framework 5.0, C#, Windows 2008 Server, MS SQL Server 2012.

SMART.NET
Dec 2015 – Feb 2015
Client: Freddie Mac
Role: Solution Architect

Scope: The SMART Application is a tool that facilitates business activities for the Low Risk Loan, High Risk Loan, and REO Groups. The application is comprised of various Excel templates, an ADE (Access Project Extension) file, and SQL Server databases. The client faced a growing portfolio of high-risk and non-performing MF loans. As a result, the Asset Management teams responsible for monitoring these loans and performing various loss mitigation activities experienced higher workload volumes. Prior to SMART, existing systems used by business teams did not adequately support their activities. Users depended on outdated legacy systems and multiple stand-alone EUC applications built to address very specific requirements. Data was not consistently stored across these systems, compounding data analysis challenges faced by the business area.

SMART is a remedy to these issues. SMART replaces and/or enhances functionalities. SMART provides functionality at the loan, property, and loan-pool level.

Responsibilities:

- Designed architecture for SMART application using Angular JS and REST API.
- Designed and developed role based security system.
- Created REST API for various modules for SMART application.

Environment: Visual Studio 2013, MVC Framework 5, Angular.JS, .Net Framework 4.5, Entity Framework 5.0, C#, ASP.Net, XML, HTML 5, JavaScript, JQuery, MS SQL Server 2012, Windows 2008 Server.

Streamlend Velocity
April 2003 – Dec 2014
Client: Open Solutions Inc.
Role: Interface Solution Architect

Scope: StreamLend Velocity is a completely web-based product, end-to-end loan processing solution which uniquely integrates decision support, business process control and document management into a single, seamless system. Velocity integrates all of the essential system components required for lending success– including loan origination software, decision support tools, workflow software and image capture capabilities through a seamless, easy-to-use loan origination platform. It has greater flexibility and control with a configuration workflow as well as customizable internet application portal and business rules. Velocity has integration with numerous account processing systems and an extensive array of third-party applications.

Responsibilities:

- Velocity Interface framework allows to integrate (interface) any account processing systems and third party applications based on financial institutions requirement. Heavily involved in designing and developing architecture for numerous integration system.
- Designed and developed numerous pass through services to channel the communication between two systems.

- Designed and developed CORE interface framework to allow implementation to plug-in any integration module without changing the CORE product.
- Designed and developed integration for DealerTrack (www.dealertrack.com) application with Velocity that allows dealer to submit loan request to Velocity. This integration provides an ability for lending institutions to receive applications from dealers through DealerTrack. Implemented "hook" in workflow system to post decisions back to DealerTrack as soon as the decisions is rendered in Velocity.
- Designed and developed integration for RouteOne (www.routeone.com) application with Velocity that allows dealer to submit loan request to Velocity. This integration provides the ability for lending institutions to receive applications from dealers through RouteOne. Implemented "hook" in workflow system to post decisions back to DealerTrack as soon as the decisions is rendered in Velocity. Implemented digital signature to secure the communication between two systems.
- Designed and developed integration for DocuSign (www.docusgin.com) application with velocity. DocuSign is an e-Signature product that allows lending solutions to submit loan documents to obtain electronic signature from borrowers. Designed and developed document generation framework to define/generate pdf document based on configured template.
- Designed and developed numerous interface solution for account processing applications with Velocity example Open Solutions DNA, Pathways, etc.
- Involved in designing various web interfaces with Velocity that includes vendors CUDL (www.dealer.cudl.com), Loan Liner (www.cunamutual.com), etc.
- Involved in the architecture of signature pad framework for velocity system. Implemented adapters for various signature pads used by lending institutions.
- Involved in the architecture of integration of Velocity with LSI solutions. This integration allows Velocity system to receive loan application request from LSI portal.
- Involved in the architecture of Cross-Sell Engine. This core Velocity component invokes the decision process on loan application and runs through various workflow and decision process to come up with pre-approval offers.
- Designed and developed configuration based web portal application (ConsumerNet) that allows institutions to defined customized portal for receiving loan application(s) from consumers/members.
- Involved in the architecture of rule based Decision Engine for Velocity system.
- Involved in the architecture of integration with numerous credit card products such as FDR, Certegy, VinTeK. This interface solution allows Velocity to produce messages to credit card applications to generate credit cards for borrowers.
- Provided architecture to securely exchange messages between systems using digital signature.
- Involved in the architecture of Document Storage System that allows Velocity to store/retrieve loan documents.
- Involved in the architecture of customizable workflow system for Velocity.
- Involved in the architecture and development of standalone product DealerView. This product allows dealers to view loan application status from Velocity.

Environment: Visual Studio 2013, .Net Framework 4.5, 4.0, 2.0, 1.1, C#, ASP.Net, XML, JavaScript, JQuery, MS SQL Server 2008, 2012.

MaxMilion®
May 1999 – March 2003
Client: ALLTEL INF Services. USA
Role: Sr. Software Engineer

Scope: MaxMillion is a rule based payment processing system. It allows financial institutions to process/maintain payments from consumers.

Responsibilities:

MaxMilion® Multi-Process Integrator: (Product: MaxMilion® Payments)

- Designed and developed the application to load the extract download file from mainframe to the SQL server database by utilizing the available process space in the server. This application was designed by using out of process components and later redesigned based on the multi-threading concept in VB.NET.

Environment: Microsoft Visual Basic .NET, SQL Server 2000, OLEDB providers, ADO

MaxMilion® RPC Driver: (Product: MaxMilion® Payments)

- Designed and developed the web pages & MTS components to execute the NETWISE API calls to interact with the HOST (Mainframe). This application acts as an interface between client/server app & Mainframe.

Environment: ASP, MTS, Microsoft Visual Basic, Net Wise, MSMQ, HTML, XML, Java Script

MaxMilion® Rule Engine: (Product: MaxMilion® Payments)

- Worked on enhancing the rule engine, which was capable of executing the workflow designed by the business people. This is one of the core component (application) used in the MaxMilion® Payments product. The product is the rule based processing tool that processes the mortgage payments.

Environment: COM, DCOM, Microsoft Visual Basic

MaxMilion® Rule Monitor: (Product: MaxMilion® Default)

- Designed and developed the rule monitor that provides the facility to the user to display & control the status of the rule engine running in various workstation. This application is designed for the managers in the banks to monitor the activities of the rule engine running in different workstations. This was designed based on DCOM technology.

Environment: COM, DCOM, Microsoft Visual Basic®

MaxMilion® File Room: (Product: MaxMilion® Payments)

- Designed and developed the tool called FILE ROOM to display the static loan information and the scanned images from the database. This also executes the predefined queries that pull the data & images from the server and displays to the user. This was designed in Visual Basic by using 3-tier architecture and later modified as web utility page in the next version of the payments product.

Environment: COM, DCOM, Microsoft Visual Basic, HTML, ASP, MTS, MSMQ

MaxMilion® Bankruptcy: (Product: MaxMilion® Payments)

- Designed and developed the rule based bankruptcy tool that processes the bankruptcy payments. Modified most of the existing components in the product to make the rule engine processing the bankruptcy rules.

Environment: COM, DCOM, Microsoft Visual Basic®

MaxMilion® Active Engine: (Product: MaxMilion® Default)

- Designed and developed the out of process component to run the rules by invoking the in-process rule based dolls. This application runs in a Windows NT server as a service that will be invoked by the schedule automatically every day. It is also capable of identifying the items that are pending for processing.

Environment: COM, DCOM, Microsoft Visual Basic, Extra Personal Client.

Paidos
May 1997 – April 1999
Organization: Paidos Health Care Inc., Chicago, USA
Role: Senior Developer

Scope: The main objective of this system is to take care the health of pre-mature newborn babies. This system deals with the registration, admission, treatment guideline setup & tracking, clinical parameter setup & tracking, discharge planning and level of care and home health care of patients.

Responsibilities:

- Designed and developed various COM components for the product security and developed OCX to suite the custom business process.

Environment: COM, Microsoft Visual Basic® 5.0, Sybase SQL Anywhere, Crystal Report, Third party OCXs.

Wesley Jebadoss, VRMS Product Configuration/ Developer

Certification

- Microsoft Certified Programmer (MCP), 2005
- Diploma in Advanced computing(C-DAC) – 2003.
- ITIL V3 - 2012

Education

- Major field of study: - Bachelor in Computer Science and Engineering.
  - Bharathidasan University – Tiruchirappalli, Tamil Nadu, India, 1998 – 2002.
- Name of University: Bharathidasan University
- City, State and Country: Tiruchirappalli, Tamil Nadu, India
- Degree: Bachelor in Engineering (B.E).

Professional Summary

- Over fourteen (14 years) of Information Technology experience in software architecture, design, programming and project delivery management.
- Experienced in designing/implementing end to end solution with Web based architecture using Microsoft technologies ASP.NET MVC Framework/ASP.Net/C# technologies and data base programming using Microsoft SQL Server 2005/2008/2012.
- Experience in implementing solution using design patterns Dependency Injection (DI), Inversion of Control(IOC), Service Locator, Repository, Singleton patterns.
- Experienced in working various phases of Software Development Life Cycle (SDLC).
- Experienced in using different Software development methodologies like CMMI, Agile, Scrum, and Waterfall.
- Experienced in database programming with Extract, Transform, Load(ETL) and design Datawarehouse (DW) using ETL approach. Strong Database Programming using Microsoft SQL Server 2008/2012 & worked on large databases for leading market research and analytics company and with Remittance processing product development company in previous projects.
- Excellent Team player & has ability to work collaboratively with Product business, Operations, Business Analysts, Testers, Developers and other team members in complex projects at all levels of the organization within a region and around the globe; possess strong analytical, negotiation, communication, presentation, organizational, facilitation skills and problem solving capabilities.
- Proven leader and delivery manager; drive system architecture decisions and lead projects from concept, design, develop through the release process.

Technical Skills

- **Databases:** Microsoft SQL Server 2000/2005/2008/2012.
- **Languages:** ASP.Net 2.0, ASP.Net 3.5, WCF, C#, ADO.Net, T-SQL, VB.Net, Web services, SOAP, COM, MVC Framework 5.0, Entity Framework 6.0, CSS, Window services, .Net Framework 1.1/2.0/3.5/4.0.
- **Design Pattern:** Dependency Injection (DI), Inversion of Control(IOC), Service Locator, Repository and Unit of Work, Singleton patterns.
- **Operating System:** Windows 95/98/NT/2000/XP/7/8.
- **Scripting Languages:** JavaScript, JQuery, JSON, HTML 5, CSS 3, XML, Bat, Signal R.
- **Third party Tools:** Telerik controls, Crystal Reports, Data Access Application Block (DAAB) tool, HP Quality Center.
- **Source Control:** Visual Source Server (VSS), Microsoft Team Foundation Server(TFS).
- **Software Methodologies:** Agile, Waterfall, SCRUM.

Professional Experience

GCOM Software LLC

Duration: 11 Aug 2014 – Till Date
Client: Department of Health and Mental Hygiene (DOHMH), NYC
Job Title: .Net Technical Lead – Albany, New York, US

Responsibilities:

- eVital project is Enterprise multi-tier project implementation for department of Health and Mental Hygiene and its business unit Bureau of Vital Statistics(BVS).
- In this project, Agile methodology life cycle where initial requirements, design, solutions implemented and provided demo to business users. The user feedbacks and changes incorporated into incremental sprint cycle. This provided end user feel of the system evolution and get the changes incorporated upfront rather than wait till delivery.
- Design and Develop various modules such registration and order processing for NYC eVital project.
- eVital project contains various major components/modules like Birth, Death, Fetal death event registration and Order processing.
- This project is implemented using Microsoft technologies such as MVC Framework 5, Entity Framework 6.1 and Microsoft SQL server. In UI layer used various technologies/tools like JQuery, Bootstrap, HTML 5, CSS 3.
- Lead registration module implementation and suggest solution to development team during implementation.
- Implementation/Support
  - Support the project during release and deployment in DOHMH/DoITT (NYC Department of Information Technology and Telecommunication) environment.

- Analyze root cause of DOHMH/DOITT environmental and production data related issues.
- Fix the application and data related issues reported with production migrated data.
- Tune and optimize the performance of system with production data volume.
- Use the performance tools such as ANTS profiler, load runner, Dynatrace to identify the performance bottleneck in the application.
- Fix/Change the payment integration code with Lexis Nexis products payment integration.
- Work with operational user groups to identify issues/improvements in the System.

- Implementation -- For Registration process
  - Developed various ASP.NET MVC forms for UI and implemented the flow of registration process. Used MVC 5 framework, created razor views and partial views, JQuery scripting for client side action handlers and ajax posts, bootstrap controls and CSS styles for UI layout. Have the knowledge of SASS preprocessing tool for CSS template generation to be utilized across site wide.
  - Integrated the custom service layer with the forms engine. Developed service layer class and WCF service contracts for rendering services to clients.
- Implementation -- For Order processing.
  - Developed create and edit order MVC forms and implemented all business logic to meet functional requirements.
  - Developed payment UI and process, integrated with Lexis Nexis payment solution.

Environment: Asp.Net 3.5(Web application), C#, SQL Server 2012, SSIS, HTML, CSS, T-SQL, JavaScript, JQuery, MVC Framework 4.0, WCF.

Client: MA SPORT
Duration: 23 May 2018 – 08 Aug 2018
Job Title: .Net Technical Lead – Albany, New York, US
Project Name: - MA SPORT-Support

Scope: The Boat and Recreation Vehicle Registration and Titling Bureau is responsible for registering motorboats, snowmobiles, and recreation vehicles in the Commonwealth of Massachusetts. It also takes care of its renewal, transfer and duplicate registrations. Accela, a web-based software, is used by the Commonwealth of Massachusetts for its implementation. It consists of two parts: Accela Automation (AA) which will be the agencies' "back office" for licensing data and related content and processes and Public Portal, a web-based portal for the public to renew registration, pay fees etc.

Responsibilities:

- Support MA SPORT project and resolve issues report's component.
- Worked on Issues reported in asana support tool.
- Fixed issues reported in below reports
  - Detailed Transaction Report.
  - License Transaction Summary.

- Registration History Report.
- Enforcement Report Title.

Environment: Oracle & Crystal Reports.

Tata Consultancy Service (TCS)
Client: The Nielsen Company – Entertainment
Duration: 5/10/12 to 8/8/14
Job Title: Lead Programmer Analyst – New York City, US

Responsibilities:

- Design, Develop, maintain and support Web based application programs for scan conversion project using .Net/MS SQL server. Owned end to end in providing solution right from requirement gathering, design, developed and supported application in production.
- Re-engineered multiple legacy systems that fueled improvements to productivity, efficiency, uptime and accuracy for Nielsen entertainment business operations. Design and implemented business intelligence tools for business, and post implementation support in Production.
- Successfully architected, lead and involved in design, testing and deployment of client/server, multitier applications.
- Developed new procedures during requirements gathering, analysis, testing, scripting and documentation to strengthen quality and functionality of business-critical applications.
- Programming using .Net custom controls using .Net framework 3.5 and created stored procedure with complex queries (used triggers/temp tables, joins), views, and performance tuning and optimizing queries using Indexes, db maintenance for large DB. Used ETL process and SSIS packages.
- Created SQL jobs for automatic scheduling of processes that doesn't require manual intervention. Job error alerts handled.
- Delivered tools supporting auditing process to ensure the data quality check before providing the reports to clients. The Web form page allows to do BI search and do excel export features.
- Built data warehouse database in sql server through creating facts, dimensions and look up tables for high scalability and performance for reporting apps.

Environment: Asp.Net 3.5(Web application), C#, SQL Server 2012, SSIS, HTML, CSS, T-SQL, JavaScript, JQuery, MVC Framework 4.0, WCF.

Tata Consultancy Service (TCS)
Client: The Nielsen Company – Entertainment Broadcast Data system(BDS) unit
Duration: 02/10/09 to 05/09/12
Job Title: Lead Programmer

Responsibilities:

- Lead programming including development and support for clients' applications and interfaces. Engineered software products, handling complex analysis and intricate programming to meet project requirements.
- Lead solutions engineering team involved in Web based project development and support. Replaced legacy technologies and converted to .Net Web based application.
- Created custom asp.net controls and customized for business needs. Created complete new website for Nielsen music control and provided with enhanced features using web parts, web zones.
- Developed and implemented cross-platform, Net based apps. Completed project under budget and in planned timelines.
- Developed Asp.Net Web application, created WCF rest services and used Telerik third party Web controls for user interface and utilize custom functions of the tool that increased availability and scalability. Created dashboard views containing multiple reports in single view for users.

Environment: Telerik web and Ajax controls Asp.Net 3.5(Web forms), CSS, WCF, C#, SQL Server 2008, T-SQL, JavaScript.

Tata Consultancy Service (TCS)
Client: The Nielsen Company – Entertainment Broadcast Data system (BDS)
Duration: 03/27/08 to 02/09/09
Job Title: Senior Programmer - Kansas City, MI

Responsibilities:

- Programming and maintenance of Web-based application for Broadcast data systems and supporting customized controls used in the BDS applications.
- Created Web site for R&R Company using Telerik Web controls and used its customized features. The site uses content management tools where dynamically the site's content is published once the content viewer is ready to be published. Edit and View mode options provided.
- Created webparts and webpart zone for the R&R content management system.
- The content authors get the admin access to edit the content of webparts and publish the content to site using this system.
- Used Telerik control (like telerik gridview, dropdownlist, calendar etc.) and make use of web parts and dashboard features for custom reporting in dashboard views.
- In backend used, stored procedure to pull the sites content and for maintaining its user privileges. Used triggers for few updates based on different another data completion.
- Handled tasks which are complex and customized for the specialized client's business needs
- Used Linq to SQL to connect database. Used Linq objects to retrieve the data and send it to view layer.

Environment: Telerik controls Asp.Net 3.5(Web application and interface build), C#, HTML, CSS, SQL Server 2008, JavaScript.

Tata Consultancy Service (TCS)
Client: Motorola
Duration: 11/8/06 to 03/26/08

Responsibilities:

- Programming using SQL server and conversion of asp based application to .Net based application.
- Worked on future cost management project and created complex stored procedure and jobs using SQL server. This system is one of cost projects for future prediction.
- The results of the data are customized and viewed through crystal report viewer.
- The reports are customized for various categories and using the asp.net dropdown and other controls the data is filtered and retrieved from DB. Various controls like asp.net grid, dropdownlist, etc. is used during this implementation

Environment: Asp.Net 2.0(Web application), C#, SQL Server 2005, JavaScript, VSS, HTML.

J&B Software Inc
Client: Bankone
Duration: Apr 2004 – Oct 2006

Responsibilities:

- Progressed through promotions, culminating in responsibility for Web-based application programming within high-volume setting.
- Used 3 tier architecture and UI layer (MVC design pattern used), then for all business logic implemented business layer and DB access done through data access layers which in turn calls stored procedure/queries.
- J&B Software had flagship product TMS which is used by various client for remittance processing system.
- Worked on TMS product flow right from check MICR and remote capture to process the checks/stubs received and extract generated out to end clients.
- Developed product to provide solution to Check 21 act. The Check 21 product designed based on Check 21 law which provides remittance/check processing electronically using the standards defined.
- Developed product in Web based programming using ASP.Net/C# and SQL server backend. Used Web service to expose/call third party components API's using DLLImport.
- Developed wrapper classes and used Dll import methods to call COM classes.
- Used XML objects to read through xml data file and traverse through the xml nodes and manipulate or perform further data processing on it.
- Created windows service for polling incoming XML existence and load the content.

Environment: Asp.Net 2.0(Web application), C#, Windows services, SQL Server 2000, JavaScript, Webservices, XML, SOAP, COM, VC++.

Lakshmi Gopalakrishnan, VRMS Product Configuration/ Developer

Education

- MCA (Masters in Computer Applications), Bharathiyar University, Coimbatore, India

Professional Summary

- Work on areas of the product development cycle from core product architecture design and development to customizing the product at different client sites. Also provide post implementation support.
- Led the Technical Support team in effectively handling Customer Support for both functional & technical related issues and requirements.
- Database design & management activities to incorporate new features and functionality into the product.
- Analyze & incorporate new features and enhancements to the product.
- Involved in the development of ancillary applications to the primary Supply Chain product.
- Conduct product tuning exercises to accommodate retail customer volumes (Performance tuning).
- Create Interface programs for data exchange between ERP framework and other third party Retail system using .NET, C#, Jscript, SQL, and XML.
- Develop Excel import tools for the master information upload into the domain system.
- Expert in the areas of Accounts, Sales, Inventory and Purchase modules.
- Involved in the up gradation of the 3ev1.2 built on an ASP model to 3ev2.0 which is a built on ASP.net and C# bearing SQLServer 2000/2005.
- Clients worked with includes BillSoft Inc USA, S.I Systems Canada, Subhiksha, Niligiris, Promart (Provogue India Ltd.), RK FoodLand, @Homes (Nilkamal Furnitures), IIGM, Varkeys Retail, Flemingo Duty Free Shops, India.
- Techno-Functional Consultant for the implementation of the Jewelry Retail Product developed for Khazana Jewelry, India.
- Exposure to Agile methodology.
- Exposure to the ASP.Net MVC Architecture.
- Exposure to Compliance Filing of US Telecom Industry.
- Exposure to the Staffing Practices.
- Extensive exposure to Retail and Supply Chain management practices.
- Extensive knowledge of RDBMS design and management.
- Possess strong database skills including database programming and performance tuning.
- Exposure to Infrastructure design principles and practices.

- Relative functional knowledge in Retail and in Accounts and Sales practices of Supply Chain Management.
- Mentor to a team and also an effective team player.
- Exposure in SAP – Legacy system Integration

Professional Experience

Company: GCOM Software LLC
October 2015 – till date
Project Name: eVital
Client: Department of Health and Mental Hygiene (DOHMH) NY

Scope: This product is designed to register vital events such as Birth and Death for the events occurring within New York City. This product will replace the existing COTS product. The eVITAL system has the functionality to customize data entry forms with ease. Due to this feature, very minimal code customization is required. Through this application the user can modify the data through the Amendment process or place Orders for the additional certificates.

Responsibilities:

- Design and Develop Data Entry Forms Views of the Application
- Develop the Business Rules and Validations in the multiple modules in ASP.NET MVC 5.0
- Develop Reusable Controls for to be used in various modules of the Application
- Multiple Design Pattern Implementation
- Coordinate with Off-shore Development team

Environment: .Net Framework 4.5, C#, Asp.Net MVC 5.0. Entity Framework 6.0, WCF, Boot strap controls, Design Patterns

Company: GCOM Software LLC
May 2018 – Sept 2018
Project Name: MA Sports
Client: Commonwealth of Massachusetts

Scope: The Boat and Recreation Vehicle Registration and Titling Bureau is responsible for registering motorboats, snowmobiles, and recreation vehicles in the Commonwealth of Massachusetts. It also takes care of its renewal, transfer and duplicate registrations. Accela, a web based software, is used by the Commonwealth of Massachusetts for this implementation. It consists of two parts: Accela Automation (AA) which will be the agencies' "back office" for licensing data and related content and processes and Public Portal, a web based portal for the public to renew registration, pay fees, etc.

Responsibilities:

- Design and Implementation of the integrating of the Payment Gateway NCOURT Interface to the Sports Portal Application.

- Fixed issues related to Business Rules and Validations related the Enforcement application.
- Customized Portal Application Login to handle the NCOURT gateway.
- Customized Batch Processing of Payments to use the NCOURT gateway.
- Assisted and Migrated the existing Production Portal and Enforcement application to the AWS environment
- Integration of the Amazon Web mail to the Portal application.

Environment: .Net Framework 4.5, C#, Web API, Angular Js, Oracle

Company: U Software Systems
Feb 2012 – Sept 2015 (Parent Company Inc., USA)
Project Name: EZFile
Client: BillSoft Inc, Kansas USA

Scope: This product is designed to automate the process of compliance filing based on the US Telecom standards. It records the sales data and converts it to compliance defined tax returns forms and enhances the end user to file them to the respective jurisdiction.

Responsibilities:

- Assisted the team with technical and design issues.
- Re-factored the code in order to increase performance and scalability.
- Designed and Developed Custom User Controls to be used, reused in the Application.
- Coordinated with On-shore Development team.
- Developed Use-case diagrams for every enhancement feature.

Environment: .Net Framework 4.0, Asp.Net MVC 4.0. Entity Framework, Winforms, Web Services, Infragistics Web and Windows Controls. NUnit, JQuery/JavaScript, Telerik Grid Controls

Company: S.I. Consultancy Services (Parent company S.I. Systems Canada)
Jul 2011 – Jan 2012
Product Name: MatchGuide Framework

Scope: The Product MatchGuide is an application used for staffing. It is used by recruiters and account executives to create Jobs and shortlist the candidates. It maintains a timesheet of every candidate and is integrated with Great Plains.

Responsibilities:

- Senior Member involved in designing the Database and Business Layer architecture for the Migration Project.
- Developed Web Controls to be used in the Application.
- Creation and Integration of Web Services with the Legacy system.
- Integration of the Application with social Media such as Twitter and Facebook.

Environment: .Net Framework 3.0, ASP .Net, C#, Webservices

Company: Fast Software Services Private Ltd
Mar 2009 – Mar 201
Product Name: 3e Jewelry Retail (Point of Sale Application)

Scope: The Jewelry Point of Sale (POS) application enables customer end billing at a jewelry store level (Electronic estimation, billing and cash register). It includes maintenance of the sales details on a day to day basis. The other key features included are Rate Fixation, Advance Booking, Orders & Repairs, and Chit Installment Module. Sales booked by a store are automatically synchronized with the Central HO server using .Net Web services. It was developed in order to integrate with SAP IS-Retail.

Responsibilities:

- Was Key member leading the team, and was also involved in design and development of the framework architecture.
- Involved in the architecture and integration of SAP- 3e Jewelry POS application.
- Involved in the synchronization process of Store Data update at HO.
- Involved in developing pluggable reports for the Jewelry POS application.

Environment: This product was architected using .net, C#, Winforms and SQL Server. UI designed using Infragistics Web and Windows Controls.

Company: Retailor Technologies Pvt Ltd
May 2008 – Feb 2009
Product Name: 3e Retail (Point of Sale Application)

Scope: The Point of Sale (POS) application enables customer end billing at a store level (Electronic billing and cash register). It includes maintenance of the sales details on a day to day basis. The other key features included are discounts and tax handling on raising a bill. The product works on a "Disconnected" model wherein non availability of services due to server side or network failures does not interrupt client side service to the customer. Sales booked by a store are automatically synchronized with the server once services are restored.

Responsibilities:

- Part of an eight-member team, and was also involved in design and development of the framework architecture.
- Involved in the integration of the "Disconnected POS" architecture with the mainstream retail application.
- Involved in the synchronization of the bills as an invoice into the domain system (Day end process).
- Involved in developing pluggable reports for the retail application using SQL Server Reporting Services.

Environment: Architected using .net, C#, Winforms and SQL Server.

Company: esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
Product Name: 3ev2 ERP Winforms Framework

Scope: An ERP Windows application involving transactions in Accounts, Inventory, Sales and Purchase, architected on .Net, C#, Winforms, SQL Server. It is an evolved model re-using the components developed in 3ev2 ERP Framework.

Responsibilities:

- Involved in development of various transactions in two modules in the Supply Chain Management, Sales and Accounts.
- Involved in writing API that is used to accomplish the data parsing and data transfer through SQL mapper and SQL Helper.
- Designed templates for the reports and business transactions.
- Mentored and led a 4-member team in realizing the stated objectives of the project.

Company: Esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
Product Name: 3ev2 ERP Framework

Scope: An ERP application involving transactions in Accounts, Inventory, Sales and Purchase, architected on .Net, C#, ASP.Net, SQL Server. It is evolved through a three tier model.

Responsibilities:

- Involved in development of various transactions in two modules in the Supply Chain Management, Sales and Accounts.
- Involved in writing API that is used to accomplish the data parsing and data transfer through SQL mapper and SQL Helper.
- Designed templates for the reports and business transactions.
- Mentored and led a 4-member team in realizing the stated objectives of the project.

Company: Esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
Product Name: 3eV2.0 Synchronization

Scope: An application that accomplishes the data transportation between two different locations (Warehouse and Stores) of a business. The activity is split into two main streams: master and transactional data transfers. Disconnected and automated models are configurable.

Technically architected with .net, C# and SQL Server.

Responsibilities:

- A key member in the technical infrastructure designing.

- Involved in the Database Programming to accomplish the Data transportation through Bulk Transfer Protocol (BCP) and storing the data as an XML in the tables.
- Involved in developing the automatic synchronization process which is accomplished through the transfer of files to and from the FTP (Windows based) for further processing. The auto FTP process can also be scheduled.

Company: Esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
Product Name: 3e Replenishment System

Scope: The 3e Replenishment System is an automated model that refills a store's stock, upon reaching a particular defined level. The system, a separate application which is run at the warehouse, monitors the stock levels of the SKU's in the warehouse. Technically architected on .Net, C#, SQL Server.

Responsibilities:

- A key member in the technical infrastructure designing.
- Involved in the database design and have completed the physical and the logical layouts of the database including indexes, constraints and relationships.
- Involved in the Database Programming for the accomplishment of the transactions.

Company: Esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
Mrms - 3ev1.2 Synchronization

Scope: Synchronization Tool which pulls the sales data from the MRMS (retail usage of Microsoft) into the system (3ev1.2 - SCM) and pushes the Purchase data into the MRMS system for billing (sale) purpose. Architected on VB and SQL Server.

Responsibilities:

- Designed the Sync UI with basic validations and login restrictions.
- Involved in the Bill (Sales data) Sync to the 3ev1.2 SCM from the MRMS. This was achieved using SQL Stored Procedures with formulated inputs through XML from the MRMS data source.

Company: Esolutions Pvt Ltd. (A part of the iLabs group of Companies)
Mar 2003 - Apr 2008
3ev1.2 ERP Framework

Scope: A web based ERP product, aimed at the small and medium enterprise (SME) segments, suiting all business transactions.

Responsibilities:

- As part of a 3-member team, designed the XSL and XML type of report template for '3e', which is now used over the entire product.
- Involved in Bug Fixing and Customer Support.
- Involved in writing common validation controls and events.
- Involved in product testing & stabilization. This included load, functional and performance testing.

Environment: Architected on ASP, VC++ COM, JScript and SQL Server.

Cody McKinney, VRMS Product Configuration/ Developer

Education

- Bachelor of Science (BS Game Design and Development). Rochester Institute of Technology, March 2013

Professional Summary

- Six years of professional programming experience with over three years working in Information Technology

Technical Skills

- Languages: C#, Javascript, JQuery, HTML, CSS, SQL, C++, Java
- Frameworks: .NET 4.5, Entity Framework, Twitter Bootstrap
- Environments: Visual Studio, Microsoft TFS, OpenGL

Professional Experience

GCOM Software
August 2014 to Present

Client: NYC Department of Health and Mental Hygiene
Project: eVital
Date: September-2014 to Present
Role: Programmer

Scope: Web based application for the capturing, accessing, and generating of birth and death certificates and information.

Responsibilities

- Developed Web pages using ASP.NET MVC
- Used and Maintained GCOM's Forms Engine tool to create dynamic web forms
- Scripted unique web behaviors using Javascript and JQuery

Environment: .NET 4.5, Visual Studio, SQL Server Management Studio

Vicarious Visions
June 2012 – August 2013

Project: Skylanders: Swap Force
Date: March 2013 – August 2013
Role: Technical Designer

Scope: Video Game title released for multiple gaming platforms

Responsibilities

- Worked to program various game systems as requested by designers
- Worked with audio artists to ensure proper sound cues throughout the game

Project: Skylanders: Battlegrounds
Date: June 2012 – March 2013
Role: Technical Designer

Project Summary: iOS Game application

Responsibilities

- Responsible for design and implementation of character AI Behaviors
- Designed and implemented the boss battle behaviors and fights
- Coordinated with artists and engineers to ensure the best implementation of designs

Siddharth Murali, Mobile Developer

Education

- Master of Science in Information Systems Pace University (Brooklyn, NY), 2010
- Bachelor of Science in Computer Engineering Ramrao Adik Institute of Technology (Mumbai, India), 2008

Professional Summary

- Highly-skilled software development professional bringing more than 6 years of experience in mobile app design, development and integration.
- Successful at managing teams, driving progress toward project milestones, quality assurance and on-time delivery.
- Experienced in full project life cycle from design to implementation to integration.

Awards & Acknowledgments:

Best of New York City Award – 2017

- Received Best Mobile Project Award for 'NYC Pay or Dispute' mobile app for providing improved Government-to-Citizen experience.

Team Performance Award – 2014

- For demonstrating outstanding team performance in developing several mobile solutions for Phillips 66.

Information Systems Department Award – 2010

- Based on a consistently high standard of academic performance, was honored with the Outstanding Student Award by the Information Systems Department at Pace University.

Core Qualifications:

- Proficient with Xcode IDE and iPhone SDK
- Profound experience with Objective-C, JavaScript, AWS, XML, JSON
- Exceptional ability to work in a fast-paced environment
- Excellent knowledge of interaction with web service APIs (Restful/SOAP)
- Excellent troubleshooting and problem solving skills

Technical Skills

- Programming Languages: Objective-C, C, C++, JAVA, SQL, HTML5
- Operating Systems: Windows XP/Vista/7, Mac OSX, Linux

- Development Tools/Framework: Xcode, Android Studio, eclipse, Appcelerator Titanium SDK, Ionic, Angular JS, AWS Cloud, Apache Cordova, Sublime Text, Visual Studio Code, SAP Mobile Platform, SUP/SMP, GIT, TFS
- Database/Web/Scripting: SQL Server, SQLite, DynamoDB, SOAP, Restful, JavaScript

Professional Experience

GCOM Software LLC
April 2015 to Present

The New York City Department of Finance (DOF)
New York, NY
Aug '16 – Current
Project: "NYC Parking Ticket – Pay or Dispute" Mobile App
Platform: iOS and Android
Role: Sr. Mobile Developer

Scope: This app is New York City's official mobile app to securely pay or dispute parking and camera violations.

Responsibilities:

- Worked closely with design team to build prototype based on client requirement
- Responsible for developing iOS version of the app from ground up including UI design, development and integration with client backend services.
- Responsible for integrating core features such as Ticket barcode scanning, Evidence attachment using iOS Photos framework, Collection of user-interaction data using Google Analytics, storing of user saved information locally using Core Data framework and Multi-Language support.
- Integrated with payment processor to securely process transaction via mobile app
- Responsible for supporting Android version of the app for bug fixes and performance improvements.
- Performed AWS support activities including payment analysis, Report generation, and app maintenance configuration.
- Responsible for setting up App store developer accounts for iOS and Android.
- Provision and deploy the app for distribution to Apple App and Google Play Store

Environment: Xcode, Android Studio, Restful Web Services, Core Data, SQLite DB, AWS cloud services

The New York City Housing Preservation & Development (HPD)
New York, NY
May'16 – Jul'16
Project: "Incident Tracker" Mobile App
Platform: iOS (iPad App)
Role: Lead Developer/UX Designer

Scope: This app enables HPD inspectors to conduct visits to buildings and record building and unit level information on the go.

Responsibilities:

- Worked with HPD business and technical team to participate in app design, planning and implementation
- Developed responsive UI design using Ionic framework
- Developed backend using AWS API gateway, Lambda function and DynamoDB
- Provisioned and deployed the app for distribution

Environment: Ionic Framework, Restful Web Services, AWS API gateway, AWS Lambda, AWS DynamoDB

Peerplace
Rochester, NY
Nov'15 – Apr'16
Project: Meals Mobile app (GCOM Software LLC)
Platform: iOS and Android
Role: Lead Developer

Scope: This app enables drivers to view their daily delivery routes on their mobile device. It also offers features such as turn-by-turn directions and maps to aid the driver. The user will also be able to update the status of the delivery and contact Manager in case of emergency.

Responsibilities:

- Developed cross-platform native solution using Ionic framework
- Added feature to view routes in platform specific maps
- Integrated app with Peerplace backend systems using REST API

Environment: Ionic framework, Restful Web Services, Native Maps API

The New York City Department of Health and Mental Hygiene (DOHMH)
Long Island City, NY
Apr'15 – Oct'15
Project: "Adults in NYC" Mobile App
Platform: iOS
Role: Lead Developer/UX Designer

Scope: This app offers information to adults on sexual reproductive health. It enables users to search for clinics that offer sexual reproductive health services and access to birth control methods located in the five boroughs of New York City.

Responsibilities:

- Coordinated with DOHMH IT as well as with program staff to gather requirements and build prototypes to meet their needs.
- Formulated UX design and developed screens for each functionality of the app
- Integrated Analytics package that served to acquire, engage and retain users
- Carried out end-to-end testing, facilitated provisioning and distribution of the app to various mobile devices

Environment: Titanium Mobile SDK, Restful Web Services, Localytics, SQLite DB, Local Notification

Larsen & Toubro Infotech Ltd.
March 2011 to March 2015

Phillips66
Bartlesville, OK
Jul'14 – Mar'15
Project: Conoco/P66/76 Station Finder
Platform: iOS and Android
Role: Technical Lead

Scope: This app helps users find the closest Conoco Gas Station and get directions from their current location; find nearby stores based-on city and state, or zip code. It also enables users to view promotion related information for a given gas station. Using this app, users can view Kickback reward points and transaction details on the go.

Responsibilities:

- Involved in designing and prototyping the app from the ground up
- Implemented Location based notifications using the API, 'Plot Projects'
- Responsible for coordinating the development effort with offshore and onsite teams

Environment: Apple Xcode, ARGIS service, Apple Maps, Restful Web Services

Phillips66
Bartlesville, OK
Dec'13 – Jun'14
Project: Safety App (iPhone App)
Platform: iOS
Role: Technical Lead

Scope: This app enables the user to capture any safety related incident on the go and report it to the safety department

Responsibilities:

- Interacted with Business units to conceptualize and design the mobile solution
- Involved in every project phase, from concept creation to app store deployment

- Worked with on-site and off-site developers to manage deliverables, integrate code, and develop subject matter expertise.
- Responsible for identifying the strengths and weaknesses of alternative solutions, conclusions or approaches to problems
- Responsible for ensuring bug free delivery of the app by conducting several app review sessions with the business team.

Environment: Apple Xcode, Consume REST Web service to send/receive data, Network Edge Authentication Pattern

Phillips66
Bartlesville, OK
May'13 – Nov'13
Project: BizLink Pricing - Pricing App using SAP Sybase Unwired Platform (SUP 2.1.3)
Platform: iOS and Android
Role: Lead Developer
Availability: Apple App Store

Scope: This app serves as a complete data delivery system. It allows employees access in real time to fuel prices on the go.

Responsibilities:

- Interacted with the client's Mobility team to gather requirements
- Responsible for designing the app from ground up
- Developed mobile business objects (MBO's) using Restful web services
- Responsible for securely configuring the app to interact with the Sybase Unwired Platform mobile business objects (MBO's).

Environment: Apple Xcode, Sybase Unwired Mobile Business Objects (MBOs), Network Edge Authentication Pattern, SQL Server Database, Restful Web Services

Phillips66
Bartlesville, OK
Jan'13 – Apr'13
Project: Travel Approval using SAP Sybase Unwired Platform (SUP 2.1.3) (iPhone App)
Platform: iOS (iPad App)
Role: Lead Developer

Scope: This app empowers an Employee to approve, reject and review expense receipts (attachments) of travel/trip requests raised by a subordinate.

Responsibilities:

- Interfaced with client for project deliverables, mobility roadmap and solution.
- Configured and designed SUP Mobile Business Objects (MBOs)

- Responsible for configuring client application to interact with SAP backend system using Network Edge Authentication Pattern.
- Created compelling device-specific user interfaces and experiences

Environment: Apple Xcode, Sybase Unwired Mobile Business Objects (MBOs), Network Edge Authentication Pattern

Phillips66
Bartlesville, OK
July'12 – Dec'12
Project: HR Mobile Connect and Brand Calendar HR App (iPhone App)
Platform: iOS
Role: Mobility Architect/Developer
Availability: Apple App Store

Scope: HR Mobile Connect - The HR app enables employees to access information on company benefits, easily locate benefit providers and get the latest company news on any iPhone device.

Brand Calendar - This App provides users with easy access to promotions and media information for all company brands. Users can quickly find yearly media and promotion information by brand and location.

Responsibilities:

- Worked with client's mobility team to arrive at the criteria for UI design of the HR application.
- Adopted an iterative approach involving frequent interactions with client's Branding and Mobility teams in building a solution based on requirements.
- Responsible for testing application from functionality and User Interface perspectives.
- Responsible for provisioning and packaging the app before submitting it to Apple App store for approval.

Environment: Mobility Solutions, Apple Xcode, RSS Feeds, and SOAP Web Service

Larsen & Toubro Infotech Ltd.
Edison, NJ
Mar'11 – Jun'12
Project: Enterprise Mobility Portfolio (Native App)
Platform: iOS
Role: Mobility Architect

Responsibilities:

- Worked as a Solutions architect to perform discovery phase & proof of concepts
- Performed Market analysis on Mobile Platforms, Business Case Analysis.
- Incorporated usability features such as barcode scanning, signature capture, attachments into mobile solution

- Evaluated new technologies and device platforms and provided feasibility assessments and accurate estimates for project implementations.
- Provided development estimates and identified risks associated with the effort.
- Supported application Teams in SDLC and Mobile Application Governance Lifecycle.
- Followed industry and customer development methodology, policies, procedures and standards.
- Provisioned, compiled, and managed apps for ad-hoc as well as app store distribution. Submitted apps to app store for approval.
- Coordinated and aligned with central mobility teams of various clients and delivered SAP Mobility based Proof of Concept developments in accordance with Client-specific Compliance standards and best practices.

Arvind Srivastava, VRMS Quality Assurance Lead

Certifications

- Certificate in Computing from Indira Gandhi Open University

Education

- Bachelor of Arts (Economics), M.D University Rohtak, India, 1996
- Higher Diploma in Software Engineering from Aptech Computer Education

Professional Summary

- Accomplished, result-oriented and meticulous Software Quality Professional with proven leadership, management and technical expertise in a career spanning across 22 years, using strong leadership, business planning, solution development, communication and facilitation skills.
- Extensive experience in IT with strong skills in the areas of QA Project Management, People Management, systems design, analysis, development, implementation and testing.
- Adept at building high-performing cross-functional matrix team, including off-shore and sub-contract management experience
- Skilled in managing volatile environments through expertise in contingency management and risk mitigation
- Extensive experience working in Release Management and responsible for the overall quality of the releases
- Extensive experience interfacing with Business, Software Development, QA and System Hardware groups throughout the SDLC
- Coordinated project implementations with Engineering, IT teams and End-Customers, and successfully managed UAT and Release Schedules
- Working knowledge of allocating resources, ensuring adherence to all relevant standards and quality processes, team building and monitoring individual contributions
- Expert in reviewing BSDs, FSDs and software customization and testing processes
- Extensive experience in preparing and deploying Test Plans, Test Scripts, and different phases of testing such as Business Functionality Testing, UAT, Integration Testing, Back-end Testing, End to End Testing, System Testing, Performance Testing, Automation Testing, Regression Testing, Load Testing and Stress Testing.
- Strong Knowledge and working experience in SDLC and Agile processes.

Technical Skills

- **Data Bases:** Oracle, Sybase, DB2, MS SQL Server, MS Access, dBase, Fox pro
- **Languages:** SQL, PL/SQL, VB, HTML, TSL, C, C++, Java
- **Operating Systems:** Sun Solaris, IBM AIX, Linux, Windows, MS DOS.
- **Testing tools:** HP Quality Center/ ALM, Clear Quest, Clear Case, Redmine, Win Runner, HP Load Runner, HP Quick Test Professional / UFT, Astra Load Test, Silk, Rational Robot.
- **Applications / Tools:** MS Office (MS Outlook, MS Word, Excel, PowerPoint, MS Project), Toad, Win SQL, DB Artisan, Beyond Compare, Putty, XML Spy
- **Project Management:** MS-Project, MS-Visio, SharePoint
- **Methodologies:** SDLC, Agile, Iterative, Waterfall and Release Management Java, .Net, Salesforce

Professional Experience

Company: New York State Enterprise Licensing System, Albany, NY
Project: NYBE (New York State Business Express), DECALS (Department of Environmental Conservation Accela Licensing System), Accela Enterprise Licensing System & MTA Genius Transit Challenge
Duration: May 2015 to Present
Role: Lead QA Automation & Performance Engineer

Responsibilities:

- Develop a testing governance model for all program/project assignments
- Plan and manage all testing activities across multiple concurrent projects.
- Implement consistent test practices and processes across the board
- Coach, mentor, motivate and supervise QA team members
- Develop and manage QA Project / Test Plan.
- Provide estimates, manage resource plan and work allocation
- Establish QA automation & performance strategies
- Developed and maintained UFT automation framework to support functional, regression and cross browser testing.
- Coordinated, prepared test scripts/data and performed Load/Performance Test.

Environment: Java, Oracle, JBoss, Web Services, Crystal Reports, Linux, HP Load Runner, HP ALM, HP UFT / Quick test Professional, Oracle Service Cloud, OPA, PHP

Company: New York City Department of Health & Mental Hygiene, NY
Project: HFD (Healthcare Facility Directory)
Duration: April 2015 to May 2015
Role: QA Project Manger

Responsibilities:

- Plan and manage a broad range of systems and application testing assignments
- Collaborate, manage and influence multiple matrixed stakeholder groups across Testing, Development, PMO and External Agencies
- Analyze performance against key SDLC deliverables and testing results as a means to effectively assess and communicate risks to project team and senior management
- Lead release planning and relevant internal testing meetings to ensure critical SDLC deliverables, testing deliverables and project risks are proactively managed and communicated to key stakeholders
- Manage various special assignments geared towards enhancing the Test Management Model
- Determine and assess need for additional resources to achieve program goals
- Proactively manage changes in scope, identify potential crisis and devise contingency plans
- Obtain detailed understanding of business requirements and design specifications to effectively develop test plans and manage testing/implementation risks
- Responsible for successful completion of all testing phases – component, Integration, regression and UAT

Environment: Salesforce, HP ALM, HP UFT / Quick test Professional

Company: State of New York - Department of Health, Albany, NY
Project: UASNY (Uniform Assessment System)
Duration: March 2012 to March 2015
Role: QA Lead

Responsibilities:

- Plan, monitor, and track team's work (Onsite & offsite).
- Ensuring that the Quality gates and goals are known and followed by all the project team members.
- Involve in QA estimates and QA major milestones.
- Design Iteration level specific Test Plans, Test Summary Reports, and Defect Reports.
- Ensure all the documentation is updated /committed at SharePoint for all Iterations.
- Defect Management, Metrics, and Test Logs using Rational Clear Quest & HP ALM
- Provide leadership across the QA effort and coordinate with Project Management
- Responsible for successful completion of all testing phases – Functional, Integration, Regression, UAT, Automation and Performance

Environment: IBM Rational Clear Quest, IBM Rational Functional Tester, Linux, HP Load runner, HP UFT / Quick test Professional, HP ALM, Web logic Server, Oracle 10g, IceFaces, JBoss

Company: MorphoTrak, Inc., Albany, NY

Project: New York State Division of Criminal Justice - SABIS (Statewide Automatic Biometric Identification System)
Duration: August 2010 to March 2012
Role: QA Lead

Responsibilities:

- Manage and drive the team towards meeting velocity and project goals
- Manage day to day work and assign tasks to the QA team members
- Coordinate with Release Management team to make sure the project changes are deployed in production on a regular basis
- Work with external teams to remove any road blocks for project team members
- Lead efforts to work with Business and Product Management team to prioritize functionalities to be played in current and next iteration
- Set and continually manage project expectations with team members and other stakeholders
- Identify and manage project dependencies and critical path
- Coach, mentor, motivate and supervise QA team members and influence them to take positive action and accountability for their assigned work
- Accountable for delivery of all work tasks identified in the project plan
- Prepare reports on a periodic basis for program team, team leads, group leads and appropriate stakeholders

Environment: Java, Oracle, JBoss, Web Services, Crystal Reports, Linux, HP Load Runner, HP ALM, HP UFT / Quick test Professional, Oracle Service Cloud, OPA, PHP

Company: UBS Investment Bank, Jersey City, NJ
Project: SBL (Stock Borrow Landing) Applications (ASAP, HALO, ECTWB, Lockup Tool, CMT & UBSSEG)
Duration: February 2009 to August 2010
Role: Senior QA / Automation Lead

Responsibilities:

- Perform Automation feasibility analysis, ROI Calculation, develop and implement Test Automation Strategy
- Analyze requirements and define framework and guidelines
- Estimate of test automation activities
- Analyze and Implement best practices like Reuse to improvise scalability and performance
- Involved in review of Functional and Technical requirement documents to understand the functionalities of the project.
- Interacting with Business users, stakeholders, Subject Matter Experts and Business Analysts to understand requirements and defined the scope of the project, financial projections and Cost/benefit analysis.
- Conducted meetings with Management, SME, users and other stakeholders for open and pending issues.

- Creation of Test plan (Test methodology, Test Strategy), Test Matrix and Conduct Project reviews with the Test team.
- Test Effort Estimation, Identification and Allocation of Resources and Coordination with the team and Management.
- Regular Interaction with Development & BA team / Preparation of Readiness reports and QA related documents.
- Automated UBSSeg Functional/Regression process using SQL.
- Developed Automation framework using Quick Test Professional.
- Creation and Execution of Performance Scenarios & Scripts.
- Verification Load/Stress Performance using Different Monitors (Database, Web, Application).
- Analyzing Performance results and creating Reports & Graphs.
- Execution of test cases/Defect Logging/ review & verification in Quality Center 9.2.

Environment: Java, .Net, Unix, Web methods, MQ Series, Apache, LDAP, HP Quality Center/Test Director, Quick test Professional, LoadRunner, Rational Clear Quest, Clear Case, Sybase, Oracle, Solaris, Shell Scripting.

Company: UBS Investment Bank, Chicago IL
Project: OBS (Off Balance Sheet)
Duration: October 2007 to January 2009
Role: Senior QA / Automation Lead

Responsibilities:

- Create test plan, Test cases and test scenarios for the application under test.
- Conduct a test plan walk-through meeting with the development and test teams.
- Provide estimation of testing efforts.
- Developed Automation framework using Quick Test Professional.
- Execute the regression testing suite using automation.
- Perform maintenance of the existing WinRunner and QTP scripts and automation data.
- Responsible for performance testing using LoadRunner.
- Modify and maintain shell scripts using the VI editor to ensure the proper setup and stability of the testing environment.
- Performed mentoring of new team members, assigned tasks to the off-shore team and reviewed daily off-shore testing status.
- Defect management is done on Clear Quest as well as Mercury Quality Center.
- Wrote SQL queries to test data integrity and replication.
- Send out daily Status Reports on the progress of testing.

Environment: Java, .Net, Objective C, WebSphere, Web methods, MQ Series, Apache, LDAP, HP Quality Center/Test Director, Rational RequisitePro, Quick test Professional, LoadRunner, Rational Clear Quest, Clear Case, Sybase, Oracle, Solaris, NeXT – Open Step, Shell Scripting.

Company: Texas Guaranteed Student Loan Corporation, Austin TX
Project: AdvanTG Web

Duration: December 2001 to September 2007
Role: Senior QA Engineer

Responsibilities:

- Created and executed test plans for AdvanTG WebTM II system, for Functional, Regression and Performance Testing to satisfy business requirements.
- Analyzed the UML based Use Cases provided by Business Analyst's and written Test Cases for Functional, Regression, System, UAT and Performance Testing.
- Performed Functional, Regression, Integration, System, Performance, Cross Browser, and GUI testing Manually as well as using Automation Tools.
- Wrote SQL Scripts for Test Data Creation and for Data verification.
- Created/Executed Test Scripts for Performance Testing using LoadRunner.
- Executed automated test scripts, which are developed by using Quick Test Professional.
- Involved in Data Conversion process from existing database (Paradox database) to AdvanTG WebTM II system (DB2 database)
- Deployed Daily builds on Staging (Testing Environment).
- Analyzed Error Messages Logged in the Log (server) files to identify the problem caused for the errors and communicated to the Development team by pointing them what exactly caused a problem while the test execution.
- Defects are tracked and reported using Mercury Quality Center/Test Director.
- Coordinated with SME's, Business Analyst's and Developers to resolve the issues raised during the testing phase and assure functional and operational needs of the business requirements are met
- Interacted with Beta Customers while Beta Testing, by assisting how the new functionality replaces the existing functionality.
- Performed security testing.

Environment: Java, JSP, EJB, Java Script, HTML, Crystal Reports, Web Logic, IIS, iPlanet, LDAP, Parallel Crystal, Mainframe, JCL, Mercury Quality Center/Test Director, Quick test Professional, LoadRunner, Visual SourceSafe, Rational Rose, Windows NT, Netscape, IE, Common Line, and DB2.

Company: AlphaBlox Corp, Mountain View, CA
Project: AlphaBlox 3 (AlphaBlox Analysis Server and AlphaBlox Application Studio)
Duration: November 2000 to December 2001
Role: Senior QA Analyst

Responsibilities:

- Close interaction with designers and software developers to understand application functionality and navigational flow.
- Analyzed system requirements developed detailed Test plan, Test cases for testing the functionality, GUI, security and performance testing of Charting Enhancement, Email Charts, Grid Enhancement and Spreadsheet Internationalization.
- Performed manual testing considering the base line of developed test plan and test cases.

- Performed the Back-End integration testing to ensure data consistency on front-end by writing and executing SQL queries on the database.
- Successfully coded and modified the Java Script codes to test API Functions.
- Extensively written Unix Shell Scripts to Automate AlphaBlox Analysis Server installation on Unix Platform (Solaris & AIX).
- Wrote and modified test scripts by inserting logical commands to handle complicated test scenarios for Win Runner for regression testing.
- Created Scenarios using Virtual Users and Agents to Perform and Monitor Performance Testing using Load Runner.
- Used Track tool to report application bugs and enhancements request and discussed with developers to resolve technical issues.

Environment: Java, HTML, Oracle, SQL Server, JavaScript, Unix (Solaris & AIX), Win runner, Load Runner, Web Servers: - IIS 4.0, NES 3.51, Apache, iPlanet 4.

Company: The Computer Zone, Faridabad (India)
Project: March 1998 to September 2000
Duration: QA Specialist
Role: Executive Information System (EIS)

Responsibilities:

- Tested the applications using different browsers such as Netscape and IE on both web server NES Netscape Enterprise Server 3.0 and Microsoft Internet Information Services
- Performed functionalities testing of the web site to identify broken links, missing URLs or change of sites.
- Performed front-end integration for Web with multiple RDBMS Database by passing direct SQL queries
- Created virtual users of different simulation groups to do the performance testing and assess response time using Load Runner
- Tested data extraction procedures and verified the output with the system requirement.
- Worked with design/software engineers to correct discrepancies and examine design issues.

Environment: Java, HTML, Oracle8.0, Windows NT, Win runner, Load Runner, Test Director.

Company: Alaska Exports, New Delhi (India)
Duration: May 1997 to February 1998
Role: QA Engineer

Responsibilities:

- Involved in creating Test Plans, Test Cases, and Test scripts using Winrunner6.0
- Involved in Acceptance Testing, User Interface Testing and Regression Testing.
- Documented Bugs found out during the process of testing using Defect Tracking System.

- Identified priority functions, transaction profiles and user profiles to plan a complete load test of the application using Loadrunner.

Environment: SQL, Visual Basic, Oracle, Windows NT / 95, Winrunner6.0

Company: Vinay Trading Corporation, Faridabad (India)
Duration: May 1996 to May 1997
Role: White Box Tester / Programmer

Responsibilities:

- Developed and tested the following application
  - Customer Information System, Sales Management
  - System and Inventory Control System

Environment: Visual Basic, Oracle, Crystal Reports

Sajan Sidharthan, VRMS Quality Assurance

Education

- Master of Computer Applications (MCA), Alagappa University, India, 1993-96

Professional Summary

- Around 15 years of experience in software quality assurance and testing managing remote and local test teams.
- Expertise in Manual Testing and well versed with different testing methodologies (Waterfall, Agile, Scrum).
- Experience in various types of testing including User Interface, Cross Browser, Unit, Functionality, Integration, Regression, Release, End to End, Compatibility, Database and Usability.
- Extensive experience in Client/server, Web Based testing on different environments.
- Well-versed with all stages of Software Development Life Cycle (SDLC) and Software Testing Life Cycle (STLC).

Technical Skills

- Operating Systems: Windows 2000/XP/7, Unix and Linux.
- Databases: Oracle, DB2, SQL Server and Microsoft Access.
- Browsers: MS Internet Explorer, Mozilla Firefox and Chrome.
- Tools: Microsoft Visio, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Share Point, SOAPUI, JUNIT, TOAD, Testing, ANT, Jenkins, GIT, ClearQuest, Rally, Firebug and RPM.
- Automation Tools: QTP and Selenium IDE/WebDriver.
- Test Management Tools: HP ALM, RQM, HP QC and Test Director.
- Defect Tracking Tools: Silk Radar, PVCS, JIRA and Bugzilla.
- Guidewire Product: PolicyCenter.
- Testing Types: Functional, Integration, Regression, Usability, Compatibility, E2E, Ad-hoc, Cross Browser and Smoke Testing.
- Domains: Banking, Insurance, Healthcare, Telecom, CRM and SCM.

Professional Experience

Employer: GCOM Software
Duration: June 2016 to Present

Client: NYC Department of Health and Mental Hygiene
Duration: Dec 2016 to Present
Role: QA Lead
Project: eVital

Scope: New York City currently has an electronic vital event reporting system (EVERS) that facilitates all vital events reporting, registration, processing, issuance, and analysis. Over 95% of all New York City births, deaths, spontaneous and induced terminations of pregnancy, are processed through EVERS. EVERS interfaces with the Office of Chief Medical Examiner (OCME); integrated with Internet orders and walk-in kiosk orders for certificates. Currently, there are approximately 10,000+ unique internal and external EVERS users. Project goal is to replace EVERS with a secure, user-friendly enterprise level, web-based system that will maintain current programmatic goals and objectives of DOHMH Bureau of Vital Statistics.

Responsibilities

- Analysis, Planning, Designing, Development, testing and documentation for application testing
- Preparation documents and validation output for each phase of SDLC
- Preparation test plan, test estimation and test scripts
- Preparation data flow diagram for integration and system testing
- Execute test cases and log the defects and bring it to closure
- Review of test cases and functional requirement documents
- Preparation of data flows between different processes in a business
- Creation and execution the SQL/database queries

Environment: .NET, SQL Server, TFS and Visio

Client: New York State
Duration: June 2016 to Nov 2016
Role: QA Lead
Project: New York Business Express (NYBE)/ E Licensing

Scope: Businesses obtaining multiple licenses and permits to operate in New York must navigate a labyrinth of state agencies, each requesting similar information. For example, an entrepreneur starting a restaurant must obtain approvals from or submit filings to the Department of State (DOS), the Department of Taxation and Finance (DTF), the Department of Labor (DOL), the Workers Comp Board (WCB), and possibly the State Liquor Authority (SLA) and the Department of Health (DOH). About 70% of the information requested is duplicative across agencies. With no single point of contact, businesses are left to fend for themselves and often resort to hiring lawyers and consultants to manage what should be a relatively simple process. The lack of user-friendly information online can result in an incomplete filing, which only compounds delays and further frustrates applicants. NYBE aims to provide a long-term solution for this problem.

The goal of the New York Business Express (NYBE) Portal is to effectively and seamlessly create one-stop services for businesses to start and grow, helping them by providing a single, user-friendly, web-based, cross-agency enterprise system to manage all their permits, licenses and documentation needed to operate their businesses in New York State (NYS). The NYBE system will redesign the existing functionality on the NYS Business Wizard to provide a stronger connection to the agency legacy systems through the CBA and Agency Modules. The CBA and Agency Modules will be integrated with the appropriate backend processing system; which is either the e-Licensing AA or agency-specific system.

Responsibilities

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- Execution test cases and log the defects and bring it to closure
- Review of test cases and functional requirement documents
- Preparation of data flows between different processes in a business
- Creation and execution the SQL/database queries

Environment: Oracle Service Cloud, Oracle Policy Automation, SOAP Web Services, Java, HP ALM and Visio

Client: Immidi Infotech LLC, USA.
Duration: May 2015 – June 2016
Role: QA Lead
Project: eTalent2share

Scope: Talent2Share is a novel idea to solve a real-life problem. This site provides you with a platform to find experienced, skilled, working professionals to train/ tutor/ teach/ guide/perfect you to fulfill your learning requirements. All you need to do is to register yourself and look for these skilled, professional individuals in the industry who are willing to share their knowledge and experience, in their respective specialization. You contact them and start learning.

Responsibilities

- Analysis, Planning, Designing, Development, testing and documentation for application testing
- Preparation documents and validation output for each phase of SDLC
- Preparation test plan, test estimation and test scripts
- Preparation data flow diagram for integration and system testing
- Execution test cases and log the defects and bring it to closure
- Review of test cases and functional requirement documents
- Preparation of data flows between different processes in a business
- Creation and execution the SQL/database queries

Environment: TFS, Visio, J2EE and MySQL

Company: IBM India Pvt Ltd
Duration: Jun 2009 – Apr 2015
Role: QA Lead
Project: American Express, CFM, APPCAT and Amica Insurance

Scope: The Project is to test the enhancements/development of all projects running in AMEX for the WWCAS (World Wide Credit Authorization System) application. The scope of the projects is to identify, develop, automate and execute the critical 'End-to-End' Test scenarios and to provide the test support to other teams to successfully execute the full business work flow.

The Application Catalogue system is an integrated portfolio management application for management and governance of logical and physical IT assets such as applications, servers, shared services, business products and reference architecture assets such as business process/capability models, application component models, technology and platform reference models and information reference models.

Combined Funds Management system (CFM) which is a mutual funds processing application which supports the BMO Mutual Funds and Term Investments Lines of Business

Guidewire PolicyCenter is a complete system-of-record and supports the core functions of the policy lifecycle—product definitions, underwriting, quoting, binding, endorsements, and renewals. As a test lead I was involved in PolicyCenter customization with BA/SME's and in validating according to the Auto business insurance process. The major business jobs of a PolicyCenter is storing information about a policy and managing a set of processes (jobs) like submissions, renewals and changes. If completed successfully these jobs might trigger an action in other products.

Responsibilities

- Review of test cases and functional requirement documents
- Prepare data flows between different processes in a business
- Prepare documents and validate output for each phase of SDLC
- Prepare test plan, test estimation and design of test cases
- Execute test cases and log the defects and bring it to closure
- Create and execute the SQL Queries
- Prepare test metrics for measure test output and software quality

Environment: IBM Mainframe, Guidewire, Java, DB2, SQL Server, HP ALM and Visio

Client: Wipro GE Health Care, India
Date: Jul 2006-Apr 2009
Role: Senior Systems Specialist
Project: Enterprise Clinical Information System and Centricity Business

Scope: Centricity Enterprise is a comprehensive suite of clinical applications built upon the acquired IDX Carecast platform. In this phase, there are four separate programs addressing the

following key development: Emergency Care - whiteboard, patient tracking, discharge, triage, clinical documentation. The objective of the project is to automate the ED department workflow

Centricity Business provides comprehensive Information Technology (IT) for large physician organizations, hospitals and Integrated Delivery Networks (IDNs). Centricity Business offers robust financial and administrative capabilities to improve revenue cycle management. System interoperability means clinical and billing information is shared seamlessly across the enterprise. Higher patient satisfaction and regulatory compliance result from greater efficiency and data integrity from the back office to the front desk.

Responsibilities

- Plan, Design, Develop, test and document for application testing
- Prepare documents and validate output for each phase of SDLC
- Prepare test plan, test estimation and design of test cases
- Prepare data flow diagram for integration and system testing
- Execute test cases and log the defects and bring it to closure
- Review of test cases and log the defects and bring it to closure
- Prepare data flows between different process in a business
- Create and execute the SQL queries
- Managing the team of functional, automation and documentation group

Environment: ASP, .NET, SQL Server, Visio, Java, DB2, TOAD and HP QC.

Company: GXS
Duration: Aug 2003 – Jul 2006
Role: Lead Engineer
Project: Price Management Services and Interchange Services.

Scope: Price Management Services solution will offer a product that allows trading partners to synchronize price and promotional information both within and outside of the GDSN.

Interchange Services, from Global eXchange Services (GXS), is a fast, reliable document-exchange service that jumps start your e-commerce or EDI program. By enabling your company to trade electronically through various standards and communication protocols, such as EDI, XML and other industry-specific standards, Interchange Services is a simple and effective way to electronically move your company's business documents. Involved in various releases from 4.5 to 4.8 for QA, Pre-production and Production testing.

Responsibilities

- Plan, Design, Develop, test and document for application testing
- Prepare documents and validate output for each phase of SDLC
- Prepare test plan, test estimation and design of test cases
- Prepare data flow diagram for integration and system testing
- Execute test cases and log the defects and bring it to closure
- Review of test cases and log the defects and bring it to closure
- Prepare data flows between different process in a business

- Create and execute the SQL queries
- Managing the team of functional, automation and documentation group

Environment: Visio, SOAPUI, Java, SQL Server, TOAD, Bugzilla and Test Director

EXHIBIT 2 PROJECT PLAN

West Virginia Department of Health and Human Resources
Electronic Vital Records System (EVRS)
CRFP EHP1900000002

GCOM Software LLC

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
1	**1**	**WV DHHR EVRS Master Release Plan**	**1828 days**	**Wed 5/1/19**	**Sun 5/3/26**	
2	1.1	Project Start Date	0 days	Wed 5/1/19	Wed 5/1/19	
3	**1.2**	**Manage**	**739 days**	**Wed 5/1/19**	**Tue 3/1/22**	
4	**1.2.1**	**Execute**	**739 days**	**Wed 5/1/19**	**Tue 3/1/22**	
5	1.2.1.1	Manage Project Plan	34.5 emons	Wed 5/1/19	Tue 3/1/22	2SS
6	1.2.1.2	Manage Quality	34.5 emons	Wed 5/1/19	Tue 3/1/22	2SS
7	1.2.1.3	Manage RAID	34.5 emons	Wed 5/1/19	Tue 3/1/22	2SS
8	1.2.1.4	Manage Releases	34.5 emons	Wed 5/1/19	Tue 3/1/22	2SS
9	**1.2.2**	**Monitor & Control**	**739 days**	**Wed 5/1/19**	**Tue 3/1/22**	
10	1.2.2.1	Status Reports	34.5 emons	Wed 5/1/19	Tue 3/1/22	2SS
11	**1.3**	**Phase 1 Death and Point of Sale (POS)**	**1826 days**	**Wed 5/1/19**	**Wed 4/29/26**	
12	**1.3.1**	**Planning and Administration (Milestone 1)**	**10 days**	**Wed 5/1/19**	**Tue 5/14/19**	
13	**1.3.1.1**	**Activities**	**10 days**	**Wed 5/1/19**	**Tue 5/14/19**	
14	1.3.1.1.1	Project Initiation Meetings	10 days	Wed 5/1/19	Tue 5/14/19	
15	1.3.1.1.2	Prepare Project Management Plan	10 days	Wed 5/1/19	Tue 5/14/19	
16	**1.3.1.2**	**Deliverable**	**0 days**	**Tue 5/14/19**	**Tue 5/14/19**	
17	1.3.1.2.1	MS1-A Project Management Plan	0 days	Tue 5/14/19	Tue 5/14/19	13
18	**1.3.2**	**Business and System Requirements (Milestone 2)**	**31 days**	**Wed 5/1/19**	**Wed 6/12/19**	
19	**1.3.2.1**	**Activities**	**31 days**	**Wed 5/1/19**	**Wed 6/12/19**	
20	1.3.2.1.1	Set up Environment for Gap Analysis	1 day	Wed 5/1/19	Wed 5/1/19	
21	1.3.2.1.2	Facilitate on site Gap Analysis Meetings	10 days	Thu 5/2/19	Wed 5/15/19	20
22	1.3.2.1.3	Conduct Gap Analysis	10 days	Thu 5/2/19	Wed 5/15/19	20
23	1.3.2.1.4	Prepare Business & System Gap Analysis Document	30 days	Thu 5/2/19	Wed 6/12/19	20
24	1.3.2.1.5	Prepare State Security Documentation	10 days	Thu 5/2/19	Wed 5/15/19	20
25	**1.3.2.2**	**Deliverable**	**30 days**	**Wed 5/1/19**	**Wed 6/12/19**	
26	1.3.2.2.1	MS2-A Gap Analysis Environment Set up report	0 days	Wed 5/1/19	Wed 5/1/19	20
27	1.3.2.2.2	MS2-B Gap Analysis Meeting Minutes	0 days	Wed 5/15/19	Wed 5/15/19	21
28	1.3.2.2.3	MS2-C Business & System Gap Analysis Document	0 days	Wed 6/12/19	Wed 6/12/19	23
29	1.3.2.2.4	MS2-D State Security Documentation	0 days	Wed 5/15/19	Wed 5/15/19	24
30	**1.3.3**	**Implementation of Hosted Environment (Milestone 3)**	**35 days**	**Wed 5/1/19**	**Tue 6/18/19**	
31	**1.3.3.1**	**Activities**	**35 days**	**Wed 5/1/19**	**Tue 6/18/19**	
32	**1.3.3.1.1**	**In GCOM**	**10 days**	**Wed 5/1/19**	**Tue 5/14/19**	
33	1.3.3.1.1.1	DEV	5 days	Wed 5/1/19	Tue 5/7/19	
34	1.3.3.1.1.2	TEST	5 days	Wed 5/8/19	Tue 5/14/19	33
35	**1.3.3.1.2**	**In Azure**	**35 days**	**Wed 5/1/19**	**Tue 6/18/19**	
36	1.3.3.1.2.1	Setup Azure Infra with connectivity	10 days	Wed 5/1/19	Tue 5/14/19	
37	**1.3.3.1.2.2**	**Setup Azure Servers**	**25 days**	**Wed 5/15/19**	**Tue 6/18/19**	

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
38	1.3.3.1.2.2.1	UAT	5 days	Wed 5/15/19	Tue 5/21/19	36
39	1.3.3.1.2.2.2	STG/Data Migration	5 days	Wed 5/22/19	Tue 5/28/19	38
40	1.3.3.1.2.2.3	TRAIN	5 days	Wed 5/29/19	Tue 6/4/19	39
41	1.3.3.1.2.2.4	PROD	10 days	Wed 6/5/19	Tue 6/18/19	40
42	**1.3.3.2**	**Deliverable**	**0 days**	**Tue 6/18/19**	**Tue 6/18/19**	
43	1.3.3.2.1	MS3-A Test, Training, Production & Replication Environments Readiness report	0 days	Tue 6/18/19	Tue 6/18/19	31
44	**1.3.4**	**Design and Configuration of Solution (Milestone 4)**	**160 days**	**Wed 6/19/19**	**Tue 1/28/20**	
45	**1.3.4.1**	**Activities**	**160 days**	**Wed 6/19/19**	**Tue 1/28/20**	
46	**1.3.4.1.1**	**Configure the Solution**	**150 days**	**Wed 6/19/19**	**Tue 1/14/20**	
47	1.3.4.1.1.1	Forms configuration	30 days	Wed 6/19/19	Tue 7/30/19	18,30
48	1.3.4.1.1.2	Workflow configuration	30 days	Wed 7/31/19	Tue 9/10/19	47
49	1.3.4.1.1.3	Rule configuration	30 days	Wed 9/11/19	Tue 10/22/19	48
50	1.3.4.1.1.4	Solution Customization	30 days	Wed 10/23/19	Tue 12/3/19	49
51	1.3.4.1.1.5	Unit Testing	30 days	Wed 12/4/19	Tue 1/14/20	50
52	1.3.4.1.2	Configuration Review Sessions	10 days	Wed 1/15/20	Tue 1/28/20	46
53	**1.3.4.2**	**Deliverable**	**0 days**	**Tue 1/28/20**	**Tue 1/28/20**	
54	1.3.4.2.1	MS4-A Solution Demo Document	0 days	Tue 1/28/20	Tue 1/28/20	52
55	**1.3.5**	**Data Conversion and Migration (Milestone 5)**	**79 days**	**Wed 5/1/19**	**Mon 8/19/19**	
56	**1.3.5.1**	**Activities**	**79 days**	**Wed 5/1/19**	**Mon 8/19/19**	
57	1.3.5.1.1	Prepare Data Conversion Plan	5 days	Wed 5/1/19	Tue 5/7/19	
58	1.3.5.1.2	Review Existing Data Format	35 days	Wed 5/8/19	Tue 6/25/19	57
59	1.3.5.1.3	Develop Data Conversion / Migration Programs	30 days	Wed 6/26/19	Tue 8/6/19	58
60	**1.3.5.1.4**	**Migrate data into Test**	**9 days**	**Wed 8/7/19**	**Mon 8/19/19**	
61	1.3.5.1.4.1	Iteration 1	2 days	Wed 8/7/19	Thu 8/8/19	59
62	1.3.5.1.4.2	Update data conversion Routines	5 days	Fri 8/9/19	Thu 8/15/19	61
63	1.3.5.1.4.3	Iteration 2	2 days	Fri 8/16/19	Mon 8/19/19	62
64	**1.3.5.2**	**Deliverable**	**74 days**	**Tue 5/7/19**	**Mon 8/19/19**	
65	1.3.5.2.1	MS5-A Data Conversion / Migration Plan	0 days	Tue 5/7/19	Tue 5/7/19	57
66	1.3.5.2.2	MS5-B Data Migration / Conversion	0 days	Mon 8/19/19	Mon 8/19/19	63
67	1.3.5.2.3	MS5-C Images Migration	0 days	Mon 8/19/19	Mon 8/19/19	63
68	**1.3.6**	**User Acceptance Testing (UAT) (Milestone 6)**	**210 days**	**Thu 6/13/19**	**Wed 4/1/20**	
69	**1.3.6.1**	**Activities**	**210 days**	**Thu 6/13/19**	**Wed 4/1/20**	
70	1.3.6.1.1	Validate Test and Production Environments	5 days	Wed 1/15/20	Tue 1/21/20	46
71	**1.3.6.1.2**	**System Integration Testing**	**174 days**	**Thu 6/13/19**	**Tue 2/11/20**	
72	1.3.6.1.2.1	Test Scenarios and Test Plans	8 days	Thu 6/13/19	Mon 6/24/19	18
73	1.3.6.1.2.2	System Testing	10 days	Wed 1/22/20	Tue 2/4/20	72,70

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
74	1.3.6.1.2.3	Defect Resolution	5 days	Wed 2/5/20	Tue 2/11/20	73
75	**1.3.6.1.3**	**User Acceptance Testing**	**41 days**	**Wed 2/5/20**	**Wed 4/1/20**	
76	1.3.6.1.3.1	UAT Scenarios and Test Plans	8 days	Wed 2/5/20	Fri 2/14/20	73
77	1.3.6.1.3.2	UAT Testing Cycle 1	15 days	Mon 2/17/20	Fri 3/6/20	76,71
78	1.3.6.1.3.3	Defect Resolution	5 days	Mon 3/9/20	Fri 3/13/20	77
79	1.3.6.1.3.4	UAT Testing Cycle 2	10 days	Mon 3/16/20	Fri 3/27/20	78
80	1.3.6.1.3.5	Defect Resolution	3 days	Mon 3/30/20	Wed 4/1/20	79
81	**1.3.6.1.4**	**Performance Testing**	**14 days**	**Wed 2/5/20**	**Mon 2/24/20**	
82	1.3.6.1.4.1	Test Scenarios and Test Plans	7 days	Wed 2/5/20	Thu 2/13/20	73
83	1.3.6.1.4.2	Run Performance Test	2 days	Fri 2/14/20	Mon 2/17/20	82
84	1.3.6.1.4.3	Defect Resolution	5 days	Tue 2/18/20	Mon 2/24/20	83
85	**1.3.6.1.5**	**AppScan Scanning**	**14 days**	**Wed 2/5/20**	**Mon 2/24/20**	
86	1.3.6.1.5.1	Scan Scenarios and Plans	5 days	Wed 2/5/20	Tue 2/11/20	73
87	1.3.6.1.5.2	AppScan Cycle 1	2 days	Wed 2/12/20	Thu 2/13/20	86
88	1.3.6.1.5.3	Defect Resolution	5 days	Fri 2/14/20	Thu 2/20/20	87
89	1.3.6.1.5.4	AppScan Cycle 2	2 days	Fri 2/21/20	Mon 2/24/20	88
90	**1.3.6.2**	**Deliverable**	**202 days**	**Mon 6/24/19**	**Wed 4/1/20**	
91	1.3.6.2.1	MS6-A UAT Defect Tracking Plan	0 days	Mon 6/24/19	Mon 6/24/19	72
92	1.3.6.2.2	MS6-B UAT Test Plan and Scripts	0 days	Fri 2/14/20	Fri 2/14/20	76
93	1.3.6.2.3	MS6-C UAT On-Site Activites	0 days	Wed 4/1/20	Wed 4/1/20	75
94	1.3.6.2.4	MS6-D State Acceptance	0 days	Wed 4/1/20	Wed 4/1/20	69
95	**1.3.7**	**Training (Milestone 7)**	**30 days**	**Wed 1/15/20**	**Tue 2/25/20**	
96	**1.3.7.1**	**Activities**	**30 days**	**Wed 1/15/20**	**Tue 2/25/20**	
97	1.3.7.1.1	Prepare training material, workbooks, exercise	20 days	Wed 1/15/20	Tue 2/11/20	55,46
98	1.3.7.1.2	Training Sessions	10 days	Wed 2/12/20	Tue 2/25/20	97
99	**1.3.7.2**	**Deliverable**	**10 days**	**Tue 2/11/20**	**Tue 2/25/20**	
100	1.3.7.2.1	MS7-A Comprehensive Training Packet	0 days	Tue 2/11/20	Tue 2/11/20	97
101	1.3.7.2.2	MS7-B Train State Trainer	0 days	Tue 2/25/20	Tue 2/25/20	98
102	1.3.7.2.3	MS7-C Technical Training for State IT staff and system administrators	0 days	Tue 2/25/20	Tue 2/25/20	98
103	**1.3.8**	**Documentation (Milestone 8)**	**0 days**	**Tue 2/11/20**	**Tue 2/11/20**	
104	**1.3.8.1**	**Deliverable**	**0 days**	**Tue 2/11/20**	**Tue 2/11/20**	
105	1.3.8.1.1	MS8-A User Documentation	0 days	Tue 2/11/20	Tue 2/11/20	97
106	1.3.8.1.2	MS8-B Technical Documentation	0 days	Tue 2/11/20	Tue 2/11/20	97
107	**1.3.9**	**Parallel Pilot (Milestone 9)**	**39 days**	**Mon 3/9/20**	**Thu 4/30/20**	
108	**1.3.9.1**	**Activities**	**39 days**	**Mon 3/9/20**	**Thu 4/30/20**	
109	1.3.9.1.1	Prepare Pilot Implementation Plan	5 days	Mon 3/9/20	Fri 3/13/20	77

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
110	1.3.9.1.2	Pilot Initiation	1 day	Thu 4/2/20	Thu 4/2/20	68
111	1.3.9.1.3	Support Pilot Monitoring and Issue Resoultion	20 days	Fri 4/3/20	Thu 4/30/20	110
112	**1.3.9.2**	**Deliverable**	**34 days**	**Fri 3/13/20**	**Thu 4/30/20**	
113	1.3.9.2.1	MS9-A Pilot Implementation Plan	0 days	Fri 3/13/20	Fri 3/13/20	109
114	1.3.9.2.2	MS9-B Onsite Assistance	0 days	Thu 4/30/20	Thu 4/30/20	111
115	1.3.9.2.3	MS9-C Pilot Performance Report	0 days	Thu 4/30/20	Thu 4/30/20	111
116	**1.3.10**	**Production Implementation (Milestone 10)**	**62 days**	**Fri 4/3/20**	**Mon 6/29/20**	
117	**1.3.10.1**	**Activities**	**62 days**	**Fri 4/3/20**	**Mon 6/29/20**	
118	1.3.10.1.1	Prepare Go Live Implementation Plan	5 days	Fri 4/3/20	Thu 4/9/20	110
119	1.3.10.1.2	Go Live Preparation	5 days	Fri 4/10/20	Thu 4/16/20	118
120	1.3.10.1.3	Go & No-Go criteria decision	1 day	Wed 4/29/20	Wed 4/29/20	121FS-2 days
121	1.3.10.1.4	GO-LIVE - Phase 1	0 days	Thu 4/30/20	Thu 4/30/20	119,107
122	1.3.10.1.5	Application Monitoring	2 emons	Thu 4/30/20	Mon 6/29/20	121
123	**1.3.10.2**	**Deliverable**	**15 days**	**Thu 4/9/20**	**Thu 4/30/20**	
124	1.3.10.2.1	MS10-A Go Live Implementation Plan	0 days	Thu 4/9/20	Thu 4/9/20	118
125	1.3.10.2.2	MS10-B Onsite Assistance	0 days	Thu 4/30/20	Thu 4/30/20	121
126	**1.3.11**	**System Warranty (Milestone 11)**	**256 days**	**Thu 4/30/20**	**Sun 4/25/21**	
127	1.3.11.1	MS11-A System Warranty Support	12 emons	Thu 4/30/20	Sun 4/25/21	121
128	**1.3.12**	**System Maintenance Support (Milestone 12)**	**1308 days**	**Sun 4/25/21**	**Wed 4/29/26**	
129	1.3.12.1	MS12-A Annual Maintenance Support	61 emons	Sun 4/25/21	Wed 4/29/26	126
130	**1.4**	**Phase 2 Birth and Fetal Death**	**1524 days**	**Tue 6/30/20**	**Sun 5/3/26**	**116**
131	**1.4.1**	**Planning and Administration (Milestone 1)**	**10 days**	**Tue 6/30/20**	**Mon 7/13/20**	
132	**1.4.1.1**	**Activities**	**10 days**	**Tue 6/30/20**	**Mon 7/13/20**	
133	1.4.1.1.1	Project Initiation Meetings	10 days	Tue 6/30/20	Mon 7/13/20	
134	1.4.1.1.2	Prepare Project Management Plan	10 days	Tue 6/30/20	Mon 7/13/20	
135	**1.4.1.2**	**Deliverable**	**0 days**	**Mon 7/13/20**	**Mon 7/13/20**	
136	1.4.1.2.1	MS1-B Project Management Plan	0 days	Mon 7/13/20	Mon 7/13/20	132
137	**1.4.2**	**Business and System Requirements (Milestone 2)**	**36 days**	**Tue 6/30/20**	**Tue 8/18/20**	
138	**1.4.2.1**	**Activities**	**36 days**	**Tue 6/30/20**	**Tue 8/18/20**	
139	1.4.2.1.1	Set up Environment for Gap Analysis	1 day	Tue 6/30/20	Tue 6/30/20	
140	1.4.2.1.2	Facilitate on site Gap Analysis Meetings	10 days	Wed 7/1/20	Tue 7/14/20	139
141	1.4.2.1.3	Conduct Gap Analysis	10 days	Wed 7/1/20	Tue 7/14/20	139
142	1.4.2.1.4	Prepare Business & System Gap Analysis Document	35 days	Wed 7/1/20	Tue 8/18/20	139
143	1.4.2.1.5	Prepare State Security Documentation	10 days	Wed 7/1/20	Tue 7/14/20	139
144	**1.4.2.2**	**Deliverable**	**0 days**	**Tue 8/18/20**	**Tue 8/18/20**	
145	1.4.2.2.1	MS2-E Business & System Gap Analysis Document	0 days	Tue 8/18/20	Tue 8/18/20	138
146	**1.4.3**	**Design and Configuration of Solution (Milestone 4)**	**155 days**	**Wed 8/19/20**	**Tue 3/23/21**	

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
147	**1.4.3.1**	**Activities**	**155 days**	**Wed 8/19/20**	**Tue 3/23/21**	
148	**1.4.3.1.1**	**Configure the Solution**	**145 days**	**Wed 8/19/20**	**Tue 3/9/21**	
149	1.4.3.1.1.1	Forms configuration	30 days	Wed 8/19/20	Tue 9/29/20	137
150	1.4.3.1.1.2	Workflow configuration	30 days	Wed 9/30/20	Tue 11/10/20	149
151	1.4.3.1.1.3	Rule configuration	25 days	Wed 11/11/20	Tue 12/15/20	150
152	1.4.3.1.1.4	Solution Customization	30 days	Wed 12/16/20	Tue 1/26/21	151
153	1.4.3.1.1.5	Unit Testing	30 days	Wed 1/27/21	Tue 3/9/21	152
154	1.4.3.1.2	Configuration Review Sessions	10 days	Wed 3/10/21	Tue 3/23/21	148
155	**1.4.3.2**	**Deliverable**	**0 days**	**Tue 3/23/21**	**Tue 3/23/21**	
156	1.4.3.2.1	MS4-B Solution Demo Document	0 days	Tue 3/23/21	Tue 3/23/21	147
157	**1.4.4**	**Data Conversion and Migration (Milestone 5)**	**79 days**	**Tue 6/30/20**	**Fri 10/16/20**	
158	**1.4.4.1**	**Activities**	**79 days**	**Tue 6/30/20**	**Fri 10/16/20**	
159	1.4.4.1.1	Prepare Data Conversion Plan	5 days	Tue 6/30/20	Mon 7/6/20	
160	1.4.4.1.2	Review Existing Data Format	35 days	Tue 7/7/20	Mon 8/24/20	159
161	1.4.4.1.3	Develop Data Conversion / Migration Programs	30 days	Tue 8/25/20	Mon 10/5/20	160
162	**1.4.4.1.4**	**Migrate data into Test**	**9 days**	**Tue 10/6/20**	**Fri 10/16/20**	
163	1.4.4.1.4.1	Iteration 1	2 days	Tue 10/6/20	Wed 10/7/20	161
164	1.4.4.1.4.2	Update data conversion Routines	5 days	Thu 10/8/20	Wed 10/14/20	163
165	1.4.4.1.4.3	Iteration 2	2 days	Thu 10/15/20	Fri 10/16/20	164
166	**1.4.4.2**	**Deliverable**	**0 days**	**Fri 10/16/20**	**Fri 10/16/20**	
167	1.4.4.2.1	MS5-D Data & Images Migration / Conversion	0 days	Fri 10/16/20	Fri 10/16/20	158
168	**1.4.5**	**User Acceptance Testing (UAT) (Milestone 6)**	**204 days**	**Wed 8/19/20**	**Mon 5/31/21**	
169	**1.4.5.1**	**Activities**	**204 days**	**Wed 8/19/20**	**Mon 5/31/21**	
170	1.4.5.1.1	Validate Test and Production Environments	5 days	Wed 3/10/21	Tue 3/16/21	148
171	**1.4.5.1.2**	**System Integration Testing**	**168 days**	**Wed 8/19/20**	**Fri 4/9/21**	
172	1.4.5.1.2.1	Test Scenarios and Test Plans	8 days	Wed 8/19/20	Fri 8/28/20	137
173	1.4.5.1.2.2	System Testing	13 days	Wed 3/17/21	Fri 4/2/21	170,172
174	1.4.5.1.2.3	Defect Resolution	5 days	Mon 4/5/21	Fri 4/9/21	173
175	**1.4.5.1.3**	**User Acceptance Testing**	**41 days**	**Mon 4/5/21**	**Mon 5/31/21**	
176	1.4.5.1.3.1	UAT Scenarios and Test Plans	8 days	Mon 4/5/21	Wed 4/14/21	173
177	1.4.5.1.3.2	UAT Testing Cycle 1	15 days	Thu 4/15/21	Wed 5/5/21	171,176
178	1.4.5.1.3.3	Defect Resolution	5 days	Thu 5/6/21	Wed 5/12/21	177
179	1.4.5.1.3.4	UAT Testing Cycle 2	10 days	Thu 5/13/21	Wed 5/26/21	178
180	1.4.5.1.3.5	Defect Resolution	3 days	Thu 5/27/21	Mon 5/31/21	179
181	**1.4.5.1.4**	**Performance Testing**	**14 days**	**Mon 4/5/21**	**Thu 4/22/21**	
182	1.4.5.1.4.1	Test Scenarios and Test Plans	7 days	Mon 4/5/21	Tue 4/13/21	173
183	1.4.5.1.4.2	Run Performance Test	2 days	Wed 4/14/21	Thu 4/15/21	182

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
184	1.4.5.1.4.3	Defect Resolution	5 days	Fri 4/16/21	Thu 4/22/21	183
185	**1.4.5.1.5**	**AppScan Scanning**	**14 days**	**Mon 4/5/21**	**Thu 4/22/21**	
186	1.4.5.1.5.1	Scan Scenarios and Plans	5 days	Mon 4/5/21	Fri 4/9/21	173
187	1.4.5.1.5.2	AppScan Cycle 1	2 days	Mon 4/12/21	Tue 4/13/21	186
188	1.4.5.1.5.3	Defect Resolution	5 days	Wed 4/14/21	Tue 4/20/21	187
189	1.4.5.1.5.4	AppScan Cycle 2	2 days	Wed 4/21/21	Thu 4/22/21	188
190	**1.4.5.2**	**Deliverable**	**33 days**	**Wed 4/14/21**	**Mon 5/31/21**	
191	1.4.5.2.1	MS6-E UAT Test Plan and Scripts	0 days	Wed 4/14/21	Wed 4/14/21	176
192	1.4.5.2.2	MS6-F UAT On-Site Activites	0 days	Mon 5/31/21	Mon 5/31/21	169
193	1.4.5.2.3	MS6-G State Acceptance	0 days	Mon 5/31/21	Mon 5/31/21	169
194	**1.4.6**	**Training (Milestone 7)**	**30 days**	**Wed 3/10/21**	**Tue 4/20/21**	
195	**1.4.6.1**	**Activities**	**30 days**	**Wed 3/10/21**	**Tue 4/20/21**	
196	1.4.6.1.1	Prepare training material, workbooks, exercise	20 days	Wed 3/10/21	Tue 4/6/21	148,157
197	1.4.6.1.2	Training Sessions	10 days	Wed 4/7/21	Tue 4/20/21	196
198	**1.4.6.2**	**Deliverable**	**10 days**	**Tue 4/6/21**	**Tue 4/20/21**	
199	1.4.6.2.1	MS7-D Comprehensive Training Packet	0 days	Tue 4/6/21	Tue 4/6/21	196
200	1.4.6.2.2	MS7-E Train State Trainer	0 days	Tue 4/20/21	Tue 4/20/21	197
201	1.4.6.2.3	MS7-F Technical Training for State IT staff and system administrators	0 days	Tue 4/20/21	Tue 4/20/21	197
202	**1.4.7**	**Documentation (Milestone 8)**	**0 days**	**Tue 4/6/21**	**Tue 4/6/21**	
203	**1.4.7.1**	**Deliverable**	**0 days**	**Tue 4/6/21**	**Tue 4/6/21**	
204	1.4.7.1.1	MS8-C User and Technical Documentation	0 days	Tue 4/6/21	Tue 4/6/21	196
205	**1.4.8**	**Parallel Pilot (Milestone 9)**	**39 days**	**Thu 5/6/21**	**Tue 6/29/21**	
206	**1.4.8.1**	**Activities**	**39 days**	**Thu 5/6/21**	**Tue 6/29/21**	
207	1.4.8.1.1	Prepare Pilot Implementation Plan	5 days	Thu 5/6/21	Wed 5/12/21	177
208	1.4.8.1.2	Pilot Initiation	1 day	Tue 6/1/21	Tue 6/1/21	168
209	1.4.8.1.3	Support Pilot Monitoring and Issue Resoultion	20 days	Wed 6/2/21	Tue 6/29/21	208
210	**1.4.8.2**	**Deliverable**	**34 days**	**Wed 5/12/21**	**Tue 6/29/21**	
211	1.4.8.2.1	MS9-D Pilot Implementation Plan	0 days	Wed 5/12/21	Wed 5/12/21	207
212	1.4.8.2.2	MS9-E Onsite Assistance	0 days	Tue 6/29/21	Tue 6/29/21	206
213	1.4.8.2.3	MS9-E Pilot Sign off	0 days	Tue 6/29/21	Tue 6/29/21	206
214	**1.4.9**	**Production Implementation (Milestone 10)**	**63 days**	**Wed 6/2/21**	**Sat 8/28/21**	
215	**1.4.9.1**	**Activities**	**63 days**	**Wed 6/2/21**	**Sat 8/28/21**	
216	1.4.9.1.1	Prepare Go Live Implementation Plan	5 days	Wed 6/2/21	Tue 6/8/21	208
217	1.4.9.1.2	Go Live Preparation	5 days	Wed 6/9/21	Tue 6/15/21	216
218	1.4.9.1.3	Go & No-Go criteria decision	1 day	Mon 6/28/21	Mon 6/28/21	219FS-2 days
219	1.4.9.1.4	GO-LIVE - Phase 2	0 days	Tue 6/29/21	Tue 6/29/21	217,205

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
220	1.4.9.1.5	Application Monitoring	2 emons	Tue 6/29/21	Sat 8/28/21	219
221	**1.4.9.2**	**Deliverable**	**0 days**	**Tue 6/29/21**	**Tue 6/29/21**	
222	1.4.9.2.1	MS10-C Go Live Implementation Plan & Onsite Assistance	0 days	Tue 6/29/21	Tue 6/29/21	219
223	**1.4.10**	**System Warranty (Milestone 11)**	**240 days**	**Wed 6/30/21**	**Tue 5/31/22**	
224	1.4.10.1	MS11-B System Warranty Support	12 mons	Wed 6/30/21	Tue 5/31/22	219
225	**1.4.11**	**System Maintenance Support (Milestone 12)**	**1023 days**	**Tue 5/31/22**	**Sun 5/3/26**	
226	1.4.11.1	MS12-B Annual Maintenance Support	47.75 emons	Tue 5/31/22	Sun 5/3/26	223
227	**1.5**	**Phase 3 Induced Termination of Pregnancy (ITOP)**	**1219 days**	**Mon 8/30/21**	**Fri 5/1/26**	**214**
228	**1.5.1**	**Planning and Administration (Milestone 1)**	**10 days**	**Mon 8/30/21**	**Fri 9/10/21**	
229	**1.5.1.1**	**Activities**	**10 days**	**Mon 8/30/21**	**Fri 9/10/21**	
230	1.5.1.1.1	Project Initiation Meetings	10 days	Mon 8/30/21	Fri 9/10/21	
231	1.5.1.1.2	Prepare Project Management Plan	10 days	Mon 8/30/21	Fri 9/10/21	
232	**1.5.1.2**	**Deliverable**	**0 days**	**Fri 9/10/21**	**Fri 9/10/21**	
233	1.5.1.2.1	MS1-C Project Management Plan	0 days	Fri 9/10/21	Fri 9/10/21	229
234	**1.5.2**	**Business and System Requirements (Milestone 2)**	**16 days**	**Mon 8/30/21**	**Mon 9/20/21**	
235	**1.5.2.1**	**Activities**	**16 days**	**Mon 8/30/21**	**Mon 9/20/21**	
236	1.5.2.1.1	Set up Environment for Gap Analysis	1 day	Mon 8/30/21	Mon 8/30/21	
237	1.5.2.1.2	Facilitate on site Gap Analysis Meetings	10 days	Tue 8/31/21	Mon 9/13/21	236
238	1.5.2.1.3	Conduct Gap Analysis	10 days	Tue 8/31/21	Mon 9/13/21	236
239	1.5.2.1.4	Prepare Business & System Gap Analysis Document	15 days	Tue 8/31/21	Mon 9/20/21	236
240	1.5.2.1.5	Prepare State Security Documentation	10 days	Tue 8/31/21	Mon 9/13/21	236
241	**1.5.2.2**	**Deliverable**	**0 days**	**Mon 9/20/21**	**Mon 9/20/21**	
242	1.5.2.2.1	MS2-E Business & System Gap Analysis Document	0 days	Mon 9/20/21	Mon 9/20/21	235
243	**1.5.3**	**Design and Configuration of Solution (Milestone 4)**	**56 days**	**Tue 9/21/21**	**Tue 12/7/21**	
244	**1.5.3.1**	**Activities**	**56 days**	**Tue 9/21/21**	**Tue 12/7/21**	
245	**1.5.3.1.1**	**Configure the Solution**	**51 days**	**Tue 9/21/21**	**Tue 11/30/21**	
246	1.5.3.1.1.1	Forms configuration	10 days	Tue 9/21/21	Mon 10/4/21	234
247	1.5.3.1.1.2	Workflow configuration	11 days	Tue 10/5/21	Tue 10/19/21	246
248	1.5.3.1.1.3	Rule configuration	10 days	Wed 10/20/21	Tue 11/2/21	247
249	1.5.3.1.1.4	Solution Customization	10 days	Wed 11/3/21	Tue 11/16/21	248
250	1.5.3.1.1.5	Unit Testing	10 days	Wed 11/17/21	Tue 11/30/21	249
251	1.5.3.1.2	Configuration Review Sessions	5 days	Wed 12/1/21	Tue 12/7/21	245
252	**1.5.3.2**	**Deliverable**	**0 days**	**Tue 12/7/21**	**Tue 12/7/21**	
253	1.5.3.2.1	MS4-C Solution Demo Document	0 days	Tue 12/7/21	Tue 12/7/21	244
254	**1.5.4**	**Data Conversion and Migration (Milestone 5)**	**44 days**	**Mon 8/30/21**	**Thu 10/28/21**	
255	**1.5.4.1**	**Activities**	**44 days**	**Mon 8/30/21**	**Thu 10/28/21**	

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
256	1.5.4.1.1	Prepare Data Conversion Plan	5 days	Mon 8/30/21	Fri 9/3/21	
257	1.5.4.1.2	Review Existing Data Format	15 days	Mon 9/6/21	Fri 9/24/21	256
258	1.5.4.1.3	Develop Data Conversion / Migration Programs	15 days	Mon 9/27/21	Fri 10/15/21	257
259	**1.5.4.1.4**	**Migrate data into Test**	**9 days**	**Mon 10/18/21**	**Thu 10/28/21**	
260	1.5.4.1.4.1	Iteration 1	2 days	Mon 10/18/21	Tue 10/19/21	258
261	1.5.4.1.4.2	Update data conversion Routines	5 days	Wed 10/20/21	Tue 10/26/21	260
262	1.5.4.1.4.3	Iteration 2	2 days	Wed 10/27/21	Thu 10/28/21	261
263	**1.5.4.2**	**Deliverable**	**0 days**	**Thu 10/28/21**	**Thu 10/28/21**	
264	1.5.4.2.1	MS5-E Data & Images Migration / Conversion	0 days	Thu 10/28/21	Thu 10/28/21	255
265	**1.5.5**	**User Acceptance Testing (UAT) (Milestone 6)**	**102 days**	**Tue 9/21/21**	**Wed 2/9/22**	
266	**1.5.5.1**	**Activities**	**102 days**	**Tue 9/21/21**	**Wed 2/9/22**	
267	1.5.5.1.1	Validate Test and Production Environments	5 days	Wed 12/8/21	Tue 12/14/21	243
268	**1.5.5.1.2**	**System Integration Testing**	**76 days**	**Tue 9/21/21**	**Tue 1/4/22**	
269	1.5.5.1.2.1	Test Scenarios and Test Plans	8 days	Tue 9/21/21	Thu 9/30/21	234
270	1.5.5.1.2.2	System Testing	10 days	Wed 12/15/21	Tue 12/28/21	267,269
271	1.5.5.1.2.3	Defect Resolution	5 days	Wed 12/29/21	Tue 1/4/22	270
272	**1.5.5.1.3**	**User Acceptance Testing**	**31 days**	**Wed 12/29/21**	**Wed 2/9/22**	
273	1.5.5.1.3.1	UAT Scenarios and Test Plans	8 days	Wed 12/29/21	Fri 1/7/22	270
274	1.5.5.1.3.2	UAT Testing Cycle 1	10 days	Mon 1/10/22	Fri 1/21/22	268,273
275	1.5.5.1.3.3	Defect Resolution	5 days	Mon 1/24/22	Fri 1/28/22	274
276	1.5.5.1.3.4	UAT Testing Cycle 2	5 days	Mon 1/31/22	Fri 2/4/22	275
277	1.5.5.1.3.5	Defect Resolution	3 days	Mon 2/7/22	Wed 2/9/22	276
278	**1.5.5.1.4**	**Performance Testing**	**12 days**	**Wed 12/29/21**	**Thu 1/13/22**	
279	1.5.5.1.4.1	Test Scenarios and Test Plans	5 days	Wed 12/29/21	Tue 1/4/22	270
280	1.5.5.1.4.2	Run Performance Test	2 days	Wed 1/5/22	Thu 1/6/22	279
281	1.5.5.1.4.3	Defect Resolution	5 days	Fri 1/7/22	Thu 1/13/22	280
282	**1.5.5.1.5**	**AppScan Scanning**	**14 days**	**Wed 12/29/21**	**Mon 1/17/22**	
283	1.5.5.1.5.1	Scan Scenarios and Plans	5 days	Wed 12/29/21	Tue 1/4/22	270
284	1.5.5.1.5.2	AppScan Cycle 1	2 days	Wed 1/5/22	Thu 1/6/22	283
285	1.5.5.1.5.3	Defect Resolution	5 days	Fri 1/7/22	Thu 1/13/22	284
286	1.5.5.1.5.4	AppScan Cycle 2	2 days	Fri 1/14/22	Mon 1/17/22	285
287	**1.5.5.2**	**Deliverable**	**23 days**	**Fri 1/7/22**	**Wed 2/9/22**	
288	1.5.5.2.1	MS6-E UAT Test Plan and Scripts	0 days	Fri 1/7/22	Fri 1/7/22	273
289	1.5.5.2.2	MS6-F UAT On-Site Activites	0 days	Wed 2/9/22	Wed 2/9/22	266
290	1.5.5.2.3	MS6-G State Acceptance	0 days	Wed 2/9/22	Wed 2/9/22	266
291	**1.5.6**	**Training (Milestone 7)**	**20 days**	**Wed 12/8/21**	**Tue 1/4/22**	
292	**1.5.6.1**	**Activities**	**20 days**	**Wed 12/8/21**	**Tue 1/4/22**	

ID	WBS	Task Name	Duration	Start	Finish	Predecessors
293	1.5.6.1.1	Prepare training material, workbooks, exercise	10 days	Wed 12/8/21	Tue 12/21/21	243,254
294	1.5.6.1.2	Training Sessions	10 days	Wed 12/22/21	Tue 1/4/22	293
295	**1.5.6.2**	**Deliverable**	**10 days**	**Tue 12/21/21**	**Tue 1/4/22**	
296	1.5.6.2.1	MS7-G Comprehensive Training Packet	0 days	Tue 12/21/21	Tue 12/21/21	293
297	1.5.6.2.2	MS7-H Train State Trainer	0 days	Tue 1/4/22	Tue 1/4/22	294
298	1.5.6.2.3	MS7-I Technical Training for State IT staff and system administrators	0 days	Tue 1/4/22	Tue 1/4/22	294
299	**1.5.7**	**Documentation (Milestone 8)**	**0 days**	**Tue 12/21/21**	**Tue 12/21/21**	
300	**1.5.7.1**	**Deliverable**	**0 days**	**Tue 12/21/21**	**Tue 12/21/21**	
301	1.5.7.1.1	MS8-C User and Technical Documentation	0 days	Tue 12/21/21	Tue 12/21/21	293
302	**1.5.8**	**Parallel Pilot (Milestone 9)**	**26 days**	**Mon 1/24/22**	**Mon 2/28/22**	
303	**1.5.8.1**	**Activities**	**26 days**	**Mon 1/24/22**	**Mon 2/28/22**	
304	1.5.8.1.1	Prepare Pilot Implementation Plan	5 days	Mon 1/24/22	Fri 1/28/22	274
305	1.5.8.1.2	Pilot Initiation	1 day	Mon 1/31/22	Mon 1/31/22	304
306	1.5.8.1.3	Support Pilot Monitoring and Issue Resoultion	20 days	Tue 2/1/22	Mon 2/28/22	305
307	**1.5.8.2**	**Deliverable**	**21 days**	**Fri 1/28/22**	**Mon 2/28/22**	
308	1.5.8.2.1	MS9-G Pilot Implementation Plan	0 days	Fri 1/28/22	Fri 1/28/22	304
309	1.5.8.2.2	MS9-H Onsite Assistance	0 days	Mon 2/28/22	Mon 2/28/22	303
310	1.5.8.2.3	MS9-I Pilot Sign off	0 days	Mon 2/28/22	Mon 2/28/22	303
311	**1.5.9**	**Production Implementation (Milestone 10)**	**64 days**	**Tue 2/1/22**	**Fri 4/29/22**	
312	**1.5.9.1**	**Activities**	**64 days**	**Tue 2/1/22**	**Fri 4/29/22**	
313	1.5.9.1.1	Prepare Go Live Implementation Plan	5 days	Tue 2/1/22	Mon 2/7/22	305
314	1.5.9.1.2	Go Live Preparation	5 days	Tue 2/8/22	Mon 2/14/22	313
315	1.5.9.1.3	Go & No-Go criteria decision	1 day	Fri 2/25/22	Fri 2/25/22	316FS-2 days
316	1.5.9.1.4	GO-LIVE - Phase 3	0 days	Mon 2/28/22	Mon 2/28/22	314,302
317	1.5.9.1.5	Application Monitoring	2 emons	Mon 2/28/22	Fri 4/29/22	316
318	**1.5.9.2**	**Deliverable**	**0 days**	**Mon 2/28/22**	**Mon 2/28/22**	
319	1.5.9.2.1	MS10-C Go Live Implementation Plan & Onsite Assistance	0 days	Mon 2/28/22	Mon 2/28/22	316
320	**1.5.10**	**System Warranty (Milestone 11)**	**258 days**	**Mon 2/28/22**	**Thu 2/23/23**	
321	1.5.10.1	MS11-C System Warranty Support	12 emons	Mon 2/28/22	Thu 2/23/23	316
322	**1.5.11**	**System Maintenance Support (Milestone 12)**	**830 days**	**Thu 2/23/23**	**Fri 5/1/26**	
323	1.5.11.1	MS12-B Annual Maintenance Support	38.75 emons	Thu 2/23/23	Fri 5/1/26	320

EXHIBIT 3 SDLC TEMPLATES

GCOM's Exhibit 3 – SDLC Templates has been included on the electronic copy only in consideration of the document size.

EXHIBIT 4 - NYC EVITAL GOLIVE PRESS RELEASE

Health Department Launches eVital, a New System with Facial Recognition Technology to Register Births and Deaths

eVital, used primarily by doctors and funeral homes to report births and deaths, replaces the Electronic Vital Events Registration System (EVERS)

Chat function, which allows New Yorkers to get information about birth and death records Monday through Friday, 9 a.m. to 4:30 p.m., to be made permanent

October 22, 2018 — The Health Department launched eVital, a new system for reporting births and deaths in New York City. eVital, used primarily by hospitals and funeral directors, will replace the decade-old Electronic Vital Events Registration System (EVERS). Last year, 12,000 people used this system to register 122,000 births, 53,000 deaths, and issue one million official certificates. The new eVital system features upgraded security measures, including facial recognition technology; a status portal for people to check on their certificate orders; and a streamlined login process that will include one login instead of two. Under eVital, the current service that allows New Yorkers to have live chats with Health Department staff will be made permanent. The upgrade was prompted by feedback from system users.

"eVital expands functionality and improves security for doctors and funeral homes, while giving New Yorkers additional access to birth and death records they need to obtain passports, enroll in school or obtain a lease or mortgage," said **Acting Commissioner Dr. Oxiris Barbot.** "The Health Department is constantly improving the services that we provide for New Yorkers, and properly capturing and reporting on the facts of birth and death are fundamental to improving health."

"There's a high risk in government of sticking with old systems just out of sheer bureaucratic inertia, even when they need to be replaced and much better tools are available," said **Manhattan Borough President Gale A. Brewer.** "I'm pleased that the Health Department is defying that tendency, replacing this decade-old system, and adding new functions that will make it easier for New Yorkers to securely access vital information."

"I appreciate the time that DOHMH took to meet with me and the Jewish and Muslim religious burial community to work through some of the questions that leaders had regarding the new eVital system. Leaders raised concerns about eVital's ability to accommodate religious burials, which are unique because they are required to be completed extremely quickly," said **Councilman Chaim Deutsch, Chairman of the NYC Council's Jewish Caucus.** "Launching a new program can be fraught with complications, but because the communication was there, the transition to eVital went smoothly. I'm grateful to Council Speaker Corey Johnson, Health Committee Chairman Mark Levine, and the Jewish and Muslim leaders who joined our discussions for their input and advocacy. I look forward to a continued partnership with DOHMH on this and other issues that effect New Yorkers."

"The new eVital system will take the Department of Health to new heights in servicing New Yorkers," said **Rabbi Jack Meyer, President of Misaskim.** "The Department of Health addressed the concerns of Muslim and Jewish communities, as well as the entire funeral home industry. The roll out was flawless and I congratulate the Health Department for it."

"New York City's hospitals welcome eVital and its improved security and functionality," said **Greater New York Hospital Association Vice President Zeynep Sumer King.** "The City Health Department has spent much of the last year coordinating eVital's launch with hospitals and other stakeholders, and we expect those efforts to lead to a smoother, more coordinated transition. The Health Department has conducted extensive one-on-one outreach to doctors, health care facilities, and health care systems to ensure that doctors are aware and have been trained on the new system. More than 9,600 certifiers are enrolled in the system and all have received instruction on how to input births and deaths."

New York City has had an electronic system in place for about a decade, with all births and 95 percent of deaths reported electronically. The United States has 57 vital records jurisdictions, and some are still registering deaths on paper. The new features for eVital include:

For the public:

- **Twice the number of kiosks** at the Health Department's walk-in center at 125 Worth Street. These kiosks guide New Yorkers through the birth and death certificate request process. Once ordered, the certificates can be picked up at one of the walk-in center's windows.
- **Permanent chat feature** on the Health Department's vital records webpage. New Yorkers will be able to ask basic questions of Health Department staff and receive responses in real time, Monday through Friday, 9 a.m. to 4:30 p.m. They will still have to order birth and death certificates through a separate site.

For funeral directors and doctors:

- **Facial recognition technology** to certify birth and death reports. Until now, funeral directors, doctors, and Health Department staff used a fingerprint device which attaches to a computer when they reported vital records. With facial recognition, nearly everyone can use a smart phone to complete the process more quickly and securely.
- **Scanning technology** so hospital staff can submit paternity documents to the Health Department with a scan instead of a fax.
- **Fewer in-person trips to the Health Department** for funeral directors, who can now submit applications for transit and disinterment electronically.
- **Streamlined login process**; now users will be required to login once instead of twice.

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#087-18

MEDIA CONTACT: Christopher Miller/Danielle De Souza, **(347) 396-4177**
PressOffice@health.nyc.gov

EXHIBIT 5 – GCOM AUDITED FINANCIALS

GCOM SOFTWARE, INC.

FINANCIAL STATEMENTS

DECEMBER 31, 2016 AND 2015

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WEST & COMPANY CPAs PC

INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Stockholders
GCOM Software, Inc.
Albany, New York

We have audited the accompanying financial statements of GCOM Software, Inc. (a New York S corporation), which comprise the balance sheets as of December 31, 2016 and 2015, and the related statements of income and retained earnings and cash flows for the years then ended and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of GCOM Software, Inc., as of December 31, 2016 and 2015, and the results of their operations and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Supplementary Information

Our audits were made for the purpose of forming an opinion on the financial statements taken as a whole. The schedules of operating expenses are presented for purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

WEST & COMPANY CPAs PC

Gloversville, New York
March 3, 2017

GCOM SOFTWARE, INC.

BALANCE SHEETS

DECEMBER 31, 2016 AND 2015

- ASSETS -	2016	2015
CURRENT ASSETS:		
Cash and cash equivalents	$ 33,126	$ 24,733
Accounts receivable	26,536,564	30,839,137
Unbilled fees	8,503,330	2,689,751
Prepaid expenses and other current assets	30,990	16,569
Total current assets	35,104,010	33,570,190
FIXED ASSETS:		
Machinery and equipment	311,598	242,904
Vehicles	40,822	40,822
Furniture and fixtures	61,958	51,321
Totals	414,378	335,047
Less accumulated depreciation	310,542	233,450
Fixed assets - net	103,836	101,597
TOTAL ASSETS	$ 35,207,846	$ 33,671,787

- LIABILITIES AND STOCKHOLDERS' EQUITY -		
CURRENT LIABILITIES:		
Accounts payable	$ 6,337,871	$ 4,666,822
Line of credit payable	0	4,000,000
Payroll deductions and taxes payable	22,815	2,045
Taxes payable	225,000	475,000
Due to stockholders	28,597,160	2,050,000
Total liabilities	35,182,846	11,193,867
STOCKHOLDERS' EQUITY:		
Common stock, 25,000 shares authorized, 2,650 shares issued and outstanding, no par value	100	100
Additional paid-in capital	24,900	24,900
Retained earnings	0	22,452,920
Total stockholders' equity	25,000	22,477,920
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 35,207,846	$ 33,671,787

See accompanying notes.

GCOM SOFTWARE, INC.

STATEMENTS OF INCOME AND RETAINED EARNINGS

YEARS ENDED DECEMBER 31, 2016 AND 2015

	2016	2015
PROGRAMMING FEES	$ 74,195,006	$ 60,566,107
DIRECT EXPENSES:		
Labor	14,447,105	12,667,181
Payroll taxes	980,259	898,483
Payroll fringe expense	448,483	194,978
Reimbursed expenses	928,403	0
Software expense	16,929	343,675
Subcontractor expense	42,990,200	31,278,257
Total direct expenses	59,811,379	45,382,574
GROSS PROFIT	14,383,627	15,183,533
OPERATING EXPENSES	3,709,521	3,475,336
OPERATING INCOME	10,674,106	11,708,197
OTHER INCOME:		
Interest income	625	4,559
INCOME BEFORE PROVISION FOR INCOME TAXES	10,674,731	11,712,756
PROVISION FOR INCOME TAXES	248,117	604,327
NET INCOME	10,426,614	11,108,429
S CORPORATION DISTRIBUTIONS	(32,879,534)	(5,499,493)
RETAINED EARNINGS - BEGINNING	22,452,920	16,843,984
RETAINED EARNINGS - ENDING	$ 0	$ 22,452,920

See accompanying notes.

GCOM SOFTWARE, INC.

STATEMENTS OF CASH FLOWS

YEARS ENDED DECEMBER 31, 2016 AND 2015

	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 10,426,614	$ 11,108,429
Adjustments to reconcile net income to net cash provided (used) by operating activities:		
Depreciation	77,093	56,711
(Increase) decrease in:		
Accounts receivable	4,302,573	(11,689,750)
Unbilled fees	(5,813,579)	(2,689,751)
Prepaid expenses and other current assets	(14,421)	(10,079)
Increase (decrease) in:		
Accounts payable	1,671,048	958,991
Payroll deductions and taxes payable	20,770	(28,731)
Taxes payable	(250,000)	375,000
Due to shareholders	(662,518)	200,000
Net cash provided (used) by operating activities	9,757,580	(1,719,180)
CASH FLOWS FROM INVESTING ACTIVITY:		
Purchases of fixed assets	(79,331)	(79,109)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Borrowings on line of credit	(4,000,000)	4,000,000
S corporation distributions	(5,669,856)	(5,499,493)
Net cash (used) by financing activities	(9,669,856)	(1,499,493)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	8,393	(3,297,782)
CASH AND CASH EQUIVALENTS - BEGINNING OF YEAR	24,733	3,322,515
CASH AND CASH EQUIVALENTS - END OF YEAR	$ 33,126	$ 24,733
SUPPLEMENTAL DISCLOSURE OF CASH INFORMATION:		
Cash paid during the year for:		
Interest	$ 94,274	$ 20,014
Income taxes	498,232	440,668
Non-cash activity:		
Non-cash S corporation distributions	$ 27,209,678	$ 0

See accompanying notes.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Business Activity

The company, with locations in Albany, New York, New York, New York, and Tallahassee, Florida, is engaged in the business of information technology project management, design and development. The company provides information technology solutions to public and private sector organizations specializing in enterprise application development and TSQM/PMBOK-based project management.

Basis of Accounting

The company reports financial position and results of operations under the accrual method.

Revenue Recognition

Revenue from customer payments for the company's development of applications designed to meet specific customer specifications is recognized over the contract period.

Cash and Cash Equivalents

For purposes of financial reporting, cash equivalents consist of short-term, highly liquid investments with original maturities of three months or less.

Accounts Receivable

For financial reporting purposes, all accounts considered uncollectible have been charged off and no further allowance for doubtful accounts is deemed necessary. In management's opinion, this method does not result in a material difference from the allowance method.

Fixed Assets

Fixed assets are recorded at cost and include expenditures for new items and items which substantially increase the useful lives of the assets. Expenditures in the nature of normal repairs and maintenance are charged to operations as incurred.

Fixed assets are depreciated using the straight-line and accelerated methods over the estimated useful lives. Estimated useful lives for the major asset categories are as follows:

Machinery and equipment	5 – 7 years
Furniture and fixtures	5 – 15 years

Depreciation expense was $77,093 and $56,711 for the years ended December 31, 2016 and 2015, respectively.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – (CONTINUED)

Advertising Costs

The company's advertising costs are expensed as incurred. The amount of advertising expensed was $252,357 and $203,902 for the years ended December 31, 2016 and 2015, respectively.

Income Taxes

The company and its stockholders have elected to be taxed as an S Corporation. The stockholders of an S Corporation are taxed on their proportionate share of the company's taxable income. Therefore, the provision and liability for income taxes included in the financial statements represents only the New York State and New York City and various other states' fixed dollar tax based on the company's revenues within those jurisdictions.

For the year ended December 31, 2016, the company will file income tax returns in its U.S. federal jurisdiction, New York State, New York City, Massachusetts, California, Minnesota and New Jersey. The company's returns for the years ended December 31, 2013, 2014, 2015 and 2016, are subject to federal, New York State, New York City and Massachusetts income tax examination by tax authorities. The company's California, Minnesota and New Jersey returns for the years ended December 31, 2014, 2015 and 2016, are subject to examination by tax authorities. The company was not required to file California, Minnesota or New Jersey returns prior to 2014.

The company follows the provision of uncertain tax positions as addressed in FASB ASC 740. The company has elected to be taxed as an S Corporation, which management believes would be accepted upon examination by the taxing authorities. Management has determined that it currently has no other uncertain tax positions or unrecognized tax benefits to report for the years ended December 31, 2015 and 2016.

Fair Value of Financial Instruments

Unless otherwise indicated, the fair values of all reported assets and liabilities which represent financial instruments (none of which are held for trading purposes) approximate the carrying values of such amounts.

NOTE 2 – COMMITMENTS

Beginning September 8, 2015, the company leased office space in Tallahassee, Florida under a lease that runs from September 8, 2015 through August 31, 2017, and called for monthly rent of $1,828.

The future minimum lease payments under the company's noncancelable operating lease for office space in Tallahassee, which terminates August 31, 2017 are as follows:

2017	$ 14,620

NOTE 2 – COMMITMENTS – (CONTINUED)

The company also leases office space in Albany, New York. The current lease for this space runs through January 31, 2022, and calls for monthly rent of $10,358 through January 31, 2017, $18,325 through October 31, 2017, and $16,388 thereafter.

The future minimum lease payments under the company's noncancelable operating lease for office space in Albany, which terminates January 31, 2022 are as follows:

2017	$ 208,059
2018	196,650
2019	196,650
2020	196,650
2021	196,650
Thereafter	16,388
Total	$ 1,011,047

Aggregate rental expense amounted to $227,420 and $150,142 for the years ended December 31, 2016 and 2015, respectively.

NOTE 3 – CONCENTRATIONS OF RISK

During the year ended December 31, 2016, the company maintained cash balances at one financial institution. At certain times throughout the year, the company's bank deposit accounts exceed the federally insured limits.

At December 31, 2016 and 2015, the company's cash balance exceeded federal insurance limits by $574,576 and $2,303,929, respectively.

For the year ended December 31, 2016, sales to three major customers comprised approximately 37% of sales and represented 29% of accounts receivable. For the year ended December 31, 2015, sales to three major customers comprised approximately 44% of sales and represented 30% of accounts receivable. Additionally for 2016, 58% of sales and 76% of accounts receivable were from various New York State and New York City agencies and departments. For 2015, 66% of sales and 77% of accounts receivable were from various New York State and New York City agencies and departments.

NOTE 4 – LINE OF CREDIT

At December 31, 2015, the company had a $6,000,000 line of credit with NBT Bank, with a variable interest rate at the *Wall Street Journal* prime rate minus .50% with a floor of 2.75%. The balance at December 31, 2015 was $4,000,000. This line of credit was personally guaranteed by the owners of the company.

On January 11, 2016, the company amended and restated the line of credit to a $10,000,000 revolving line of credit with NBT Bank, with a variable interest rate at the *Wall Street Journal* prime rate minus .50% with a floor of 2.75%. The balance at December 31, 2016 was $-0-. This line of credit was personally guaranteed by the owners of the company and collateral on the line includes all machinery, equipment and fixtures and all accounts receivable of the company.

NOTE 5 – DUE TO STOCKHOLDERS

The amount due to stockholders represents earnings of the company through December 31, 2016, less distributions to the owners through December 31, 2016, as well as estimated federal and state tax resulting from normal operations.

NOTE 6 – EMPLOYEE STOCK OPTIONS

The company has outstanding stock options for several key employees. These options vest over a period of two years and have a five-year expiration date. Based on the underlying assumptions, using the Black-Scholes model, the compensation cost associated with these options does not have a material effect on the financial statements.

In March, 2017, the stock options were terminated and were replaced by a restricted stock plan. The new plan provides for the issuance of nonvoting shares to key employees, which will represent additional taxable wages in 2017 to the recipient.

NOTE 7 – FINANCIAL STATEMENT PRESENTATION

Certain amounts in the accompanying 2015 financial statements have been reclassified to conform to the 2016 presentation. The reclassification has no effect on previously reported financial position or results of operations.

NOTE 8 – SUBSEQUENT EVENTS

The company has evaluated subsequent events through the issuance date of the report. During February, 2017, the company secured a $20 million line of credit with TD Bank, N.A. an initial advance of $4 million was taken from the line. The company has also made changes to the employee stock options, see Note 6 for additional information. No other events were considered material to the issued financial statements.

GCOM SOFTWARE, INC.

ADDITIONAL FINANCIAL INFORMATION

YEARS ENDED DECEMBER 31, 2016 AND 2015

	2016	2015
SCHEDULES OF OPERATING EXPENSES		
Administration salaries	$ 1,292,918	$ 877,295
Payroll taxes	103,433	70,184
Recruiting expense	157,262	346,724
Insurance	223,938	261,281
Rent expense	227,420	150,142
Advertising	252,357	203,902
Office expense	163,606	144,160
Utilities	71,860	35,453
Professional services	401,213	608,688
Travel and entertainment	577,947	642,846
Dues and subscriptions	6,906	16,481
Miscellaneous expense	58,879	36,619
Interest expense	94,274	20,014
Bad debt expense	375	2,279
Commissions	40	0
Depreciation	77,093	56,711
Computer system	0	2,557
TOTAL OPERATING EXPENSES	$ 3,709,521	$ 3,475,336

See independent auditors' report.

GCOM HoldCo LLC and Subsidiaries

Consolidated Financial Statements
Periods Ended December 31, 2017 and November 13, 2017

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RSM

Independent Auditor's Report

Board of Directors
GCOM HoldCo LLC and Subsidiaries

RSM US LLP

Report on the Financial Statements
We have audited the accompanying consolidated financial statements of GCOM HoldCo LLC and its subsidiaries (the Company), which comprise the consolidated balance sheet as of December 31, 2017, the related consolidated statements of operations, changes in members' equity and cash flows for the period from November 14, 2017 to December 31, 2017 and the period from January 1, 2017 to November 13, 2017, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of GCOM HoldCo LLC and its subsidiaries as of December 31, 2017, and the results of their operations and their cash flows for the the period from November 14, 2017 to December 31, 2017 and the period from January 1, 2017 to November 13, 2017 in accordance with accounting principles generally accepted in the United States of America.

RSM US LLP

New York, New York
September 19, 2018

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GCOM HoldCo LLC and Subsidiaries
Consolidated Balance Sheet
December 31, 2017
(Dollars in thousands)

ASSETS		
Current Assets:		
Cash and cash equivalents	$	1,129
Accounts receivable, net of allowance for doubtful accounts of $350		32,336
Unbilled Services		10,600
Other current assets		436
Total current assets		44,501
Property and Equipment, net		145
Goodwill, net		22,136
Intangible assets, net		44,137
Total assets	$	110,919
LIABILITIES AND MEMBERS' EQUITY		
Current Liabilities:		
Current portion of long-term debt	$	2,000
Accounts payable		5,883
Accrued expenses		1,524
Deferred revenue		1,202
Contingent purchase consideration, current portion		2,029
Total current liabilities		12,638
Long-term debt and line of credit, net of current portion		63,177
Contingent purchase consideration, net of current portion		1,558
Total liabilities		77,373
Members' Equity:		
Additional paid-in capital		36,294
Accumulated deficit		(2,748)
Total members' equity		33,546
	$	110,919

See Notes to Consolidated Financial Statements.

GCOM HoldCo LLC and Subsidiaries
Consolidated Statements of Operations
(Dollars in thousands)

	Successor period from November 14, 2017 to December 31, 2017	Predecessor period from January 1, 2017 to November 13, 2017
Revenues	$ 11,036	$ 71,558
Cost of services		
Subcontractor Expense	6,018	39,840
Salaries and wages	2,448	15,229
Payroll taxes and benefits	183	1,330
Other	352	1,278
Total Cost of services	9,001	57,677
Gross Profit	2,035	13,881
Operating Expenses		
Selling, general and administrative expenses		
Salaries and wages	315	2,441
Marketing expense	20	345
Recruiting expense	7	308
Immigration expense	30	293
Rent	39	250
Payroll taxes and benefits	38	313
Other costs	262	1,009
Total Selling, general and administrative expenses	711	4,959
Depreciation and amortization expense	1,225	71
Transaction expenses	2,000	11,987
Total Operating expenses	3,936	17,017
Loss from operations	(1,901)	(3,136)
Interest expense	847	26
Loss before provision for income taxes	(2,748)	(3,162)
Provision for income taxes	-	(20)
Net loss	$ (2,748)	$ (3,142)

See Notes to Consolidated Financial Statements.

GCOM HoldCo LLC and Subsidiaries
Consolidated Statements of Members' Equity
For the period from November 14, 2017 to December 31, 2017 (Successor)
and the period from January 1, 2017 to November 13, 2017 (Predecessor)
(Dollars in thousands)

Predecessor:	Common Stock Shares	Amount	Additional Paid-in Capital	Retained Earnings (deficit)	Total
Balance, December 31, 2016	2,650	$ -	$ 25	$ 26	$ 51
Net loss	-	-	-	(3,142)	(3,142)
Dirstribution to shareholders	-	-	-	(4,319)	(4,319)
Issuance of Restricted Stock	-	-	1,047	-	1,047
Balance, November 13, 2017	2,650	$ -	$ 1,072	$ (7,435)	$ (6,363)

Successor:	Additional Paid-in Capital	Accumulated Deficit	Total Members' Equity
Balance, November 14, 2017	$ -	$ -	$ -
Capital Contribution	27,101	$ -	27,101
Rollover equity contribution	9,123	-	9,123
Warrant Issuance	70	-	70
Net loss	-	(2,748)	(2,748)
Balance, December 31, 2017	$ 36,294	$ (2,748)	$ 33,546

See Notes to Consolidated Financial Statements.

GCOM HoldCo LLC and Subsidiaries
Consolidated Statements of Cash Flows
(Dollars in thousands)

	Successor period from November 14, 2017 to December 31, 2017	Predecessor period from January 1, 2017 to November 13, 2017
Cash Flows From Operating Activities:		
Net loss	$ (2,748)	$ (3,142)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	1,225	71
Amortization of deferred financing costs	58	-
Benefit for bad debt adjustments	13	10
Issuance of warrants	70	
Restricted Stock Compensation	-	1,047
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable	(2,252)	(6,060)
Unbilled Services	(1,837)	65
Other current assets	2,970	(343)
Accounts payable	89	957
Accrued expenses	(2,046)	12,892
Deferred revenue	509	552
Net cash (used in) provided by operating activities	(3,949)	6,049
Cash Flows From Investing Activities:		
Acquisition of GCOM HoldCo LLC, net of cash acquired	(77,140)	
Purchase of equipment	(2)	(73)
Net cash used in investing activities	(77,142)	(73)
Cash Flows From Financing Activities:		
Proceeds under revolving credit facility	1,250	-
Proceeds from term loan	56,000	-
Payment of debt issuance costs	(2,131)	-
Equity contributions	27,101	-
Distribution to shareholders	-	(4,319)
Cash provided by (used in) financing activities	82,220	(4,319)
Net (decrease) increase in cash and cash equivalents	1,129	1,657
Cash and cash equivalents,beginning of period	-	33
Cash and cash equivalents, end of period	$ 1,129	$ 1,690
Supplemental Disclosures of Cash Flow Information:		
Interest paid	$ 747	$ 26
Income taxes paid	$ -	$ 567

(continued)

GCOM HoldCo LLC and Subsidiaries
Consolidated Statements of Cash Flows
(Dollars in thousands)

	Successor period from November 14, 2017 to December 31,	Predecessor period from January 1, 2017 to November 13, 2017
Supplemental Disclosures of non-cash financing activities:		
Acquisition, net of cash acquired:		
Accounts receivable	$ 30,097	$ -
Unbilled services	8,763	-
Other assets	3,406	-
Fixed assets	150	-
Goodwill	22,416	-
Intangible assets	45,075	-
Accounts payable and accrued expenses	(9,364)	-
Deferred revenue	(693)	-

See Notes to Consolidated Financial Statements.

Note 1. Summary of Significant Accounting Policies

Organization and Principal Business Activity: GCOM Software, Inc. was a New York corporation formed during 2005. Effective November 14, 2017, the Company was party to a transaction pursuant to which certain investors acquired the equity interests of GCOM Software, Inc. In connection with this transaction, GCOM Software, Inc.'s name was changed to GCOM Software LLC and became a wholly owned subsidiary of the newly organized New York corporation GCOM IntermediateCo LLC. In addition, GCOM IntermediateCo LLC became a wholly owned subsidiary of the newly organized New York corporation GCOM HoldCo LLC. Collectively these corporations are referred to herein as GCOM or Company.

GCOM is an information technology services company which primarily serves clients in the public sector, namely state and local government agencies. The Company provides information technology resources for its customers, as well as design, development and implementation of software solutions. The Company has locations in Albany, New York, New York City, New York and Tallahassee, Florida.

Basis of Preparation: We prepare our financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The Company continued as the same legal entity after the Acquisition, however, a new accounting basis was established in accordance with the provisions of Accounting Standards Codification ("ASC") 805, *"Business Combinations"*. The accompanying statements of operations, changes in members' equity, and cash flows are presented for the Predecessor period from January 1, 2017 to November 13, 2017, and the Successor period from November 14, 2017 to December 31, 2017, which relate to the periods preceding and succeeding the Acquisition, respectively. Although the accounting policies followed by the Company are consistent for the Predecessor and Successor periods, financial information for such periods has been prepared under two different historical-cost bases of accounting and is therefore not comparable. A heavy black line separates the Predecessor and Successor financial statements.

Use of Estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts and disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. The Company's significant estimates include the allowance for doubtful accounts, the useful lives assigned to intangible assets, the valuation of contingent purchase consideration, and estimated total contract revenues and costs.

Cash and Cash Equivalents: The Company considers all highly liquid investments with a maturity of three months or less at time of purchase to be cash equivalents.

Accounts Receivable: The Company carries its accounts receivable at cost less an allowance for doubtful accounts. On a periodic basis, the Company evaluates its accounts receivable and establishes an allowance for doubtful accounts based on the history of past write-offs and collections, and current conditions.

Property and Equipment: Property and equipment is stated at cost. Expenditures for acquisitions, renewals and betterments is capitalized, whereas maintenance and repair costs are expensed as incurred. Upon retirement or sale, the cost of the assets disposed, and the related accumulated depreciation is removed from the accounts and any resulting gain or loss is included in the determination of net income.

Property and equipment is depreciated using the straight-line method over the following estimated useful lives:

Furniture and fixtures	5 to 7 years
Equipment	3 to 5 years
Automobile	5 years

Note 1. Summary of Significant Accounting Policies (Continued)

Goodwill: The Company's goodwill was recorded as a result of the Company's business combination. The Company has recorded this business combination using the purchase method of accounting. The Company has elected the accounting alternative provided in *Accounting Standards Update* (ASU) No. 2014-02, *Intangibles—Goodwill and Other (Topic 350): Accounting for Goodwill* (ASU 2014-02). Under this accounting alternative, goodwill is amortized on a straight-line basis over a period of ten years. Also pursuant to the accounting alternative, the Company tests for goodwill impairment upon the occurrence of an event or circumstance that may indicate the fair value of the company is less than its carrying amount and has elected to perform this test at the company level. If events or circumstances are present that may indicate the fair value of the company is less than its carrying value, the estimated fair value of the company is compared to its carrying amount and an impairment loss is recognized for the excess of the carrying amount over fair value (if any), not to exceed the carrying amount of goodwill. No indicators of impairment were identified during the period ended December 31, 2017.

Intangible Assets Subject to Amortization: Intangible assets consist of trademarks, technology, customer relationships, and noncompete agreements, which will be amortized over the estimated useful life of each, which ranges from 5 to 11 years. The Company reviews for possible impairment whenever circumstances indicate the carrying value of the assets may not be recoverable. A loss is recognized in the consolidated statements of income if it is determined that an impairment exists based on expected future undiscounted cash flows. The amount of the impairment is the excess of the carrying amount of the impaired asset over its fair value. There were no impairments and no impairment loss was recorded during the period from inception (November 14, 2017) through December 31, 2017.

Revenue Recognition: Revenues from fixed price contracts where the Company designs, develops and implements new or enhanced software applications for its clients are recognized on the percentage-of-completion method, which involves calculating the percentage of services provided during the reporting period compared to the total estimated services to be provided over the duration of the contract. Contracts for technology integration consulting services generally span six months to five years. Revenue from software license arrangements that require significant functionality enhancements or modification of the software are recognized as those services are performed. Estimates of total contract revenues and costs are monitored during the term of the contract, and recorded revenues and estimated costs are subject to revision as the contract progresses. Such revisions may result in increases or decreases to revenues and income and are reflected in the Consolidated Financial Statements in the periods in which they are first identified. If the Company's estimates indicate that a contract loss will occur, a loss provision is recorded in the period in which the loss first becomes probable and reasonably estimable.

Revenues recognized in excess of billings are recorded as Unbilled services. Billings in excess of revenues recognized are recorded as Deferred revenues until revenue recognition criteria are met. Client prepayments (even if nonrefundable) are deferred and recognized over future periods as services are delivered or performed.

Revenues related to time-and-materials contracts are recognized as the service is performed and amounts are earned. The Company considers amounts to be earned once evidence of an arrangement has been obtained, services are delivered, fees are fixed or determinable, and collectability is reasonably assured.

Stock-based compensation: The Company measures all stock-based awards granted to employees and directors based on the fair value on the date of the grant and recognizes compensation expense of those awards, over the requisite service period, which for the Company is the period between the grant date and the date the award vests or becomes exercisable. The fair value of restricted stock and restricted stock units is determined based on the number of shares granted and the fair value of the Company's stock on the date of grant.

Note 1. Summary of Significant Accounting Policies (Continued)

Income Taxes: As a limited liability company, the Company's taxable income or loss is allocated to members in accordance with their respective percentage ownership. Therefore, no provision or liability for income taxes has been included in the financial statements for the period ended December 31, 2017.

Recently Issued Accounting Pronouncements: -

In May 2014, the FASB issued Accounting Standards Update (ASU) 2014-09, Revenue from Contracts with Customers (Topic 606), to supersede nearly all existing revenue recognition guidance under GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity is expected to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgment and estimates may be required within the revenue recognition process than required under existing GAAP, including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each performance obligation. ASU 2014-09, as deferred one year by ASU 2015-14, will be effective for annual reporting periods beginning after December 15, 2018 using either of two methods: (a) retrospective to each prior reporting period presented with the option to elect certain practical expedients as defined within ASU 2014-09; or (b) retrospective with the cumulative effect of initially applying ASU 2014-09 recognized at the date of initial application and providing certain additional disclosures as defined in ASU 2014-09. The Company has not yet selected a transition method and is currently evaluating the impact of the pending adoption of ASU 2014-09 on the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*. The amendments in this Update create Topic 842, *Leases*, and supersede the leases requirements in Topic 840, *Leases*. The objective of Topic 842 is to establish the principles that lessees and lessors shall apply to report useful information to users of financial statements about the amount, timing, and uncertainty of cash flows arising from a lease. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. All leases create an asset and a liability for the lessee in accordance with FASB Concepts Statement No. 6, *Elements of Financial Statements*, and, therefore, recognition of those lease assets and lease liabilities represents an improvement over previous U.S. GAAP, which did not require lease assets and lease liabilities to be recognized for most leases. The amendments in ASU 2016-02 are effective for fiscal years ending after December 15, 2019. The Company is currently evaluating the impact of the pending adoption of the ASU on its financial statements.

In March 2016, the FASB issued ASU 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which simplifies several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the consolidated statements of cash flows. The amendments in this ASU affect all entities that issue share-based payment awards to their employees. Management adopted this standard during 2017 and it did not have a material impact on the financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 provides guidance on how certain cash receipts and cash payments should be presented and classified in the statement of cash flows with the objective of reducing existing diversity in practice with respect to these items. ASU 2016-15 will be effective for the Company on January 1, 2019. Early adoption is permitted. ASU 2016-15 requires a retrospective transition method. However, if it is impracticable to apply the amendments retrospectively for some of the issues, the amendments for those issues would be applied prospectively as of the earliest date practicable. The Company is currently evaluating the impact the adoption of this guidance will have on its statement of cash flows.

Note 1. Summary of Significant Accounting Policies (Continued)

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805) Clarifying the Definition of a Business (ASU 2017-01)*, which clarifies the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. ASU 2017-01 is effective for annual and interim periods beginning after December 15, 2017, with early adoption permitted, and applied prospectively. The Company is currently evaluating the impact of adopting this standard.

Note 2. Acquisition

As described in Note 1, on November 14, 2017 the Company was a party to a transaction pursuant to which certain investors acquired equity interests of GCOM. The acquisition was recorded under the acquisition method of accounting and pushed-down to the Company in accordance with ASC 805, by allocating the purchase consideration of approximately $101,540 to the cost of the assets acquired, including intangible assets, based on their estimated fair values at the acquisition date. The allocation of purchase price is based on management's judgment after evaluating several factors, including, but not limited to, valuation assessments of tangible and intangible assets. Intangible assets were valued utilizing customary valuation procedures and techniques. The excess of the total purchase price over the fair value of net liabilities assumed is recorded as goodwill. The goodwill arising from the acquisition consists largely of the commercial potential of the Company and the value of the assembled workforce.

The acquisition date fair value of the consideration transferred totaled $101,540, which consisted of the following:

Cash	$	78,830
Rollover equity		9,123
Seller Note		10,000
Due to seller and contingent consideration		3,587
	$	101,540

The following table summarizes the estimated fair value of the net assets acquired at the date of the acquisition:

Cash on hand	$	1,690
Accounts receivable		30,097
Unbilled services		8,763
Other assets		3,406
Fixed assets		150
Goodwill		22,416
Intangible assets		45,075
Accounts payable and accrued expenses		(9,364)
Deferred revenue		(693)
	$	101,540

Note 2. Acquisition (continued)

The following is a summary of the intangible assets acquired and the weighted-average useful lives over which they will be amortized (in thousands):

	Fair Value	Estimated Lives
Trademarks	$ 4,507	9.1 years
Technology	9,113	7.1 years
Noncompete agreements	4,738	5.0 years
Customer Relationships	26,717	11.1 years
Total intangible assets	$ 45,075	

In accordance with our accounting policies in Note 1, the identified goodwill will be amortized on a straight-line basis over a period of ten years.

Acquisition-related transaction costs include investment banking, legal and accounting fees, and other external costs directly related to the Acquisition. Transaction costs paid at closing totaled $16,048. These costs include $217 of deferred financing costs and $1,914 of original issue discounts which were recorded on the balance sheet as a deduction from the loan principal. $11,987 was incurred by the predecessor during the period from January 1, 2017 to November 13, 2017, of which $10,341 relates to transaction bonuses. The remaining $2,000 of transaction costs was incurred by the successor during the period from November 14, 2017 through December 31, 2017.

In March 2018, under the terms of the agreement, a post-closing adjustment to the purchase price was finalized with a payment to the seller totaling $1,795. The post-closing adjustment was the true-up of the final Net Working Capital Amount and Final Cash amounts.

Note 3. Property and Equipment

Property and Equipment consist of the following as of December 31, 2017:

Furniture and fixtures	$ 26
Equipment	104
Automobile	21
	151
Less accumulated depreciation and amortization	(6)
	$ 145

Depreciation expense was $6 during the period from November 14, 2017 to December 31, 2017 (Successor) and $71 during the period from January 1, 2017 to November 13, 2017 (Predecessor).

Note 4. Goodwill, Net

Goodwill, net as of December 31, 2017 consists of the following as a result of the GCOM Software LLC acquisition:

Goodwill at cost	$ 22,416
Less accumulated amortization	(280)
	$ 22,136

Amortization expense for the period of November 14, 2017 to December 31, 2017 was $280.

The following is the amount of amortization expense of goodwill for each of the years ended December 31:

Year Ending December 31,	
2018	$ 2,242
2019	2,242
2020	2,242
2021	2,242
2022	2,242
Thereafter	10,926
	$22,136

Note 5. Intangible Assets, Net

The following is a summary of amortizable intangibles as of December 31, 2017:

	Cost	Amortization from November 14, 2017 to December 31, 2017	Net Carrying Value, December 31, 2017
Trademarks	$ 4,507	$ (62)	$ 4,445
Technology	9,113	(161)	8,952
Noncompete agreements	4,738	(118)	4,620
Customer Relationships	26,717	(597)	26,120
	$ 45,075	$ (938)	$ 44,137

Trademarks, technology and noncompete agreements will be amortized using the straight-line method over the estimated useful life ranging from 5.0 to 9.1 years. Technology consists of software and other proprietary information created and developed by the Company. Customer relationships have been assigned an 11.1 year useful life and are being amortized using accelerated methods. Customer relationships consist of information and knowledge obtained from prior working history with customers.

Note 5. Intangible Assets (continued)

Expected amortization expense related to intangible assets is as follows:

Year ending December 31,	
2018	$ 7,264
2019	6,832
2020	6,400
2021	5,968
2022	5,418
Thereafter	12,255
	$ 44,137

Note 6. Long-Term Debt

A summary of the Company's long-term debt, net of financing costs and excluding any borrowings under the Company's revolving line of credit, at December 31, 2017 is as follows:

In November 2017, in connection with an acquisition, the Company signed a note payable to the GCOM Albany Holdings, Inc. for $10,000. The note bears interest at 8% per annum. Interest is due annually on November 14th, subject to meeting cash threshold requirements. The note matures on May 14, 2023., at which time the principal balance will be due (see Note 7)	$ 10,000
In November 2017, the Company borrowed money under a credit agreement with Cerberus Business Finance LLC as Administrative Agent in the amount of $56,000. The loan bears interest at LIBOR plus 7.5% per annum which was 8.92% as of December 31, 2017. The loan is payable in quarterly installments of $500, beginning March 31, 2018 with the final payment of $46,500 due November 14, 2022. The loan agreement requires, among other things, maintenance by the Company of leverage and fixed charge coverage ratios.	56,000
The Company has a revolving line of credit with its primary financing institution. The maximum amount available is $10,000 and has a maturity date of November 14, 2022. Interest is charged on the outstanding balance using a LIBOR or Reference rate formula. The interest rate on December 31, 2017 was 9.75%. In addition, the Company is charged a monthly unused fee of 0.75% per annum.	1,250
	67,250
Less Debt issuance costs, net	(2,073)
	65,177
Less current portion of long-term debt	(2,000)
	$ 63,177

Note 6. Long-Term Debt (continued)

Maturities of long-term debt are scheduled as follows:

Year ending December 31,

2018	$ 2,000
2019	2,000
2020	2,000
2021	2,000
2022	49,250
Thereafter	10,000
	$ 67,250

Note 7. Members' Equity

The following summarizes the terms of the Company's capital stock:

Predecessor:
GCOM Software, Inc. was authorized to issue 50,000 Class A voting shares and 50,000 Class B non-voting shares, both with a par value of $0.01. As of November 13, 2017 there were 30,687 shares of Class A outstanding and 10,065 shares of Class B outstanding. Class A and Class B shares are entitled to receive dividends and distributions if declared by the board of directors.

On September 17, 2007 GCOM Software, Inc. adopted a Stock Option Plan. On December 31, 2016 the Stock Option Plan was cancelled. On January 1, 2017, GCOM Software, Inc. adopted a Restricted Stock Plan. In March 2017, GCOM Software, Inc. issued 8,310 and 1,755 Class B non-voting shares under the Restricted Stock Plan to employees and non-employees, respectively. All shares vested immediately.

GCOM Software, Inc. recorded a total stock compensation expense of approximately $1,047 relating to the grants. Expense of approximately $395, $183, and $469 is recorded in Salaries and wages under Cost of services, Subcontract expense under Cost of services, and Salaries and wages under operating expenses on the Consolidated Statements of Income.

Successor:
GCOM HoldCo LLC was formed on October 26, 2017 as a Delaware limited liability company that exists in perpetuity. GCOM HoldCo LLC wholly owns GCOM IntermediateCo LLC which wholly owns GCOM Software LLC.

The Company is authorized to issue Class A, Class E, and Class P units (collectively Units). There is no authorized Unit limit and the Company may issue fractional Units. As of December 31, 2017 the Company had 408,800.44 Class A units, 1 Class E unit, and had no Class P units outstanding. Class A units entitle the holder thereof to one vote. Class E and Class P units shall have no voting rights.

The Company shall make distributions to the members in respect of their Units at any time and from time to time as determined by the board of directors at its sole discretion. To the extent that distributions are made, such distributions shall be distributed to the Class A and vested Class P unit holders ratably.

Note 7. Members' Equity (continued)

Upon an exit event, Class E unit holders are entitled to receive distributions of up to $10,000 after taking into consideration cumulative distributions to Class A unit holders exceeding $122,640, or 300% of the amount of capital contributions invested (approximately $40,880). Class E unit holders shall have no other rights other than this event.

Class P units shall be entitled to receive a distribution once fully vested. There were no Class P units granted as of December 31, 2017.

Warrants:
On November 14, 2017, the Company issued an option to a non-employee to purchase up to 2,500 Class A units at a strike price of $100 per unit. The warrants are accounted for as equity warrants and approximately $70 of expense was recorded in transaction expenses in the successor period.

Note 8. Commitments, Contingencies and Related Party Transactions

Operating Leases: The Company conducts its operations utilizing leased facilities, under non-cancelable operating leases. The leases expire between 2018 and 2022. Rent expense under existing operating leases was $39 and $250 for the periods ended December 31, 2017 and November 13, 2017. Future minimum lease payments under non-cancellable operating leases at December 31, 2017, are as follows:

Year ending December 31,	
2018	$ 263
2019	211
2020	197
2021	197
2022	16
	$ 884

Legal Matters: The Company from time-to-time is subject to routine complaints occurring in the ordinary course of business. Management believes that is has adequate defenses and that the results of any of these non-identified complaints and proceedings will not have a material adverse effect on the Company's financial position but could have an effect on operating results in the year settled.

Related Party Transactions: The Company maintains Management Services agreements with two organizations that have equity ownership of the Company. Fees charged under these agreements totaled $66 during the period of November 14, 2017 to December 31, 2017 and is recorded in other costs on the consolidated statements of income.

The company has a $10,000 note payable with an organization that has equity ownership of the Company. Interest expense under this note payable totaled $100 during the period of November 14, 2017 to December 31, 2017 (see Note 5).

Note 8. Commitments, Contingencies and Related Party Transactions (continued)

The Company owed $51 to related parties as of December 31, 2017, which is included in accounts payable on the consolidated balance sheet. $32 of related party expense was recorded in subcontractor expense,and $20 in other costs on the consolidated statements of income during the period of November 14, 2017 to December 31, 2017. $38 of related party expense were recorded in subcontractor expense, $112 in recruiting expense, and $50 in marketing expense on the consolidated statements of income during the period of January 1, 2017 to November 13, 2017.

Change in Accounting Estimate: During 2016 the Company reduced its revenue and unbilled services by $865, in connection with two projects which the Company experienced difficulties. During 2017, the Company was able to reach an agreement with the customer and the subcontractor on these projects and recovered $1,250. In connection with this agreement, the Company recorded revenue and accounts receivable in the amount of $1,250 during the period January 1, 2017 to November 13, 2017. All accounts receivable related to these transactions have been collected as of July 19, 2018.

Note 9. Subsequent Events

In 2018, the Company issued 19,494 of Class P Units in GCOM Management LLC, in consideration for services rendered or to be rendered to GCOM Holdco LLC or any of its subsidiaries. The initial Participation Threshold under the Company's Unit Agreement shall be $100.00 per Corresponding Class P Unit, which shall be adjusted from time to time by the Company. Unit awards typically vest ratably over a five-year period.

EXHIBIT 6 - CERTIFICATION OF FINANCIAL INTEGRITY

March 1, 2019

To Whom it may concern,

RE: West Virginia Department of Health and Human Resources CRFP EHP1900000002

GCOM Software LLC is a private held company under the leadership of the GCOM Board of Directors and CEO Girish Bhatia. GCOM conducts an annual financial audit with independent consulting firm, RSM US LLP (RSM Ranked No. 5 on Accounting Today's Top 100 Firms List). GCOM corporate functions are segregated between consulting services operations, legal, accounting, and human resources.

Girish Bhatia, GCOM CEO, certified that this is an accurate representation of GCOM corporate structure, accurate financial statements, and separation of corporate functions.

Girish Bhatia
CEO

GCOM Software LLC - 24 Madison Avenue Extension, Albany, NY 12203
42 Broadway, 12th Floor, New York, NY 10004
1580 Waldo Palmer Lane 2-A, Tallahassee, FL 32308
Phone: (518) 869 1671, **Email**: info@gcomsoft.com

EXHIBIT 7 TABLE GROUPING

Business Module	Associated Table	Purpose
Amendment	AMENDMENT	Contains Amendment master record
	AMENDMENT_ATTRIBUTE	Contains Attributes of Amendment type
	AMENDMENT_LINE_ITEM	Contains field level details (old & new value) of Amended registration
	AMENDMENT_PARTY_TASK	Contains party details of who created amendment record
	AMENDMENT_STATUS	Contains status of Amendment record
	SUPPORTING_EVIDENCE	Contains supporting evidence
Auditing	AUDIT_LOG	Contains field level auditing details (old & new values are captured)
	AUDIT_TRANSACTION	Contains object level auditing details of db transaction
	CHANGE_LOG	Contains field level auditing based on object
Birth	BIRTH	Contains master record of birth registration
	BIRTH_DELIVERY	Contains birth admission & delivery details
	BIRTH_HEARING_SCREENING	Contains birth hearing screening details
	BIRTH_IMMUNIZATION_REGISTRY	Contains birth immunization registration details
	BIRTH_METABOLIC_SCREENING	Contains birth metabolic screening details
	BIRTH_MOTHER	Contains birth mother information
	CHILD	Contains birth child information
	HEARING_SCREENING	Contains hearing screening records
	METABOLIC_SCREENING	Contains metabolic screening information
Common	ADDRESS	Contains Address details
	ADDRESS_GEO_CODE	Contains GEO code and address relationship
	ADDRESS_PLACE	Contains relationship between address and place(city)
	AFFIRMATION	Contains Affirmation messages
	AFFIRMATION_STATUS	Contains relationship between Affirmation message and status
	BIO_TEMPLATE	Contains Biometric information of registered users
	BUSINESS_CONTEXT	Contains application business context details and used for field validation
	BUSINESS_UNIT	Contains business unit records
	BUSINESS_UNIT_FUNCTION	Contains functions of business unit such as birth, death, ITOP
	BUSINESS_UNIT_NAME	Contains business unit name
	COMMENT	Contains comments
	COMPONENT_FEE	Contains fee of each component like Fedex,UPS, etc
	CORRESPONDENCE	Contains correspondence letter details
	DOCUMENT	Contains uploaded documents (letters)
	GEO_CODE	Contains GEO code information
	IMMUNIZATION_REGISTRY	Immunization registry details
	ISSUANCE	Contains document, permit, certificate issuance details
	JOB_LOG	Contains job log
	JOB_LOG_FAST_LOAD	Contains job log
	JOB_OUTPUT	Contains job output
	JOB_SCHEDULE	Contains job scheduling details

	MESSAGE	Contains notification messages
	MESSAGE_RECIPIENT	Contains notification recipient information
	NAME	Contains name details of all parties
	NUMBER_QUEUE	May be used for unique number generation
	OBJECT_PROPERTY	Contains value for object property
	OBJECT_PROPERTY_OTHER_VALUE	Contains value for object property
	OVS_REQUEST_HISTORY	Contains OVS request history. No records found
	PAPER_STOCK	Contains paper stock information
	PAPER_STOCK_RANGE	Contains paper stock range
	PARTY	Contains party details
	PARTY_ADDRESS	Contains party address
	PARTY_CURRENT_LICENSE	Contains party current license
	PARTY_LICENSE	Contains party license
	PARTY_PLACE	Contains party place information
	PARTY_RELATION	Contains party relations (like user with business entity)
	PERSON	Contains personal details
	PERSON_SSN_STATUS	Contains person SSN status relationship
	PERSON_SSN_VERIFICATION	Person SSN verification details
	PHONE_NUMBER	Contains phone number of the party
	REGISTRATION	Contains master record of registration tasks
	REGISTRATION_DOCUMENT	Contains registration documents. Contains only 38 records. need to be verified
	REGISTRATION_LINKAGE	Contains linkage information of multiple registrations
	REGISTRATION_LINKAGE_REGISTRATION	Contains linkage information of multiple registrations
	REGISTRATION_PARTY_TASK	Contains party task information
	REGISTRATION_PARTY_TASK_ADDRESS	Contains party task address
	REGISTRATION_PARTY_TASK_BU_NAME	Contains Business unit name information
	REGISTRATION_PARTY_TASK_LICENSE	Contains party license relationship
	REGISTRATION_PARTY_TASK_NAME	Contains party task name
	REGISTRATION_PARTY_TASK_PHONE_NUMBER	Contains party task phone number
	REGISTRATION_STATUS	Contains registration status
	RETURNED_MAIL	Contains returned mailing details
	RULE_RESULT	Contains validation rule results
	STATUS_ALERT_TASKS	Contains status alert. No records found
	VERIFIED_SSN_MODIFICATION	Contains information about who verified the modified ssn
	VOID_PAPER	Contains voided paper information
Configuration	CODE_TYPE	Contains system code type
	CODE_TYPE_SYSTEM_CODE	Contains relationship between code type and system codes
	CONFIG_ITEM	Contains system configuration
	CONTEXT_ATTRIBUTE	Contains business object attribute details and used in validation
	CONTEXT_ATTRIBUTE_GROUP	Contains business object attribute group details
	CORRESPONDENCE_TEMPLATE	Contains letter templates

EXTRACT_FORMAT	Contains extract field format
FEE	Contains fee details
FEE_AMOUNT	Contains amount associated with fees
FEE_AMOUNT_ACCOUNT	Contains account and fee relationship
FIELD_VALIDATION	Contains field level validation configuration
JOB	Contains job used in the system
JOB_PARAMETER	Contains parameters used in the job
JOB_SCHEDULE_RECIPIENT	Contains notification recepient information of the job
JOB_SOURCE	Contains database source information
KIOSK	Contains KIOSK information
OBJECT_ATTRIBUTE	Contains attribute of each business object. not required in new system
OBJECT_CLASS	Contains class information of each business object. not required in new system
OBJECT_CONTEXT	Contains object context. not required in new system
OBJECT_RELATION	Contains object relations and not required in new system
OBJECT_STATUS	Contains object status, not required in new system
OBJECT_TYPE_INITIAL_STATUS	Contains object initial status, not required in new system
OVS_STATUS_CODE	Contains OVS status code information
PAGE_ATTRIBUTE	Contains page layout UI appearance information. Not required in new system
PARAMETER_VALUE	Contains job parameter values
PLACE	Contains place information (city)
PLACE_RELATION	Contains relationship between places
PLACE_RELATION_GEO_CODE	Contains relationship between Place & GEO code
PRINT_PRODUCT	Type of print product
SERVICE	Contains service details
SERVICE_FEE	Contains service fee details
SHIFT	Contains shift details (1st, 2nd, third)
STATUS	Contains all statuses
STATUS_LIST	Contains special statuses
STATUS_LIST_STATUS	Contains special status that relates to actual statues
STATUS_RELATION	Contains relationship between statuses
STATUS_RULE_TRIGGER	Contains status rule trigger information.
STATUS_TYPE	Contains status type
SYSTEM_CODE	Contains sytem code (code set descriptions)
SYSTEM_CODE_OTHER_VALUE	Contains other value defintion for a given system code
SYSTEM_CODE_TYPE	Contains relationship betwen system code & code type
SYSTEM_PREFERENCE	Contains system configuration
TYPE_GROUP	Contains group type
VALIDATION_RULE	Contains all validation rule definitions
VALIDATION_RULE_BYPASS_CONDITION	Contains all validation rule by pass codintions
VERSION_HISTORY	Contains Evers system version information, will not be considered in migration
WEB_PAGE	Contains web page information, will not be considered in migration

Death	CAUSE_OF_DEATH	Contains cause of death
	CAUSE_OF_DEATH_CODE	Contains cause of death codes
	DEATH	Contains master record of death registration
	DECEDENT	Contains dedent information
	FETAL_DEATH_CONDITION	Contains fetal death condition
	IDENTITY_DEATH_FILE_NUMBER	No records found, table might have been used for generation of unique file #
	INJURY	Contains injury details
Extract/Batch processing	AMENDMENT_NYC	Contains Amendment extract detail
	AOP_TRANSMITTAL	Contains AOP batch processing details
	LOAD_ATTRIBUTE	Contains load attribute details
	LOAD_BIRTH	May be used by an extract or batch processing
	LOAD_BIRTH_BATCH	May be used by an extract or batch processing
	LOAD_BIRTH_CODE_REFRESH	May be used by an extract or batch processing
	LOAD_BIRTH_FAST_NYC	May be used by an extract or batch processing
	LOAD_BIRTH_FAST_NYC_ARCHIVE	May be used by an extract or batch processing
	LOAD_BIRTH_FAST_NYC_SEED	May be used by an extract or batch processing
	LOAD_BIRTH_FAST_NYC_VALIDATION	May be used by an extract or batch processing
	LOAD_BIRTH_LOG	May be used by an extract or batch processing
	LOAD_BIRTH_PROPERTIES	May be used by an extract or batch processing
	LOAD_BIRTH_PROPERTIES_REFRESH	May be used by an extract or batch processing
	LOAD_BIRTH_PROPERTIES_WORK	May be used by an extract or batch processing
	LOAD_BIRTH_REFRESH	May be used by an extract or batch processing
	LOAD_COMMENT	May be used by an extract or batch processing
	LOAD_COMMENT_BATCH	May be used by an extract or batch processing
	LOAD_DEATH	May be used by an extract or batch processing
	LOAD_DEATH_BATCH	May be used by an extract or batch processing
	LOAD_DEATH_CODE_REFRESH	May be used by an extract or batch processing
	LOAD_DEATH_FAST_ADDRESS_BOROUGH	May be used by an extract or batch processing
	LOAD_DEATH_FAST_NYC	May be used by an extract or batch processing
	LOAD_DEATH_FAST_NYC_ARCHIVE	May be used by an extract or batch processing
	LOAD_DEATH_FAST_NYC_SEED	May be used by an extract or batch processing
	LOAD_DEATH_FAST_NYC_VALIDATION	May be used by an extract or batch processing
	LOAD_DEATH_LOG	May be used by an extract or batch processing
	LOAD_DEATH_REFRESH	May be used by an extract or batch processing
	LOAD_DEATH_REPROCESS	May be used by an extract or batch processing
	LOAD_DPW	May be used by an extract or batch processing
	LOAD_DPW_BATCH	May be used by an extract or batch processing
	LOAD_FETAL_DEATH	May be used by an extract or batch processing
	LOAD_FETAL_DEATH_BATCH	May be used by an extract or batch processing
	LOAD_FETAL_DEATH_LOG	May be used by an extract or batch processing
	LOAD_FETAL_DEATH_PROPERTIES_REFRESH	May be used by an extract or batch processing

	LOAD_FETAL_DEATH_REFRESH	May be used by an extract or batch processing
	LOAD_GEO_CODE	May be used by an extract or batch processing
	LOAD_ISSUANCE	May be used by an extract or batch processing
	LOAD_ISSUANCE_BATCH	May be used by an extract or batch processing
	LOAD_ITOP_BATCH	May be used by an extract or batch processing
	LOAD_ITOP_LOG	May be used by an extract or batch processing
	LOAD_ITOP_PROPERTIES_REFRESH	May be used by an extract or batch processing
	LOAD_ITOP_REFRESH	May be used by an extract or batch processing
	LOAD_MRE_BATCH	May be used by an extract or batch processing
	LOAD_MRE_BIRTH	May be used by an extract or batch processing
	LOAD_MRE_BIRTH_REFRESH	May be used by an extract or batch processing
	LOAD_MRE_DEATH	May be used by an extract or batch processing
	LOAD_MRE_DEATH_REFRESH	May be used by an extract or batch processing
	LOAD_SETUP	May be used by an extract or batch processing
	LOAD_SETUP_BATCH	May be used by an extract or batch processing
	LOAD_SOURCE	May be used by an extract or batch processing
	LOAD_SOURCE_ATTRIBUTE	May be used by an extract or batch processing
	MainframeExtract_NYC	May be used by an extract or batch processing
	nbs_extract	May be used by an extract or batch processing
	PaMasterExtract	May be used by an extract or batch processing
	REGISTRATION_EXTRACT	May be used by an extract or batch processing
	REGISTRATION_LOAD	May be used by an extract or batch processing
	SIIS_Extract_Work	May be used by an extract or batch processing
ITOP	ITOP	Contains master record details of ITOP
Order Processing	ACCOUNT	Contains Account details
	CASH_OUT	Cash out details of order
	LINE_ITEM	Contains order item details
	LINE_ITEM_ACCOUNT_TOTAL	Contains order amount details
	LINE_ITEM_ISSUANCE	Contains relationship between order and issuance
	LINE_ITEM_OFFERING	Contains item offering (quantity, discount) details
	LINE_ITEM_STATUS	Contains order item status
	OFFERING	Contains order processing offering details
	OFFERING_COMPONENT	Contains offering component details
	OFFERING_FEE	Contains offering fee details
	ORDER_ACCOUNT_TOTAL	Contains order account total
	ORDER_CASH_OUT	Contains cash out details of the order
	ORDER_PARTY_TASK	Contains party task for the order
	ORDER_PARTY_TASK_PHONE	Contains phone number of the party task
	ORDER_PAYMENT	Contains order payment
	ORDER_PAYMENT_PARTY_TASK	Contains party task for payment
	ORDER_STATUS	Contains order status

	ORDER_SUBJECT	Contains order subject
	ORDER_SUBJECT_ACCOUNT_TOTAL	Contains Order subject total
	ORDER_SUBJECT_ACCOUNT_TOTAL_VOID	Contains order subject total that was voided
	ORDER_SUBJECT_CRITERIA	Contains search criteria
	ORDER_SUBJECT_MATCH	Contains relationship of order with business object type
	ORDER_SUBJECT_STATUS	Contains order subject status
	ORDERS	Contains master record of orders
	PAYMENT_DISTRIBUTION	Contains payment distribution details
	PAYMENT_TOTAL	Contains payment total
Security	ACTIVITY	Contains rights
	PASSWORD_HISTORY	Contains password history
	ROLE	Contains all security roles
	ROLE_ASSOCIATION	Contains association between roles and business unit
	SECURITY_DOMAIN	Contains security domains (domain will be assigned for business unit)
	SECURITY_DOMAIN_USER	Contains user assigned to security domain
	SECURITY_DOMAIN_USER_PAYMENT_PROFILE	Contains user payment profile
	SECURITY_DOMAIN_USER_ROLE	Contains role/user assignment details
	USERS	Contains user information
Unused	ACCOUNT_OFFICE_STATUS	No records found
	AFFIRMATION_FIELD	No records found
	AFFIRMATION_GROUP	No records found
	AMENDMENT_CHANGES	No records found
	AUDIT_LOG_ARCHIVE	No records found
	AUDIT_TRANSACTION_ARCHIVE	No records found
	BIRTH_BIRTH_DEFECT	No records found
	BIRTH_DEFECT	No records found
	BirthAnalysis_NM	No records found
	BirthAnalysis_NM_Extract_Work	No records found
	BUSINESS_UNIT_ACCOUNT	No records found (please validate)
	dataset_howard	This doesn't look like a table used in the system
	DOCUMENT_FORMAT	No records found
	DPW_CONVERTED_RECORDS	No records found
	EDRS_REQUEST_MAPPING	No records found
	EVVE_BirthRecord	This doesn't seem to be used in the application
	EVVE_DeathRecord	This doesn't seem to be used in the application
	FINITE_STATE	No records found
	HUNTING	No records found, doesn't look like table used in the system
	IMAGING	No records found
	ISSUANCE_HISTORY	No records found. may be used for history
	LICENSE_REGISTRATION	No records found
	MARIJUANA_CARD	No records found

MARRIAGE	No records found
MASK	used for mask activity which may not be used in current system
MASK_ACT_SEC_DOM_USER	used for mask activity which may not be used in current system
MASK_ACTIVITY	used for mask activity which may not be used in current system
MASK_ACTIVITY_ROLE	used for mask activity which may not be used in current system
MASK_CODE	used for mask activity which may not be used in current system
Numbers	Contains just sequence number..not required in the new system
OFFICE_FEE	No records found
PERFORMANCE_STATS	Might have used for performance analysis
PERMIT	No records found
PERSON_ANCESTRY	No records found
PERSON_CODE	No records found
PLACE_GEO_CODE	No records found
PRESUMPTIVE_DEATH	No records found
RandomFirstName	This table may not be used in the real system
RandomLastName	This table may not be used in the real system
RandomStreetName	This table may not be used in the real system
REGISTRATION_COUNT_LOG	Not required in new system.
REGISTRATION_PARTY_TASK_ADDRESS_ARCHIVE	No records found. may be used for archive purpose
REGISTRATION_PARTY_TASK_BU_NAME_ARCHIVE	No records found
REGISTRATION_PARTY_TASK_LICENSE_ARCHIVE	No records found
REGISTRATION_PARTY_TASK_NAME_ARCHIVE	No records found
RESPONSE_TIME	Not required in the new system. related to performance
RESPONSE_TIME_ARCHIVE	Not required in the new system. related to performance
SECURITY_DOMAIN_USER_WEB_PAGE	No records found
tmp_Dth1962_FixBoro	looks like a temporary table, will not be considered in migration
tmp_foxpro_sealed	looks like a temporary table, will not be considered in migration
tmp_Post_Migrate_Update_HW	looks like a temporary table, will not be considered in migration
tmp_Post_Migrate_Update_HW_bk	looks like a temporary table, will not be considered in migration
tmp_stg_nbs_extract	looks like a temporary table, will not be considered in migration
TYPE_GROUP_RELATION	No records found
WORK_QUEUE_SUMMARY	No records found. looks like a extract table, please review