Consilience
SOFTWARE

State of West Virginia
Department of Health and Human Resources
Electronic Disease Surveillance System (WVEDSS)

Consilience Software
9005 Mountain Ridge Drive, Suite 190
Austin, TX 78759
Telephone: 512.795.1300
POC: Mr. Richard Ehni
E-mail: info@consiliencesoftware.com
Web page: www.consiliencesoftware.com

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.

2. The State may accept or reject in part, or in whole, any bid.

3. All quotations are governed by the ***West Virginia Code*** and the ***Legislative Rules*** of the Purchasing Division.

4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.

6. Payment may only be made after the delivery and acceptance of goods or services.

7. Interest may be paid for late payment in accordance with the ***West Virginia Code***.

8. Vendor preference will be granted upon written request in accordance with the ***West Virginia Code***

9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

11. The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.

12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties

13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (**http://www.state.wv.us/admin/purchase/vrc/hipaa.htm**) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.

2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.

3. Complete all sections of the quotation form

4. Unit prices shall prevail in case of discrepancy.

5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

Consilience software

9005 Mountain Ridge Drive • Suite 190 • Austin Texas 78759

23 July 2009

Department of Administration, Purchasing Division
ATTN: Roberta Wagner
2019 Washington Street, East
Charleston, WV 25311

Subject: West Virginia Disease Surveillance System (WVEDSS)--Consilience Software Proposal Submission

Dear Ms. Wagner,

Consilience Software is pleased to provide the attached proposal in response to your Request For Quotation (RFQ) for an automated, web-based, statewide disease surveillance system for the State of West Virginia, Department of Health and Human Resources (WVDHHR). Our extensive experience implementing automated disease surveillance systems, and our review of your RFQ, provided us with an understanding of WVDHHR's near-term and future WVEDSS process improvement needs.

Consilience Software's focus is on WVDHHR realizing greater efficiency by implementing a common and shared disease surveillance system. Using Consilience Software's unique, polymorphic, user-modifiable Maven EDSS, WVDHHR can meet not only the current requirements identified in the RFQ, but also the changing statutory, regulatory and epidemiological requirements in the future.

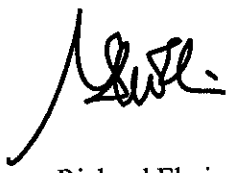
Consilience Software will use our mature, proven Maven EDSS and work jointly with WVDHHR subject matter experts to modify the existing Maven EDSS to meet WVDHHR's requirements. This approach provides WVDHHR significant business benefits such as:

- Reduced implementation schedule: because no software development is involved in this deployment
- Reduced project risk: because WVDHHR will be utilizing and modifying our proven Maven EDSS case management system to meet WVDHHR's requirements outlined in the RFQ.

Consilience Software would be pleased to demonstrate Maven to you during your proposal evaluation process. This will help you get the true feel and appreciation for Maven's inherent flexibility in realizing your objective disease surveillance system, as well as the concomitant related financial and temporal business benefits in automating your existing processes.

We look forward to providing you a demonstration of Maven and working with you in the near future. Should you have any questions please contact me at 512.795.1300 ext 207.

Best regards,



Richard Ehni
President
Consilience Software, Inc.

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Introduction

The State of West Virginia, Department of Health and Human Resources (WVDHHR) is on the brink of making a crucial decision—choosing a partner to jointly streamline and automate the West Virginia Electronic Disease Surveillance System's (WVEDSS) existing processes. This crucial decision must be based on your partner's ability, not only to supply, in short order, a web-based disease surveillance case management system that is flexible, versatile, and integrated, but also on your partner's experience providing the professional services and project management necessary to successfully implement your objective disease surveillance system. Consilience Software's unbroken record of successfully implementing Maven-enabled disease surveillance systems will facilitate WVDHHR achieving its vision for world-class disease surveillance system.

Modifying Maven to Achieve the Web-based Electronic Disease Surveillance System (EDSS)

Consilience Software understands WVDHHR wants to implement a common and shared disease surveillance system (including multiple diseases) for public health that would provide WVDHHR authorized stakeholders a single view of West Virginia residents via an automated, streamlined, web-enabled, disease surveillance system. To meet this requirement, Consilience Software proposes WVDHHR utilize our proven, successfully deployed Maven EDSS and modify it to meet your unique disease surveillance requirements. Modifying an existing proven solution, rather than developing a new case management solution, significantly enhances WVDHHR's ability to quickly realize the business benefits of an integrated, web-enabled case management system.

Modifying Maven entails changing application layer question, rule and workflow packages, mostly without source code changes. Like a chameleon changes its skin color to match its environment, Maven changes its question and rules packages—without changing the underlying Maven source code—to meet WVDHHR's specific disease surveillance case management needs. As was done in the solutions implemented by Consilience Software for Massachusetts and North Carolina, who both use Maven for Disease Surveillance and Case Management, we will use Maven's unique flexibility to realize your objective WVEDSS, thereby significantly reducing the project risk and cost.

Positioning WVDHHR to Meet Its Challenges

Consilience Software's Maven™ EDSS and our extensive software engineering experience combine to meet WVDHHR's technology challenge. The Maven suite's modular construction allows for immediate implementation of an automated case management process while allowing for subsequent changes to be made to meet changing requirements.

Key features of Consilience Software's Maven EDSS are:

- Decreased dependence on custom-developed application software mitigates risks traditionally associated with new development and significantly reduces downstream maintenance costs
- High availability, high performance, and data integrity offers desired quality of service to the users
- Scalable, interoperable and modular solution assures a system that will remain current well into the next decade

The Bottom Line—Ready To Go

Consilience Software's extensive software engineering experience is both a rare attribute and a key qualification to facilitate WVDHHR's needs in implementing flexible case management processes. Consilience Software's flexible Maven EDSS minimizes risk, reduces administrative costs, decreases case processing time and delivers increased value for your users; allowing WVDHHR to successfully meet the following project objectives:

- Web-based submission and access to case reports for community reporters, hospitals and clinics, Infectious Control Practitioners (ICPs), etc.
- Ability to receive electronic case reports from community reporters, hospitals and clinics, ICPs, etc.
- Ability to receive electronic reports from laboratories through the Maven XML interface.
- Web-based interface for users outside of WVDHHR such as tribal and local public health (with maintained security)
- Web-based interface for field services epidemiologists (with maintained security)
- Ability to connect/interface with various different systems installed at local public health departments through the Maven XML interface.
- Ability to manage all reportable diseases in West Virginia as well as needed follow-up information for each disease
- Ability to manage other diseases where individual surveillance is performed (where individual cases are received and managed)
- Reporting functionality for monitoring and analyses of the data

- Allows for integration of infectious and chronic diseases to the extent this is feasible
- Integration of laboratory information with disease cases to the extent this is possible through the Maven XML interface.
- Allow for interoperability with other WVDHHR information systems through the Maven XML interface.
- Allow for maintaining data security consistent with federal, state and departmental data security standards
- Allow for secure transmission of information
- Allow for secure, role and/or context-based access to information
- Allow for context-based output
- Ability to send data to the Centers for Disease Control and Prevention (CDC) in the format CDC requires
- Allow for customization by staff at WVDHHR without having to change the code of the system. Diseases, forms, fields, reports, etc. should be possible to add to the system on the fly and by non technical WVDHHR staff

Automated case management and decision making is central to your stated objective in the RFQ—and ours. Your decision is critical. Keeping an eye towards future automated decisions, WVDHHR's choice of an electronic disease surveillance system is arguably one of the most important technology decisions it will make. Consilience Software stands ready to help WVDHHR realize its business vision, goals and strategies.

Statement of Understanding of WVEDSS Project

Consilience Software has extensive experience successfully implementing disease surveillance and outbreak management systems of similar size and complexity as that outlined in the West Virginia RFQ. The West Virginia Electronic Disease Surveillance System (WVEDSS), as in the successful EDSS implementations of the Commonwealth of Massachusetts, North Carolina, Connecticut and New South Wales, requires a system that meets not only your currently defined needs, outlined in the RFQ, but also provides the flexibility to incorporate future changing statutory, regulatory and epidemiological requirements quickly and easily. Consilience Software's Maven EDSS is that system and provides West Virginia significant business benefits including, but not limited to, increased flexibility to meet changing requirements, savings on lifecycle costs and consistent look, feel and ease of use for West Virginia staff.

Maven's unique design facilitates West Virginia becoming a leader in the field of public health information technology and informatics; and helps advance the West Virginia Department of Health and Human Resource's goal to respond quickly and effectively to emerging public health issues by implementing a common, shared disease surveillance system (including multiple diseases) for public health. Maven enhances West Virginia's existing disease surveillance process by providing the capability for rapid collection, analysis and identification of health threats, and the timely dissemination of information to the appropriate health professionals. Additionally, West Virginia can integrate Maven's functionality with existing state and local response plans to allow more routine assessment of state and local responses to disease outbreaks and other health threats, and thereby make incremental and iterative improvement to your standard operating response procedures.

The scope of this project entails Consilience Software modifying our existing Commonwealth of Massachusetts Electronic Disease Surveillance System (EDSS) to meet West Virginia's requirements. By employing this strategy, a number of benefits accrue to West Virginia, such as:

- Access to question, rules, workflow and reports currently used by the Commonwealth of Massachusetts are available for modification by West Virginia. This minimizes West Virginia's risk because these functionalities are already used statewide by Massachusetts. This also reduces the cost because Consilience Software will use these functionalities as a baseline to work from rather than recreating, at greater cost to West Virginia, the same functionalities.
- The PHIN compliant Commonwealth of Massachusetts EDSS (MA EDSS) will extend to WVEDSS by modifying an existing solution.
- Additional questions or rules specific to West Virginia, not currently implemented in the MA EDSS can be added using the user friendly Maven Model Manager. This again minimizes project risk because added questions do not impact the underlying Maven source code and are implemented without the need for IT programmer support

Consilience Software prepared a pro forma project plan, explained in more detail in the Schedule section of this proposal submission, highlighting the scope of this project. Based on our understanding of the requirements outlined in the RFQ, Consilience Software considers the following to be in scope as pertains to this project:

- West Virginia Department of Health and Human Resources will modify general communicable diseases excluding sexually transmitted diseases and human immunodeficiency virus
- Ten (10) print templates will be developed
- Two (2) interface adapters will be developed
  - ELR
  - NETSS
- Twenty (20) workflows will be developed
- Ten (10) reports will be configured
- One (1) NETSS database conversion

Consilience Software considers working jointly with West Virginia a critical success factor to this WVEDSS project. Our experience has shown that working with clients throughout the implementation, rather than providing a "big bang" fait accompli solution, helps minimize project risk by facilitating frequent and open communications between both parties. Consilience Software has also found that working jointly with our clients helps users feel more comfortable with Maven and enhances the Maven-enabled WVEDSS acceptance by the users; therefore helping West Virginia to realize more quickly its objective to improve West Virginia's ability to respond quickly and effectively to emerging public health threats.

In summary, Maven meets the critical functionality, outlined below, that is essential for West Virginia to become a national leader of public health information technology and informatics. Maven's inherent flexibility and proven effectiveness in the cases Commonwealth of Massachusetts and North Carolina may facilitate West Virginia to:

- Provide better case and contact management follow up and services.
- Enable outbreak management support such as importing or uploading roster data in allowable formats.
- Streamline and support daily operations through efficient business flows.
- Provide data for system and process evaluations and planning.
- Allow industry best practices for system security and user distinctions based on individual user scope of responsibility.
- Allow sharing of appropriate information (limited access or messaging) with other federal, state or local jurisdictions, as well as private health care entities and providers.
- Provide WVDHHR staff a Web based EDSS.
- Use Maven's inherent easily modifiable question and rules packages to match changing requirements as needed.

As an integrated EDSS, Maven insures the above capabilities by providing:

- Data access via Maven's exporter/importer capability
- Linking capability to CDC Vocabulary Access and Distribution System using Maven's XML interface functionality
- Linking capability to Health Alert Network using Maven's XML interface functionality
- User configurable work flows, searches, reports and letters
- System security components
- De-duplication functionality
- West Virginia determinable audit capabilities for data entries

The following sections address specific areas of interest highlighted by West Virginia in the RFQ.

Other Vendor Requirements

Consilience Software, incorporated in Delaware since 2003, has seen significant growth since its inception more than six years ago. Consilience Software is headquartered in Austin, Texas with offices in Boston, Massachusetts and Sydney, New South Wales, Australia. As is commonly known, most innovations are developed by entrepreneurial companies. The result of Consilience Software's thriving in the entrepreneurial crucible has been the versatile and innovative Maven software suite. We have steadily grown and expanded our market reach across a number of seemingly unrelated industry verticals using our proven, commercial-off-the-shelf (COTS), flexible and user configurable Maven Case Management Software (CMS) currently offered in this submission.

Consilience Software is an agile organization, with over thirty professionals, focused on helping clients like West Virginia Department of Health and Human Resources (WVDHHR) successfully implement a streamlined, automated, information-gathering and decision support system, like West Virginia Electronic Disease Surveillance System (WVEDSS). All Consilience Software employees serve our clients, directly or indirectly, and are capable of acting like business owners when they serve the client. In lieu of departments or functional focus, Consilience Software is structured around our clients, teams, problems, processes and opportunities. Providing speed, flexibility, and innovation, Consilience Software can rapidly respond to client's needs or changes in the business environment; and thereby deliver efficiency and effectiveness to directly benefit clients like WVDHHR. Consilience Software's agile organization is best illustrated by the lower "New" organization, in Figure 1 below.

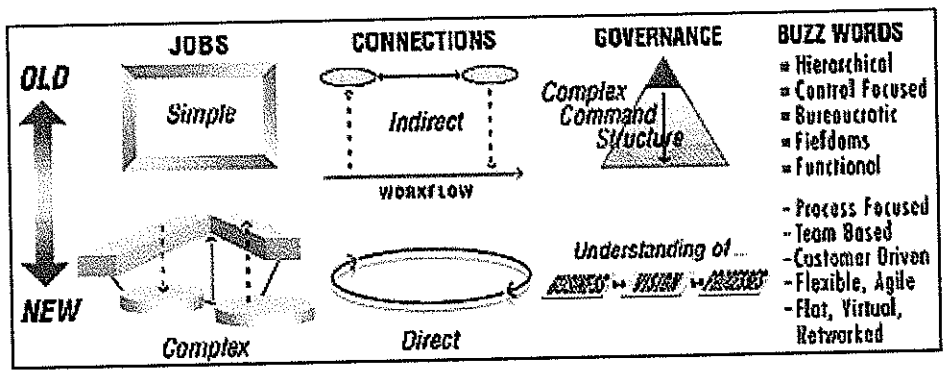


Figure 1 Consilience Software's Agile "New" Organization Capabilities

Providing automated information gathering and decision support systems, like WVEDSS, are a complex and dynamic task that requires complete competence of all Consilience Software employees. Consilience Software employees are empowered to flexibly work directly with anyone needed to make the WVEDSS implementation succeed. Additionally, decision making is decentralized to the Project Manager to make fast, reasoned decisions without the undo delays typically seen in more traditional, hierarchical software organizations.

Consilience Software's organizational chart is provided in Figure 2 below. Being an agile matrix organization, we allow staff working on the WVEDSS project to reach into other areas of the organization, such as the Financial Services Product group, to quickly solve any identified issues. Consilience Software employees' performance is self-directed and self-governed based on their clear understanding of the WVDHHR's requirements and processes. Our trust in our employees provides WVDHHR with the added benefit of working with highly motivated individuals whose individual success is closely aligned with WVDHHR's successful implementation of WVEDSS.

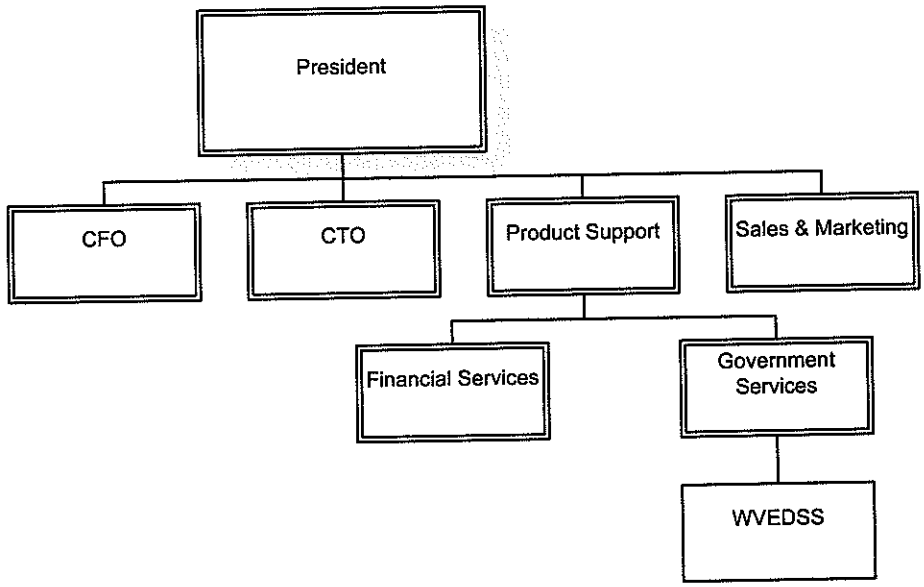


Figure 2 Consilience Software Organizational Structure

WVDHHR's desire to expeditiously implement a WVEDSS requires your selected partner's proposed EDSS solution to be a proven, flexible, and easily modifiable system. Consilience Software proposes modifying our existing Maven EDSS, successfully deployed for the Commonwealth of Massachusetts and North Carolina, to meet WVDHHR's requirements outlined in the RFQ. Consilience Software's approach to implementing WVEDSS focuses on incrementally and iteratively modifying Maven to meet the specific needs of the WVDHHR. Modifying our Maven EDSS significantly reduces WVEDSS project risk because the modifications to Maven do not entail changes to the underlying source code and WVDHHR will be using a proven, tested Maven EDSS that is currently in production in Massachusetts and North Carolina. The modifications are made to the existing disease surveillance queston and rules packages to align them with WVDHHR requirements outlined in Appendix D below.

Appendix A — Similar EDSS Project Experience

Maven, as noted above, is used across a number of industry verticals, including Public Health Disease Surveillance and Immunization Registry, each with challenging data collection, decision support, processing, and workflow requirements similar to those outlined in WVDHHR's RFQ. Each Maven implementation, like the WVEDSS, sought to streamline an existing paper-based, multiple data entry, and manpower intensive process with an automated, web-based flexible and easy to use system – Maven.

Maven's flexibility and versatility to meet the seemingly unrelated case management system requirements of various industry verticals lies in its notable design. Using Maven's unique flexible design WVDHHR users can modify, as needed, the disease question and rules packages and through Maven's workflow and report functionality determine subsequent actions or additional information needed, as determined by the business user, thereby streamlining your current disease surveillance processes. Individual forms used by WVDHHR to gather required infectious disease information are segmented into logical groups of questions known in Maven parlance as questions packages, which are subsequently entered in Maven using the Maven Model Manager. The Maven Model Manager is the tool used by the WVDHHR designated System Administrators to make the required changes and does not require IT programming support. In this way, Maven allows any form--from any industry vertical--to be quickly and electronically implemented to meet WVDHHR specific information requirements.

Consilience Software is currently modifying Maven in South Dakota, North Dakota and New South Wales. Consilience Software encourages client interaction and, because these states are currently modifying Maven to meet their specific needs as we are proposing for WVDHHR, we encourage WVDHHR to contact these customers.

Consilience Software has an ongoing deployment of Maven Electronic Disease Surveillance and Outbreak Management system with the Connecticut Department of Health. The reference is below:

Gary Archambault (Gary.Archambault@ct.gov; (860) 509-7780
Nancy Barrett (Nancy.L.Barrett@po.state.ct.us; (860) 509-7998
410 Capitol Ave. P.O. Box 340308
Hartford, CT 06134-0308

Consilience Software has an ongoing deployment of Maven Electronic Disease Surveillance, Outbreak Management and Immunization Registry system with the New South Wales, Australia Department of Health. The reference is below:

Lina Persson (lpers@doh.health.nsw.gov.au, +61 2 9391 9022
Mark Bartlett mbart@doh.health.nsw.gov.au, +61 2 9391 9675
73 Miller Street, Level 7
North Sydney NSW 2060
Australia

Each of the following references tailored Maven to meet specific business needs. In each case, and as will be done for WVDHHR, Maven question packages were modeled with the associated business rules to adapt Maven to each client's specific requirements.

Consilience Software	
Reference Information	
Name of Reference Company/Client:	**Commonwealth of Massachusetts**
Address of Reference Company/Client:	**State Laboratory Institute** **305 South Street** **Jamaica Plain, MA 02130**
Reference Contact Person Name, Phone #, and E-mail Address:	**James Daniel, CIO, Department of Public Health** **617.983.6808** **james.daniel@state.ma.us**
Title/Name of Service/Contract	**Emergency System for Advanced Registry of Volunteer Health Professionals (ESAR-VHP)**
Dates of Service/Contract:	**May 2006 to October 2006**
Size of Service:	Massachusetts Maven-enabled ESAR-VHP provides a **statewide**, web-enabled capability Massachusetts uses to register health volunteer information with proper health volunteer authorization, assign each health volunteer an emergency credentialing level in accordance with emergency credentialing standards based on credential information inputs and to do emergency verification of volunteer information and authorize the information's use in an emergency.
Description of Services Performed:	The Massachusetts ESAR-VHP is used statewide to register, certify and credential volunteer health professionals. Massachusetts DPH staff, using experience gained during the Massachusetts EDSS deployment, developed the requisite question, rules and workflow packages to create the Massachusetts ESAR-VHP. Because the underlying Maven source code does not need to be modified Massachusetts staff was able to quickly develop the web portal used by volunteers resulting in over 2,000 health professionals registering to volunteer their services during emergencies. Maven's intuitive and easy to use Model Manager allowed Massachusetts staff to develop the ESAR-VHP system. Consilience Software provided guidance and assistance, when required, but the development of the ESAR-VHP was predominantly accomplished by Massachusetts staff who had gained experience working jointly with Consilience Software implementing the EDSS

Consilience Software	
Reference Information	
Name of Reference Company/Client:	**State of North Carolina**
Address of Reference Company/Client:	MSC 1931, Raleigh, NC 27699
Reference Contact Person Name, Phone #, and E-mail Address:	Mr Dennis Harrington dennis.harrington@ncmail.net (919) 707-5050
Title/Name of Service/Contract	**Electronic Disease Surveillance System (EDSS)**
Dates of Service/Contract:	**January 2006 to March 2008**
Size of Service:	Consilience Software was awarded the streamlining and automation of the current paper-based disease reporting process by providing an automated electronic disease reporting and processing capability to help North Carolina Division of Public Health (DPH) prevent and control the spread of infectious diseases in North Carolina residents. Conversion requirements from STD*MIS, HARS, STELLAR and TIMS and NETSS systems were also part of this project. Consilience Software is also implementing integration to a state centric Geographical Information System (GIS) function, Health Alert Network (HAN), Outbreak Management and the NC Immunization Registry (IR).
Description of Services Performed:	a. **Phased Implementation** - Consilience Software is using our Rapid Cycle Time™ (RCT™) methodology to iteratively implement North Carolina Department of Public Health's (DPH's) Electronic Disease Surveillance System (EDSS). NC DPH statewide pilot of Maven provided North Carolina a proof-of-concept demonstration of Maven using the extremely complex tuberculosis (TB) question and rules packages. In parallel with the TB pilot the other 80 reportable diseases (with their corresponding individual question and rules packages) were developed. NC DPH is extending Maven to all 92 local health departments and other identified health officials to facilitate timely and accurate infectious disease reporting. It should be noted that each disease also has individual North Carolina DPH specific workflow requirements and these workflow requirements are also developed in conjunction with modeling the appropriate question and rules packages. b. **Complexity of Product Customization** - The underlying Maven Decision Support Engine did not have to be customized to be implemented at NC DPH - as will be the case with implementing WVEDSS - because the products are implemented using the intuitive and user-friendly Maven Model Manager to develop the WVDHHR specific question and rules packages. The underlying Maven code did not have to be modified because it was designed specifically to support the information gathering and automated decision support business process. The process remains unchanged therefore the underlying code does not have to be modified or customized thus significantly reducing the time to deploy Maven. As was done at NC DPH, designated senior WVEDSS personnel (identified

and authorized by the WVDHHR) responsible for the effectiveness and efficiency of the new system will iteratively enter in the questions and rules for each process and document identified in the RFQ. As each question and rules package is implemented, tested, verified and approved – by the business owner (without requiring IT coding support) – it is promoted to production for use.

c. **Data Conversion** – As part of the NC DPH deployment Consilience Software imported legacy data regarding existing stove-piped infectious disease database into the Maven system by performing an automated conversion from an Excel XML file into the XML integration format used by Maven. These databases include:

- NETTS
- STD-MIS
- TIMS
- HARS
- North Carolina Violent Death Reporting System (NC-VDRS)
- North Carolina Department of Environment and Natural Resources (DENR)
- North Carolina Adult Blood Lead Epidemiology and Surveillance (ABLES)

Maven's inherent data de-duplication module allowed NC DPH client data, sometimes replicated across a number of disease databases such as TB and HIV, to be consolidated into one database with one view of the client disease history. This same data de-duplication can be used to cross-correlate patient information across the WVEDSS information thus insuring all patient data captured once and that data is available, therefore not requiring data re-entry, to either WVEDSS staff thereby presenting one case view.

d. **Maintenance** – Consilience Software provides Tier 3 maintenance support with several sub-releases to enhance the system and to implement customer driven feature requests.

e. **Training** - Consilience Software is conducting simultaneous training as the product questions and answers were developed. Maven allows business users to implement real time changes to the questions and rules based on the constantly changing regulatory, statutory and competitive insurance business market. The senior business users responsible for the effectiveness and efficiency of the EDSS process are working side-by-side with Consilience Software personnel so that the business users learn, via on-the-job-training, how to change/add/delete/modify questions or rules.

Consilience Software	
Reference Information	
Name of Reference Company/Client:	**Commonwealth of Massachusetts**
Address of Reference Company/Client:	**State Laboratory Institute** **305 South Street** **Jamaica Plain, MA 02130**
Reference Contact Person Name, Phone #, and E-mail Address:	**Scott Troppy, Project Manager** **617.983.6819** **scott.troppy@state.ma.us**
Title/Name of Service/Contract	**Electronic Disease Surveillance System (EDSS)**
Dates of Service/Contract:	**July 2005 to September 2006**
Size of Service:	The Maven-enabled EDSS provides the Commonwealth of Massachusetts Department of Public Health (DPH) a **statewide,** web-enabled ability to register health volunteer information with proper health volunteer authorization, assign each health volunteer an emergency credentialing level in accordance with emergency credentialing standards based on credential information inputs and to do emergency verification of volunteer information and authorize the information's use in an emergency.

Description of Services Performed:	Consilience Software worked jointly with the Massachusetts DPH (MDPH) to streamline and automate their paper-based, multiple data entry disease reporting process by implementing a statewide Maven electronic disease surveillance system. **Because of its ease of use, flexibility and intuitiveness, Massachusetts Department of Public Health (MDPH) selected Consilience Software's Maven for their Immunization Registry.** Maven collects vaccine administration information as well as providing vaccine supply chain management. Maven also enables Massachusetts to have configurable immunization scheduled based recommendations. Maven fully supports ACIP recommendations. Consilience Software used our Rapid Cycle Time™ (RCT™) methodology to iteratively implement MA Department of Public Health's (DPH's) Electronic Disease Surveillance and Reporting System (EDSS). MA DPH statewide deployment of Maven began with a pilot, proof-of-concept implementation Maven with a tuberculosis (TB) question and rules package. After deploying the TB pilot the other 85 reportable diseases (with their corresponding individual question and rules packages) were developed. MA DPH extended Maven to all 170+ local health departments and other identified health officials to facilitate timely and accurate infectious disease reporting. It should be noted that each disease also has individual workflow requirements and these workflow requirements were also developed in conjunction with modeling the appropriate question and rules packages. **Complexity of Product Customization** - The underlying Maven Decision Support Engine did not have to be customized to be implemented at MA DPH - as will be the case with implementing WVEDSS - because like IR the products are implemented using the intuitive and user friendly Maven Model Manager to develop the West Virginia specific question and rules packages. The underlying Maven code did not have to be modified because it was designed specifically to support the information gathering and automated decision support business process. The process remains unchanged therefore the underlying code does not have to be modified or customized thus significantly reducing the time to deploy Maven. As was done at MA DPH, designated senior IR personnel (identified and authorized by the WDVHHR responsible for the effectiveness and efficiency of the new system will iteratively enter in the questions and rules for each process and document identified in the RFQ. As each question and rules package is implemented, tested, verified and approved – by the business owner (without requiring IT coding support) – it is promoted to production for use **Project Similarity** – The scope of the MA DPH EDSS project is **statewide.** It is a thin-client, web-enabled automation of the existing paper-based information gathering and decision support process previously used at MA DPH. MA DPH has 170+ local health departments as well as numerous hospitals and laboratories currently electronically (via electronic laboratory reports (ELR)) funneling infectious disease information. Each entity has multiple staff with various roles – allowing access to certain data and restricting access to other data in compliance with state and HIPAA requirements thus exposing Maven to potential of 2000+ simultaneous users.

Appendix B – Organization Chart

Consilience Software's project organization chart also reflects our company vision for being agile. The Project Manager will interface with the WVEDSS Project Manager to ensure all project requirements and WVDHHR's reporting expectations are met. There are two groups that will work with WVDHHR: the Maven EDSS Implementation Team and the Training Team. These teams work closely during the WVEDSS implementation by employing Consilience Software's incremental and iterative Rapid Cycle Time™ (RCT™) methodology. Our RCT methodology is a powerful new way for WVDHHR to deliver the web-enabled WVEDSS project. Embracing the realities of Internet time, the RCT™ approach drives projects like WVEDSS to early and frequent deliveries that are closely aligned with business needs—even when those needs change mid-project. By keeping both project and vision on track while delivering early and often, the Consilience Software Rapid Cycle Time™ methodology accelerates and maximizes the return on your WVEDSS investment. Implementation training is ongoing throughout the build, along with continuous feedback and insight, and results in maximizing end-user acceptance of the WVEDSS and making the West Virginia's EDSS a world-class disease surveillance system.

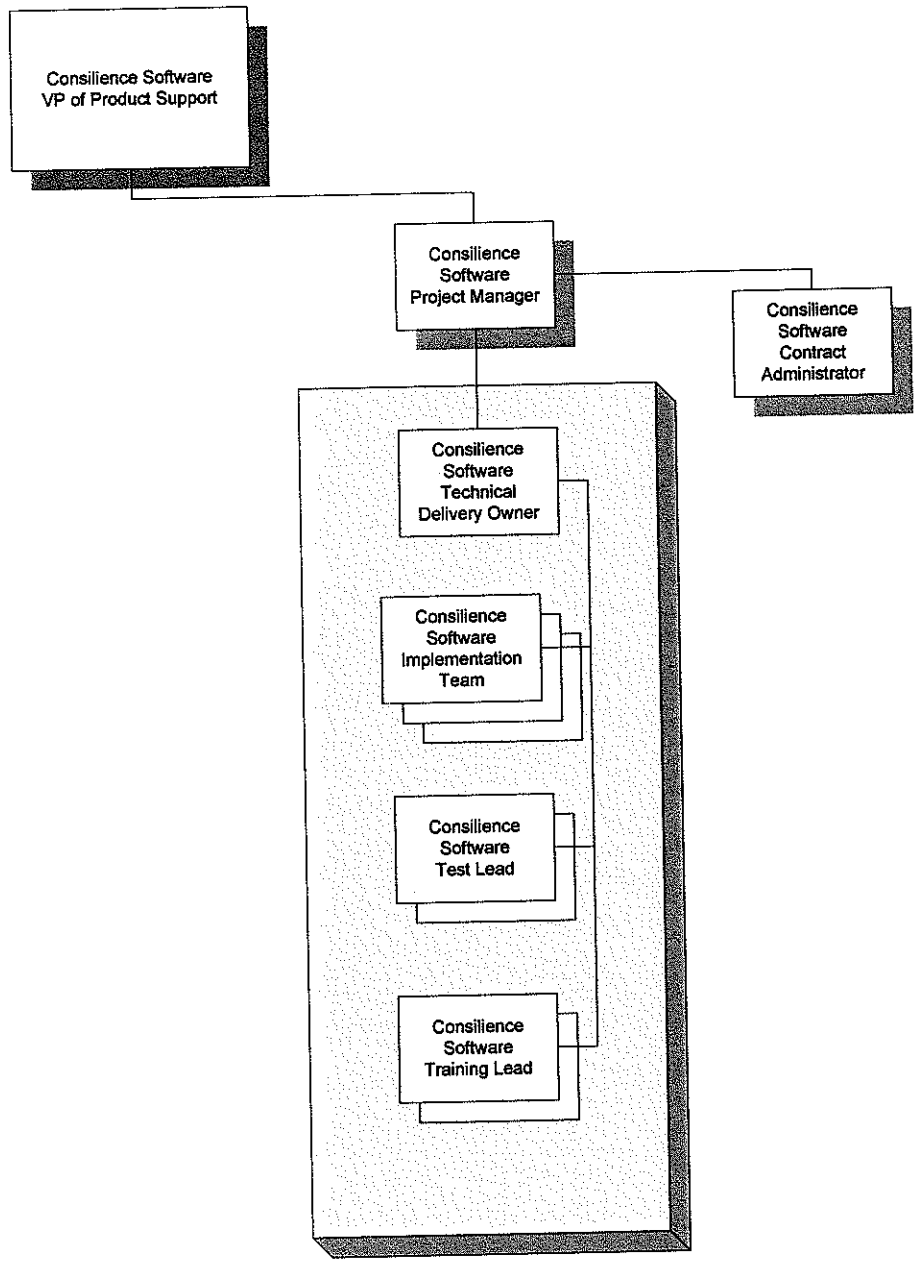


Figure 3 Consilience Software WVEDSS Project Structure

Consilience Software WVEDSS Staff Information

The following table provides a skills matrix of the proposed Consilience Software staff required to successfully complete WVEDSS implementation. This is further highlighted in the project management plan in Appendix C.

Item	Professional Grade Description	Proposed Usage
1	Project Manager	• Project management • Personnel management
2	Technical Delivery Owner	• Provide technical lead and guidance implementing Maven EDSS. • Review, analyze and monitor EDSS requirements fulfillment. • Workflow Modeler
3	Business Analyst/Trainer	• Business analyst and trainer • Disease Modeler • Form Developer
4	Developer	• Develop Integration Interface • Conduct Database Conversion

The following table highlights the skills each Consilience Software team member brings to the implementation of the Maven EDSS in West Virginia. As noted throughout this proposa, Consilience Software will modify the question and rules packages, of our existing Maven EDSS to facilitate implementation of a WVDHHR-specific EDSS. Because Maven EDSS is already a web-based HIPAA and a HL7 compliant solution that's currently being utilized in Massachusetts, Consilience Software will use this solution to minimize project risk and significantly reduce the project schedule—seen in the project plan.

Name	Position in Company	Experience (Years)	Qualifications	Proposed Role
Chance Campbell	Project Manager	9 years	Project manager on numerous integrated systems implementations, including document management, case management, and data conversion projects for state and local governments.	Project Manager
David Rice	Technical Lead	6 years	Technical lead with extensive experience delivering financial services and public sector case management systems – including North Carolina, North Dakota, and South Dakots disease surveillance systems. In addition, he provided technical leadership in the implementation of industry-leading, multi-biometric authentication solutions and deploying distributor management systems.	Technical Delivery Owner
Michelle Brazel	Lead Business Analyst	14 years	Developed notifiable disease question package for both North Carolina and Massachusetts successful disease surveillance systems implementations.	Business Analyst
Michelle Brazel	Trainer	14 years	Certified teacher and Maven training lead.	Training Lead

Consilience
SOFTWARE

Chance Campbell

PROJECT MANAGER

Work Experience

Consilience Software, Inc.
Project Manager
- Manage implementation teams of business analysts and technical delivery owners for disease tracking and surveillance software for state and city government.
- Interact with diverse customer stakeholders such as IT professionals, appointed officials, epidemiologists, and disease subject matter experts.
- Contribute to the writing, publishing and submission of responses to customer requests for information, proposals, bids or negotiations.
- Responsible for the creation of Statements of Work and Contracts in support of sales staff.

Docudata Solutions
Special Projects Manager
- Brought on board for subject matter expertise to close out project in jeopardy of failure. Project involved two partner vendors, a government customer, and multifaceted issues with digitization, indexing, and conversion of records.
- Managed complex or difficult projects with multiple internal and external stakeholders and numerous project team members.
- Reported directly to the Vice President of the Austin office.

Hart Intercivic
Project Manager
- Served on transition team of newly acquired line of business, providing deployment and project management expertise for the incorporation of new products.
- Successfully managed and brought to closure the largest and most technical record management contract for the company to date. Controlled budget of $2 million.
- Led the requirements gathering and implementation of first-in-state deployments.
- Designed and managed rapid deployment model for small size Texas installations. Implemented 6 rapid deployment model accounts in a calendar year, while maintaining a cumulative 40% profit margin
- Experience managing projects in multiple states over multiple jurisdictions. Key accounts in Florida, Texas, California, and Michigan.
- Developed project objectives based on predefined customer strategy. Defined scope of effort required to meet objectives.
- Implemented corporate operating procedures including communication, documentation, quality, and change control processes.
- Communicated, managed, and worked closely with all members of the project team, including Development, Database Administrators, Subject Matter Experts, Support Managers, and Sales.

Hart Intercivic
Senior Consultant--Subject Matter Expert
- Coordinated with Hart project managers and client personnel to develop training strategy documents, training plans and training schedules as they relate to applicable software packages.
- Responsible for the delivery of training milestones.
- Consulted with management and reviewed project proposals to determine goals, time frame, procedures for accomplishing project, staffing requirements, and allotment of resources.
- Formulated and defined technical scope and objectives of project.
- Assisted in identifying and scheduling project deliverables, milestones, and required tasks.
- Coordinated recruitment or assignment of project personnel.

- Assisted in assigning duties, responsibilities, and scope of authority to project personnel.
- Reviewed status reports prepared by project personnel and modified schedules and plans as required by the Project Manager.
- Prepared project status reports and kept Project Manager informed of project status and related issues.
- Conferred with project personnel to provide technical advice and resolve problems.
- Developed and maintained technical and project documentation for Project Manager.
- Worked with Project Manager to manage expectations, negotiate differences between customer and Hart perspectives on contracted requirements, and achieved agreement of customer on contract requirements and acceptance criteria completion.
- Researched and developed requirements for state specific functionality required for integration into core Records Management software

Hart Intercivic
Imaging Service Consultant--Technical Trainer

- Conducted hands-on instruction on system software (usually Microsoft Windows) and proprietary records management imaging software and hardware, following outline, handouts, and texts.
- Demonstrated procedures being taught, such as document processing, quality control and system administration of proprietary software.
- Tested new iterations of proprietary software and summarized findings for programmers.
- Participated in meetings, seminars, and training sessions to obtain information useful to training and support of Hart's customers, and integrates information into training/support program.
- Assisted the Customer Support Center by working in the Call Center, offering telephone assistance to field personnel and customers.
- Developed and conducted programs to train and support governmental employees in installation, administration, operation, maintenance, and troubleshooting of proprietary records management software and hardware.
- Defined and analyzed customer requirements, including creation workflow analyses and Business Process Analyses.

Education

Texas A&M University Bachelor of Science in Kinesiology, December 1996

Consilience
SOFTWARE

David A. Rice

TECHNICAL ARCHITECT/
TECHNICAL LEAD

Work Experience

Consilience Software, Inc.
Maven Core Product Development Team

- Led design and implementation of several key components of a J2EE based online case management system, including enhanced security features, management of case investigations, and the ability for users to dynamically create additional questions for a particular case.
- Developed various approaches enhancements to provide performance increases for batching operations.
- Led core product development team while responsible for developing the product feature road map for future development.
- Mentored new employees for both software development best practices and our internal software codebase

NC EDSS Development Team

- Developed HL7 compliant Electronic Lab Result interface to accept incoming labs results sent from the State Lab.
- Developed database conversion for STD MIS database

ND ESAR Development Team Technical Lead

- Led technical deployment of the Maven ESAR-VHP Software Suite for ND Dept of Health
- Developed custom reports and an integration component to integrate with ND Health Alert Network
- Provided on site technical training for administrators to be able to maintain and configure the application

ND EDSS/SD EDSS Development Team Technical Lead

- Led technical deployment of the Maven EDSS Software Suite for both the ND Dept of Health and the SD Dept of Health
- Worked closely with both customers to develop requirement documents for integration components and configurations to ensure that the Maven deployment met all of their needs
- Provided technical guidance to both customers to help answer any questions they had regarding configurations
- Developed custom reports
- Developed an integration component to integrate with both states' Health Alert Networks which provide the ability for users to configure rules which dictate when they should be notified via email/phone regarding particular events
- Led development team that developed components for integrating with the Center for Disease Control
- Led development team that wrote migration of legacy data
- Provided on site technical training for administrators to be able to maintain and configure the application

GTECH Corporation
Developer--ES Interactive
- Designed and implemented key components of a J2EE based online lottery system.
- Led design and implementation of the system maintenance framework which included configurable and pluggable components allowing business use cases to be scheduled, batched, and initiated remotely.
- Proactively helped drive the redesign and standardization of a continuous build process.
- I was the only consultant on a medium sized team offered permanent employment.

H-E-Butt Grocery Company
Developer--Pharmacy Systems Development
- Wrote and managed requirement documents for pharmacy workflow and retail mail projects. I was the only non-senior/lead developer participating in this endeavor.
- Maintained and enhanced a Struts-based reporting system for the pharmacy system.
- Designed and implemented the framework for submitting insurance claims through the new centralized pharmacy system.
- Designed and implemented highly configurable load tests, written to run in LoadRunner, which simulated the pharmacy client via CORBA calls to the server.
- Worked closely with the Oracle DBA to load test a centralized pharmacy system.
- Designed and implemented a trickle feed for the pharmacy system using Vitria BusinessWare to populate an ODS, providing real time access to sales data.
- Became the primary resource for the enterprise for load testing applications.
- Implemented and managed the version control system for a large-scale project.
- Member of an enterprise-wide deployment team.

Point of Sale Development
- Designed a low cost checkout lane using a diskless computer booting Linux. This utilized a collection of various technologies, which allowed the terminal to determine the most efficient method for booting, and to provide the ability to boot the terminal using a multicast protocol, which the boot servers, running on a legacy OS, did not support.
- Developed C based programs to provide both intercommunication between Linux terminals and remote control of the Linux terminals.

H-E-Butt Grocery Company
Knowledge Management
- Designed an ASP-based system to monitor metadata transformation and flow between four key systems: Microstrategy, Informatica, Redbrick DB, and sales data feeds.
- Implemented an ASP-based knowledge repository for the storage and retrieval of intra-office documents which supported various document formats.
- Wrote ASP-based front-ends to simplify database operations used by the group

Sony Semiconductor of America
Information Systems
- Wrote two web-based applications for tracking defects and system problems using ASP's.
- Designed ASP-based and ActiveX-based applications to analyze in house software usage and database growth for their silicon wafer manufacturing system.

Education

The University of Texas at Austin Bachelor of Science in Computer Science, May 2003
- Graduated Magna Cum Laude with Special Honors
- Member of Upsilon Pi Epsilon – Computer Science Honor Society

Programming Languages

Java J2SE & J2EE
C, C++
Unix/Linux Shell Scripting (Bash, KSH 93)
Perl
Visual Basic
Icon/Unicon

Frameworks & Technologies

J2EE Enterprise Java Beans (EJBs)
Jakarta Struts
UML
XML, HTML
Vitria BusinessWare 4.2
Mercury LoadRunner
Java Servlets & Java Server Pages (JSP)
Hibernate
SQL
Active Server Pages (ASP) & PHP
JasperReports
Mercury Test Director

Tools & Software

App Servers: JBoss, Tomcat, Sun One, IBM Websphere, BEA Weblogic
Software: Eclipse, Ant, JUnit, Idea IntelliJ, Apache, MKS, Perforce, SVN, CVS, Mercury LoadRunner
Databases: Oracle, DB2, MS SQL Server, MySQL, HSQLDB

Operating Systems

GNU LINUX (Red Hat/Debian/Slackware), UNIX System V, Solaris, SCO UnixWare, Mac OSX
Microsoft Windows 3.1/95/98/ME/NT/2000/XP and MS-DOS

Consilience
SOFTWARE

Michelle Brazel

BUSINESS ANALYST/
LEAD TRAINER

Work Experience

Consilience Software, Inc.
Business Analyst/Lead Trainer

- Solely responsible for all training-related activities within the company: including instruction, authoring courseware, and planning and coordinating training activities.
- Solely responsible for (XML) model creation, updates, and maintenance for the disease surveillance projects of: the state of North Carolina, the state of New South Wales, and New York City; assisted model creation for the state of Massachusetts disease surveillance project
- Solely responsible for creating many other smaller models, including North Carolina's adult and childhood lead models, Connecticut's adult lead and radon models, and the interim model Immunization registry model in New South Wales.
- Subject matter expert (SME) for questions or problems related to modeling; mentor to other Consilience Software employees and to the customers with whom I've worked.
- Plan, design, develop, and deliver all training programs from request through evaluation and reporting to ensure effectiveness and efficiency of training projects--focus training curriculum to meet the varying needs of each customer.
- Conduct performance needs assessment and design of performance interventions that will impact business goals
- Manage project budgets and assist Program Manager with general budget review to ensure all projects are completed within budget.
- Monitor project activities to ensure projects are completed within deadlines and requirements.
- Supervise Training Specialist(s) to ensure training is accurately administered and reported in compliance with contractual requirements.

Motive, Inc.
Business Analyst/Sr. Technical Instructor

- Conducted extensive business analysis and training in call centers located in the US, Canada and Western Europe.
- Specified business requirements for customer projects by observing current processes and analyzing business needs within call centers.
- Evaluated current call center procedures and worked closely with call center management to provide suggestions for implementation that would allow for the most benefits and cause the fewest unnecessary procedural changes.
- Liaised with call center representatives to gather improvement ideas and suggestions and brought feedback to Motive to be implemented in future releases.
- Evaluated call center operations and process changes after the Motive product was released to suggest usability improvements with the goal of achieving a significant, positive return on investment (ROI) for the customer.
- Instructed customer service representatives (CSR's) on the use of the Motive software products in the call center environment and provided individual mentoring.
- Authored and served as a subject matter expert (SME) for several courses (both instructor-led and web-based).
- Managed internal development and on-going maintenance of a Learning Management System (LMS) which facilitated student registration, course and resource scheduling, and reporting.
- Managed the training team operationally, including scheduling courses, instructors, and resources; verifying proper classroom setup; registering students; and providing logistical support for visiting students.

Accomplishments:

- Contributed to savings of over £100,000/month for one UK customer.
- Improved analyst efficiency by 100% with analysts using Motive's software in the call center.
- Received highest customer feedback scores in the training department.

ProsoftTraining.com
Web Development Instructor
- Acquired Certified Internet Webmaster (CIW) Master Designer Certification.
- Trained Internet certification classes to all (skill) levels of individuals.
- Specific classes taught include: Basic Internet Business Fundamentals, Advanced Internet Business Fundamentals, HTML, Networking Fundamentals, Site Design Methodology and Technology, and JavaScript.

Knowledge Alliance
Applications Training Manager/Training Consultant
- Managed five application instructors.
- Taught all levels of HTML, Front Page, Visual Basic for Applications, Access, Excel, Word, Power Point, Outlook, and Windows 95 and 98.
- Provided consulting services for software applications.
- Developed a web site for a division of Knowledge Alliance (no longer accessible).
- Identified a client's need for additional support, acquired the necessary skills, and provided appropriate training
- Redesigned curriculum of several classes.

Education

Advanced Neuro Dynamics Master Practitioner Certification in Neuro Linguistic Programming, November 2005

The University of Texas at Austin Certification in Elementary Education, May 1996
- Dual Specialization: Reading and English

The University of Maryland Bachelor of the Arts in Psychology, May 1992
- Member of Psi Chi Honor Society

Competencies

- Training Design and Delivery
- Disease surveillance operations and processes
- Call center operations and processes
- Customer Relationship Management (CRM)
- Call center analytics
- Process analysis

Appendix C - Consilience Software Project Management Methodology

Overview

Consilience Software utilizes a tested and proven Project Management Methodology (PMM) that provides common standards to ensure that projects are conducted in a disciplined, well-managed and consistent manner. This methodology promotes the delivery of quality products that are completed on time and within budget. Consilience Software utilizes best practices established by the Project Management Institute (PMI) and documented in the Project Management Body of Knowledge. These standard project management principles are then tightly intertwined with our highly successful Rapid Cycle Time (RCT) software deployment methodology defined in more detail below.

Consilience Software divides projects into more manageable pieces called phases. These phases allow Consilience Software to provide better management and control in order to provide efficient and productive efforts throughout the life of the project. Collectively, these phases are sometimes called the "project life cycle." Although these project phases have been established to complement the project teams' involvement with the tasks, these phases are not stand alone as may be depicted in Figure 6 below. Projects are iterative processes as each phase builds on the previous and phases can overlap at times.

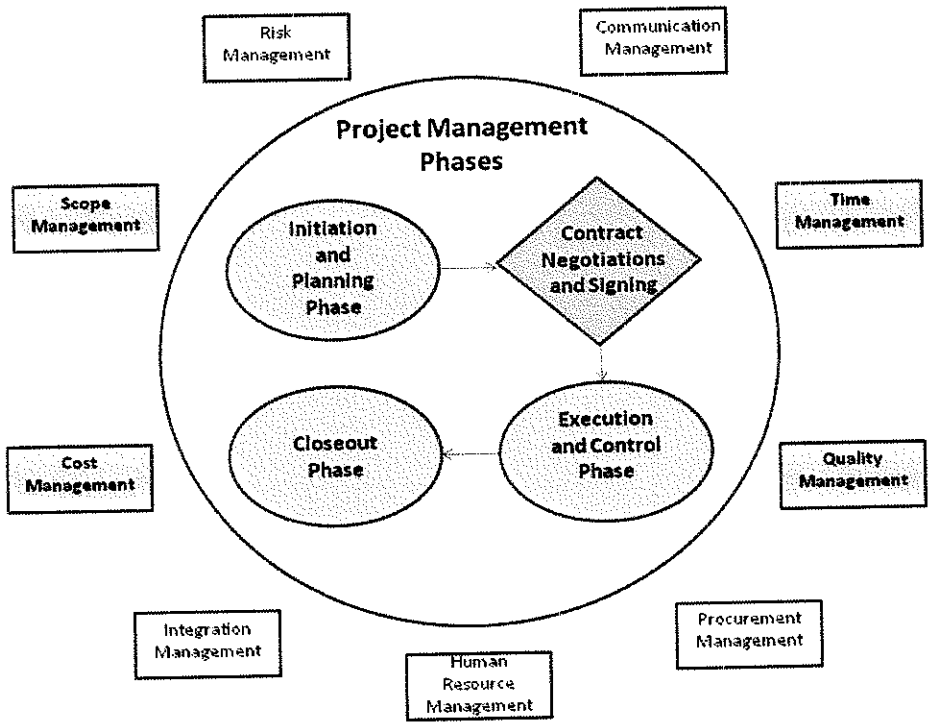


Figure 4 Project Management Phases

Project Management and the Rapid Cycle Time software deployment methodology

Consilience Software has successfully deployed the Maven software suite for a variety of large projects, including Electronic Disease Surveillance (EDSS), Juvenile Case Tracking, and Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP). By implementing an existing proven solution, rather than developing a new case management solution (which requires software code development), greatly enhances our customer's ability to quickly realize the business benefits of an integrated, web-enabled case management system.

Consilience Software uses our Rapid Cycle Time (RCT) software deployment methodology. RCT is one of our core strengths; allowing projects to be deployed rapidly and successfully. RCT is an iterative software development/configuration methodology where the assertions inherent in the plan are repeatedly challenged and evaluated by the design and development of demonstrable versions of Maven. Each version is objectively evaluated to prove that it reduces the project risk, and each builds upon the prior version until the solution is complete. RCT has the following characteristics:

- Iterative application of a set of activities to evaluate a set of assertions, resolve a set of risks, accomplish a set of development objectives, and incrementally produce and refine an effective solution
- Successive refinement of the understanding of the problem, the solution's definition, and the solution's implementation by the repetitive application of core development activities
- Incremental, as each pass through the iterative cycle grows the understanding of the problem and the capability offered by the solution
- Iterative cycles are sequentially arranged to compose the project

Each phase of RCT results in a clearly identifiable deliverable that can be executed and evaluated. Early deliverables, such as a proof of concept and prototype, are incomplete versions of the Maven solution that demonstrate particularly important characteristics required of Maven and address the major technical risks facing the project. As the project progresses, functionality is added incrementally until sufficient functionality is available to enable the system to deliver real business value. After this point, subsequent releases can continue to be developed that implement additional capability.

The Consilience Software Project Management Methodology is a combination of processes to aid the project manager in order to guarantee complete and correct project management, while the technical staff typically carries out the aspects of the RCT methodology. This approach is not intended as a specific model. Instead, it is a generic methodology for project management that accommodates various development approaches and a variety of detailed execution procedures. The Consilience Software Project Management Methodology is a proven, yet flexible, approach that can stand alone or work closely with other organizations or PMOs in jointly managing and closing a successful deployment.

Project Initiation and Planning Phase

The purpose of the Initiation and Planning Phase is to identify and document scope, business requirements, tasks, schedules, risk, quality, budget, and staffing needs prior to Contract signing. The phase begins during early initiation (usually the RFP) and culminates in an Implementation Assessment Workshop (IAW) where requirements are documented in a Requirements Traceability Matrix (RTM). This process greatly increases the understanding of exactly how the requirements are realized in Maven, and to refine the Project Implementation and Payment Plan before the contract is signed.

Prior to Contract Negotiations and Signing, a Project Implementation and Payment Plan (PIPP) is also developed and utilized as the governing body for the project deliverables. Consilience Software, in conjunction with the Customer, is responsible for developing and maintaining the PIPP required in relation to the goals of the project. This document contains the initial project control documents; including timeframes, communication, change management, transition, governance, and risk management plans used throughout the life of the project. The PIPP will be further developed and revised throughout the Project Execution and Control Phase in accordance with agreements set forth by both Consilience Software and the Customer.

Project Initiation and Planning Documents

Requirements Traceability Matrix (RTM)
Project Implementation and Payment Plan (PIPP)
Project Schedule
Project Budget and Milestones
Risk Management Plan
Transition Plan
Communication Plan
Change Management Plan
Project Governance

Contract Negotiations and Signing

Once the budget and scope have been agreed upon, and the above milestones complete, the Contract is then negotiated and signed.

Contract Negotiations and Signing Documents

Contract
Revised PIPP (if required)
Revised Schedule (if required)

Project Execution and Control Phase

The Execution and Control Phase constitutes the majority of the project scope and duration. It is within this phase that the RCT deployment methodology is being fully utilized in conjunction with standard project management principles. There are three (3) general sub-phases in Execution and Control.

Project Kickoff

The project is formally set in motion with all team members and stakeholders holding a set of kickoff meetings. Project management documents and procedures (such as project status meetings and communication plans) are agreed upon and initiated. Additionally, Consilience Software will deploy a functional version of the Maven system to be used to make the modifications outlined in the project plan to meet requirements.

Modification
The next focus is on modifying the Maven system as well as performing other tasks essential to implementing a fully functional system. The modifications are based on the agreed upon scope of the contract and discussions and clarifications provided during the Implementation Assessment. The project plan typically divides question package modeling, workflows, reports, and interface modifications into tranches to facilitate incremental and iterative development.

Transition
The final step in Execution and Control is transitioning the Maven system to production. Tasks included during this phase include train-the-trainer (T3) training, system and user acceptance testing and production roll out. Upon successful completion of this phase a fully functional, web-enabled Maven system will be available for use.

Project Execution and Control Documents

Project Status Reports
Issue List
PIPP (updated)
Weekly Agenda / Minutes
Project Schedule (Updated)

Project Closeout

The Project Closeout Phase involves the administrative and financial efforts needed to close out a project after the work has been completed. Also, during the Closeout Phase the product is transferred to the customer.

Project Closeout Documents

Lessons Learned
Archival
Closeout Report
Project Documentation

Resources and Responsibilities

Stakeholders include all individuals and organizations having a vested interest in the success of a project. Stakeholder participation helps to define, clarify, drive, change, and, ultimately, ensure the success of the project. To ensure project success, the project management team must identify stakeholders early in the project, determine their needs and expectations, and manage and influence those expectations over the course of the project.

Key project stakeholders include (but are not limited to):

- Project Manager - The project manager is an individual appointed and given responsibility for management of the project. The project manager must ensure that the project is successfully executed, completed on time, within budget, and at an acceptable level of quality. Project expectations are for a dedicated resource on both Consilience Software and Customer teams.
- Project Sponsor - The project sponsor is an individual, usually part of the agency management team, who makes the business case for the project. This individual usually has the authority to define project goals, secure resources, and resolve

organizational and priority conflicts. Project expectations are for a dedicated resource on both Consilience Software and Customer teams.

- Advisory Committee – The Advisory Committee provides recommendations to business leaders regarding project initiation or continuance, management, baselines (performance, cost, and schedule), periodic reviews, and any additional follow-up actions required to ensure the success of the project. The Advisory Committee will be comprised of Consilience Software and Customer representatives.
- Project Team (Staff) - The project team includes those individuals that report, either part time or full time, to the project manager and are responsible for the completion of project tasks. The project team includes subject matter experts responsible for executing the project plan. Project expectations are for dedicated resources on both Consilience Software and Customer teams.

Summary

By utilizing proven best practices in project management and software development, Consilience Software provides a structured methodology designed to deliver projects on time and within budget. As displayed in multiple deployments, Consilience Software has a solid record of managing these projects and bringing them to closure. And, as with the Consilience Software suite, the Project Management Methodology is flexible and allows for easy integration with existing Customer PMO groups or existing project management methods.

Appendix D - WVEDSS Requirements

System Performance

	Requirement	Response
1.3.1.1	Response time for any user request should be an average of less than eight (8) seconds; target response time is less than one (1) second. A maximum response time for transactions involving certain long running processes (e.g. reports and exports) should have a target response time of less than two (2) minutes. These requirements must be met in the worst-case scenario - a 128Kb/sec integrated services digital network (ISDN) connection.	Maven EDSS is designed for server response time of 3 seconds for 95 percent of user requests and 5 seconds for 98 percent of user requests, at a case volume of 1,000,000 cases with 500 concurrent user sessions and appropriate hardware. Consilience Software testers have benchmarked these performance metrics for case searches, case creation, and basic reporting, including basic case count lists. These benchmarks were recorded using a quad core, 3 GHz application server, and a quad core, 3 GHz database server. For complex reporting needs Consilience Software recommends incorporating a separate reporting database into the architecture.
1.3.1.2	The system interface should appear the same across all internet connection speeds.	Maven's graphical user interface (GUI) appears consistent across all Internet connection speeds.
1.3.1.3	All data field validations should be verified within the user's browser without sending data to the server.	Maven supports client side key-level validation using input masks to prevent users from entering invalid data fields. Other, more complex, validation rules require server side verification with business level requirements (e.g., expressions, conditions and rules defined in the Maven models).
1.3.1.4	A minimum of 250 concurrent users must be supported by the application software.	Maven EDSS supports over 5,000 registered user, and has been stress tested successfully with over 500 concurrent users. Maven EDSS is currently deployed in production statewide in North Carolina and Massachusetts.
1.3.1.5	A minimum of 10,000 disease investigations per year must be supported by the application software.	Maven EDSS supports this requirement. Consilience Software will work jointly with WVDHHR to configure your unique EDSS architecture to support your

	Requirement	Response
		investigation requirements.
1.3.1.6	When there is a new system update, the fully tested update should be delivered within 30 days.	As part of our maintenance agreement, Consilience Software provides timely Maven EDSS updates as needed which are fully tested and deliverable within 30 days. Typically, Consilience Software works with customers to incorporate additional features/standards with customers through user group meetings and change control processes.

Security

	Requirement	Response
1.3.2.1	System must retain an access log of when a user logs on, logs out, or his/her session times out. This text log will contain the user's account identifier ID, date, time of logon/logout/timeout, and activity type (log in, log out, time out). This log must be stored in Comma Separated Value (CSV) format and easily accessible for analysis by the system administrator.	Maven keeps track of user access and also user inactivity. It uses activity reports to show such information clearly to the authorized user. These logs and reports are permission driven and can be made available in CSV format.
1.3.2.2	System must support strong password functionality that can be configured by the system administrator. These capabilities include the length of passwords, types of characters required (numbers, symbols, uppercase letters, lowercase letters), the password change interval in days, and the user password expiration notification in days.	Maven allows each deployment to specify what constitutes a valid password. The listed capabilities are exposed as system settings and can be configured by a WVDHHR administrator using the Maven System Administrator Dashboard.
1.3.2.3	Must use Advanced encryption standard (AES) or other industry standard of data security through strong encryption, minimum of 128-bit, in all external communication.	Communications with Maven are sent/received using SSL encryption.
1.3.2.4	System must monitor and report any unauthorized access attempts to the system administrator.	Maven automatically keeps track of login attempts (both successful and non-successful) in its login history table.
1.3.2.5	System must support multiple user account status options to minimally include: 'Inactive or locked', 'Active', and 'Must change password upon next login'. System should provide an audit log of access changes.	Maven supports all of the listed user account status. Access changes are stored in the Maven audit tables.

	Requirement	Response
1.3.2.6	System must alert users to an expiring password based on the user password expiration notification set by the administrator and prompt the user to change their password in advance of expiration.	Maven provides password expiration alerts based on the pre-defined password policies.
1.3.2.7	System must allow users to change their own password after successfully logging into the application and enforce strong password functionality as discussed in 1.3.2.2.	End-users have the ability to update their passwords in the user management section of the main application conforming to the pre-defined password policies.
1.3.2.8	System must support a 'forgotten password' functionality that requires the user to enter their e-mail address account ID. If the ID exists as a valid account that is not inactive or locked, the system will then generate a new, random password that will be e-mailed to the user for a single use. The system will force the user to change this password after successfully logging in.	Maven provides the 'Reset Password' functionality that asks a security question (answer previously provided by the user) which, if answered correctly and a valid e-mail address account exists, an e-mail is sent out to the user allowing them to reset their password. This capability is controlled system settings and can be disabled /enabled as necessary.
1.3.2.9	System must allow the system administrator to restrict user account access by system function (query, export, report, etc.), disease condition, facility, and/or jurisdiction. System should provide an audit log of access changes, e.g.: who granted user access, what type of access, user name, date of creation and modification.	Maven roles and groups can be configured using permissions, disease access lists, as well as expression driven conditions. The combination of these configurations addresses each and every case listed. Access changes are stored in the Maven audit tables.
1.3.2.10	The vendor will provide system upgrades, patches and other changes to the application via a secure (login/password) file transfer protocol FTP site that can be accessed only by West Virginia technical staff to obtain appropriate files and documentation.	Consilience Software provides upgrades and patches as outlined in our standard maintenance agreements. Please note efficient support requires remote access to non-production environments to facilitate collaborative, interactive problem resolution with WVDHHR IT personnel. Consilience Software makes new core product releases available in a shared version control repository. The release documentation and scripts are then used by WVDHHR staff to "overlay" WVEDSS specific configuration and then deploy to the appropriate environment.
1.3.2.11	Any configurations required for the system to be installed and to run on the West Virginia test/training and production databases will be built into the source code provided by the vendor. West Virginia staff will not modify installation and/or configuration files provided by the vendor for either environment.	Maven configuration will be built into the deployment. Consilience Software technical team will work closely with WVDHHR personnel to configure the Maven solution prior to deployment.

	Requirement	Response
1.3.2.12	The vendor will provide "back out" procedures in the event a version of the application needs to be uninstalled by West Virginia staff.	Consilience will provide step-by-step procedures to be followed in the event a version of its application needs to be uninstalled.
1.3.2.13	System must store all passwords in Advanced Encryption Standard (AES) or other industry standard encrypted format.	Passwords are SHA encrypted. Passwords are not passed as open text and are not stored as open text.
1.3.2.14	System must not use schema owner or privileged user (SYS, SYSTEM, etc) to connect to the database.	A Maven specific user will be created for the process.
1.3.2.15	System must use least privileged user to connect to database. The user utilized to connect to the database for configuring strong password parameters should not be the same user connecting to the database for other administrative processes and that should not be the same user connecting to the database for update, or the user connecting to the database for query, etc.	Maven connects to the database with a user different from any administrator user. Additional users will be defined (with special roles) for specific administrative processes.
1.3.2.16	System should be tested to mitigate the Top 25 Most Dangerous Programming Errors as developed by SANS (SysAdmin, Audit, Network, Security) Institute/Mitre Corporation. This may be found in the attached 2009 CWE/SANS (Common Weakness Enumeration) Top 25 Most Dangerous Programming Errors or on-line at http://cwe.mitre.org/top25. Generate reports detailing any security issues from the top25 list.	Maven utilizes best software practices to guard again issues like SQL injection (see below), input data validation (configurable per deployment), user access and roles, audit logs and thorough testing of the entire application prior to each release.
1.3.2,17	There should not be any structured query language (SQL), either static or dynamic, executed on any web page. All queries, inserts and updates should be handled by passing parameters to stored procedures. If not explain how you will safeguard against SQL injection attacks.	Maven guards against SQL injection attacks through the use of prepared statements and validation of the input parameters. Maven has also been successfully tested against SQL injection attacks using the Rational AppScan tool.

Data Validation

	Requirement	Response
1.3.3.1	All dates including but not limited to onset date, report date, date of death, etc. provided in the course of a disease investigation should be equal to or greater than the birth date.	Date validation is provided in the core product and is configured in deployment. Using the Maven Model Manager (an easy to use, graphical configuration tool), data field order, validation, size, and tool tip can be configured without any code changes to further optimize WVDHHR date verification requirements.
1.3.3.2	After input validation and before leaving the current data entry screen, the system should clearly indicate to or warn the user of any missing or incorrect required data specific to the screen.	Data validation for incorrect or missing information is provided in the core product and configured in deployment. Initial validation is performed at data entry while saving, without leaving the screen, the form.
1.3.3.3	Any specific disease question validations specified by the system administrator (see 1.3.4.1.3).	Maven is configured during deployment to validate the formatting or consistency of data throughout the workflow process, not just upon entry. Maven allows data validation business rules to be configured to alert users (e.g. data consistency checks (symptom onset date >= DOB etc.)). All data fields collected through Maven question packages (demographic data, clinical data, hospitalization data, risk history, etc.) can be configured as optional or required, and the overall status of the data collection (number of missing required answers and question package complete/incomplete status) is always available to the user.
1.3.3.4	Measurement units must always be displayed for any question that expects a user response keyed in a specific measurement system.	Data format validation and display is provided in the core product and is configured in deployment.

System Administration Function

	Requirement	Response
1.3.4.1	***Disease Condition Management***	
1.3.4.1.1	System must allow the system administrator to define new disease conditions and disease groupings (e.g., foodborne) without vendor involvement.	Maven allows creation and administration of Products (diseases) and Models (disease groupings) without any programming, entirely through the Maven Model Manager.
1.3.4.1.2	System must allow the system administrator to define new disease condition questions and group these questions into disease-specific questionnaires without vendor involvement.	Maven allows creation and administration of Question Packages (disease-specific questionnaires) and Questions (Questions within Question Packages) without any programming, entirely through our Java/Swing-based Maven Model Manager.
1.3.4.1.3	System must allow the system administrator to define attributes associated with disease questions. At a minimum, these attributes must include: · Value auditing (e.g., tracking of old and new values) · Required fields · Data types (alphanumeric, numeric) · Acceptable discrete values (e.g., Yes or No) or a valid value range (0 — 24) · User roles/role groups that can view the question · User roles/role groups that can respond to the question · Context sensitivity (questions are only presented based on responses to previous questions) · Date range during which the question is effective and visible to users	Maven provides extensive audit trail functionality associated with any particular question in a Question Package. Each question: • is able to be determined, and subsequently changed as necessary, as "required" or optional. • allows users to determine a question response data type as a Numeric, String, Date, and other data types. • allows creation of Selection Choices (for Y/N type of questions). Effective dates (start-end) for each question. Additionally, using the Maven Model Manager WVDHHR users can implement logic governing appearance of the question based on other question responses. For question level security Maven provides View Restrictions and Update Restrictions based on user's security level. For question level security Maven provides View Restrictions and Update Restrictions based on user's security level and user group.
1.3.4.2	***General Functions***	
1.3.4.2.1	System must be able to show the number of concurrent users accessing the system at any given time and the maximum number of concurrent users since the system was started in a graphical interface available to the system administrator.	Maven offers a Security Access Log which provides information on Login Attempts, Login Failures, Application Usage (by Type), Application Usage (by Time), Operating Systems, Browsers, and Login Attempt Details.

	Requirement	Response
1.3.4.2.2	System must be able to broadcast instant messages to users about system problems or general announcements. These messages must be displayed in the application to all active users whenever their session refreshes the browser screen.	Maven provides a system notices framework, which system administrators can use to alert users to general announcements (system upgrades, new guidelines etc.)
1.3.4.2.3	System must support a "message of the day" (MOTD) functionality configurable by the system administrator to alert users of upcoming events immediately after user login.	Maven provides a system notices framework, which system administrators can use to alert users to general announcements. These notices can also be used to communicate "Message of the day" type messages.
1.3.4.2.4	Code and data validation tables will be used whenever possible to facilitate the maintenance of and changes to system operation. West Virginia technical staff should be able to perform most configuration and administrative tasks without any programming. A minimal level of technical expertise should be required for customization and maintenance, (e.g., changes to disease questionnaires, changes to look up tables, changes to reports, etc.).	The entire Maven configuration, customization and administration can be done without any programming, through either Web interface or using supplied tools like the Maven Model Manager. Maven's inherent Ad Hoc Reporting feature allows West Virginia business users to implement line list, statistical, case count and crosstab reports without any programming.
1.3.4.2.5	The vendor will provide all system installation and related technical documentation — one copy in both paper and electronic formats with rights for state to reproduce and or modify for specific users.	Consilience Software provides technical documentation as part of the Maven implementation.
1.3.4.3	***Geography and Facility Management***	
1.3.4.3.1	System must allow the system administrator to define public health jurisdictions including multi-county jurisdictions and regional county aggregations without vendor involvement.	Groups of users can be defined in Maven to associate users by jurisdiction or geography. Using the Maven System Administrator Dashboard WVDHHR authorized users can define these groups.
1.3.4.3.2	System must allow the creation of non-geographic entities to represent private facilities such as hospitals.	Using the Maven System Administrator Dashboard WVDHHR authorized users can represent members of private organizations including hospitals and, potentially, health care providers, as required.
1.3.4.3.3	System must allow the assignment of users to non-geographic entities that can share cases within the entity.	Maven security settings can be designed to allow sharing of cases within a user group (as configured above) but to provide limited or no access to those outside of this group.
1.3.4.3.4	System must allow a designated administrator for geographic and non-geographic entities to manage the user accounts assigned to those entities.	Maven allows WVDHHR to designate an administrator for geographic and/or non-geographic entities to manage the user accounts for those entities. Furthermore, each group in Maven, can have one or more designed group administrators. A group administrator can manage the membership of the groups they

	Requirement	Response
		administer such as adding and editing users (within WVDHHR specified security constraints).
1.3.4.4	***User and Role Management***	
1.3.4.4.1	System must support the ability to list user accounts and sort this list in ascending and descending order by user ID (e-mail address), account status (active, inactive, etc.), and user role at a minimum.	Using the Maven System Administrator Dashboard, designated WVDHHR users can access user account lists. This listing includes login name, full name, email, status, groups, roles and time of last login.
1.3.4.4.2	System must allow a user (ID) to consist of an e-mail address. User id and/or e-mail address should not be the primary key and/or foreign keys to any table.	An email address can be used as a user id in Maven. This field is not used as a primary or foreign key and once created the user id cannot be changed for a given user.
1.3.4.4.3	System must support the ability to export the list of user account IDs, account status, and user roles in a (CSV) formatted file.	User, role and group information in Maven can be exported in XML format through the Maven System Administrator Dashboard. CSV format is provided in a WVDHHR designated reports.
1.3.4.4.4	System must allow the system administrator to define new role groups or role classes without vendor involvement. For example, one class **of** roles could be "Public Health" and another "Private Sector".	Creating roles and groups and assigning them to users can be performed in the Maven System Administrator Dashboard by designated WVDHHR system administrators to meet changing requirements.
1.3.4.4.5	System must allow the system administrator to define new user roles without vendor involvement.	Roles can be created or edited in the Maven System Administrator Dashboard by designated WVDHHR system administrators to meet changing requirements.
1.3.4.4.6	System must allow the system administrator to assign system rights and privileges to user roles and/or role groups without vendor involvement.	The role editing screen in Maven allows rights to be added and removed at any time.

General Systems Functions

	Requirement	Response
1.3.5.1	System must guide the user through the desired process by suggesting next steps.	Maven offers ability to have descriptions in the workflow that can aid users to perform expected actions. Maven enables reflexive questioning where, based on how users answer specific questions, additional questions are either revealed or not revealed. Messages can also be added to the question package in order to guide users as to how they should answer questions.
1.3.5.2	System must allow flexibility in the order in which participant data are entered and allow the user to save screen data that may not have all fields completed.	Maven allows user to enter and save data as they receive them through the life of a case.
1.3.5.3	The user interface must use industry standard navigational methods and offer the user the option of using the mouse, keyboard, or menu navigation.	Maven allows users to use industry standard navigational methods.
1.3.5.4	Navigation through each field on a screen must be consistent and in the order of presentation.	The Maven application is designed so that the navigation is as consistent as possible
1.3.5.5	Fields on input screens should be entirely visible. The system must avoid forcing the user to scroll to see additional information. If the user is forced to scroll to see additional information, there must be instructions on the screen prompting them to do so.	Maven is designed to optimize screen area use, and most screens in Maven require no or minimal scrolling. The size of the data collection screens depends largely on the configuration used by WVDHHR to collect disease specific information, and browser environment specific settings (e.g., enlarged font size or screen resolution) may impact the size of the visible area. On these screens the system identifies the both the number of questions presented to the user and the number of remaining unfilled questions. In addition standard scroll bars are used to indicate that additional content exists on the web page. Consilience Software will work jointly with WVDHHR to minimize question packages to thereby minimize the need to scroll to see additional information.
1.3.5.6	System must clearly indicate to the user what fields are required. Required fields must be configurable by the system administrator.	Required fields are identified on the question package screen with an asterisk and are defined in the model, on a question by question basis, by designated WVDHHR users using the Maven System Administrator Dashboard.

	Requirement	Response
1.3.5.7	System should use attention-focusing features, such as color and highlights, whenever possible.	Maven utilizes colors and highlights to help user navigation where possible. Maven is Section 508 compliant.
1.3.5.8	System must maintain the same "look and feel" across modules, both in screen and menu design.	Maven screens are designed to maintain the same look and feel across all screens
1.3.5.9	System should minimize the use of pop-up boxes for input of additional information.	To increase simplicity of use, Consilience Software will work jointly with WVDHHR during project implementation to minimize pop-up boxes for input based on WVDHHR requirements.
1.3.5.10	The screen elements must include descriptive text on the screen or through the use of "tool tips" that appear when the user hovers over a symbol, icon, or button.	Maven navigations include tooltips and descriptive text to aid user navigation.
1.3.5.11	The user interface should carry critical investigation information from screen to screen, e.g., patient name, when possible.	Maven screens are designed so that critical information, such as the patient name, is prominently displayed when each question package is opened.
1.3.5.12	The user interface will present drop down boxes for selection lists. Lists should be searchable through the use of initial characters.	Maven allows drop down lists to be used for selection and is searchable by initial characters dependant on the client's internet browser. Maven also enables designated WVDHHR users to modify, without IT programming support, these drop-down lists to meet changing requirements.
1.3.5.13	Tabs on tab panels should not re-arrange as the user selects a tab. Placement of tabs should reflect the workflow.	Maven tabs are static and location and do not rearrange as user selects them.
1.3.5.14	System will have an on-line help for all functional areas. The on-line help should be context sensitive, in that it directs the user to the documentation pertaining to the current screen. The on-line help should be searchable by word or phrase.	Maven screens include help buttons which brings up the online Maven manual for the associated screen opened by default. The online help is searchable as with regular web pages.
1.3.5.15	All screens must provide the user with a cancel function, which will take the operator back to a menu or other convenient point. If information has been entered onto the screen, the user will be presented with an option to save the information, if possible.	All screens in Maven where users enter data all allow the user to cancel so that no data is saved.

	Requirement	Response
1.3.5.16	System will be highly configurable by the system administrator. The system administrator must be able to design, develop, and implement new functionality and features without vendor-based assistance or hard coding by the vendor. West Virginia modifications and custom configurations must be maintained if a new version or upgrade is deployed.	Using the Maven System Administrator Dashboard and the Maven Model Manager designated WVDHHR system administrators can design, develop, and implement new functionality and features without Consilience Software-based or West Virginia IT programmer assistance or hard coding by the Consilience Software or West Virginia IT programmers. These modifications and custom question package configurations are maintained as new versions to the underlying Maven source code are provided to West Virginia for upgrade.
1.3.5.17	System must be based on a visual model manager for easy configuration changes without source code changes.	The Maven Model Manager Tool aids designated WVDHHR users to make modifications, as needed to meet changing requirements, of WVEDSS models. Maven allows creation and administration of Question Packages (disease-specific questionnaires) and Questions (Questions within Question Packages) without any programming, entirely through our Java/Swing-based Maven Model Manager

Disease Investigation

	Requirement	Response
1.3.6.1	***Address Functions***	
1.3.6.1.1	System must collect and store patient address separately from investigation address.	Maven stores a complete address history for the patient as well as an address for each case investigation.
1.3.6.1.2	System must automatically attempt to assign cases to a defined jurisdiction based on the stored patient address, unless an alternate investigation address is specified. If an alternate investigation address is supplied, the system must assign the case to a defined jurisdiction based on the investigation address.	Maven allows a flexible jurisdiction assignment process that can be customized to meet WVDHHR requirements.
1.3.6.2	***Aggregate Case Collection Capabilities***	
1.3.6.2.1	System must support the reporting of aggregate case counts for certain conditions identified by the system administrator by jurisdiction.	Maven comes with various reports, including case count reports. Using the Maven System Administrator Dashboard designated WVDHHR users can implement ad hoc reports. This Ad Hoc Report feature provides WVDHHR users a visual report building tool that allows creation of several types of reports (case counts, line list, statistical breakdowns, and cross-tabular counts) with no coding or server downtime required.
1.3.6.2.2	System must allow jurisdiction staff to enter and edit current and previous aggregate case counts as needed.	Maven can be customized to store aggregate case counts as data which are editable by system users.
1.3.6.3	***Auditing Capabilities***	
1.3.6.3.1	System must support strong auditing controls. The investigation audit log must track the following events: view, export, modify (with old and new values for all questions where value auditing has been enabled), report, NETSS (The National Electronic Telecommunications System for Surveillance) export, and CDC (Centers for Disease Control and Prevention) electronic message with the associated user ID, date, and time that the event occurred. Migrate the NETSS export as the NETSS legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.	Maven supports strong auditing of events in the system such as case viewing, case searching, case export, case modification, case reporting, and case extraction. The Maven Model Manager provides designated WVDHHR users the ability to easily configure, on a question by question basis, which question should be audited at the system level thereby saving database space.

	Requirement	Response
1.3.6.3.2	System must provide access to the audit log in a graphical user interface within the system that permits sorting by any field header, printing, and exporting in (CSV) format.	Maven comes with two built-in Audit Trail viewing reports. One allows viewing of all audit events on a particular case investigation. The other has case creation date, user, and type of audit event as parameters. The output is provided either as formatted HTML that can be printed, or as an Excel export that can then be sorted by any columns.
1.3.6.3.3	System must provide a mechanism to mask audit entries created by public health users from non-public health users.	The reports mentioned in 1.3.6.3.2 can be customized to mask or exclude certain audit trail entries based on customer requirements.
1.3.6.4	***De-Duplication of Patients and Investigations***	
1.3.6.4.1	System must provide automated patient de-duplication functionality to users with appropriate permissions. This function must identify potential duplicate patients and allow the authorized user to choose values from each duplicate patient record to be merged into a new patient record. The system will not automatically merge patients without user review and approval.	Maven comes with a well developed and flexible de-duplication algorithm. Different patient attributes (such as name, DOB, address, social security number) can be assigned weights. In addition, threshold levels can be assigned to tell the Maven-enabled WVEDSS when to consider two patients as potential or full matches. By setting the full match threshold to a high value, the system will never automatically merge two patients without user review and approval.
1.3.6.4.2	System must be able to unmerge any patient records that were previously merged, maintaining the data integrity and history of each.	Maven allows the user to merge cases as part of the deduplication process. Case unmerging, however, creates a data integrity issue that Maven is unable to resolve. For example, if two records were merged and, after merging, additional information was entered in the patient event, it would be impossible to determine which patient event this new data would be required to be assigned. Unmerging previously merged events would require WVDHHR staff to manually unmerge the events.

	Requirement	Response
1.3.6.4.3	System must provide automated de-duplication logic to identify investigations that may be for the same patient and disease condition. An authorized user will be presented with a list of possible duplicate investigations for manual review. The user will determine which investigation should replace another.	Maven provides automated de-duplication logic for case investigations for the same patient and disease condition, and within a configured re-infection period for each disease. Authorized WVDHHR users can either merge two potential duplicate cases or mark them as separate cases. During the merge, the user can specify which investigation has priority in the merge in case two questions are answered differently in the two investigations. Merging of answered questions from the non-primary investigation can be enabled or disabled at the system level.
1.3.6.4.4	System must be able to reverse any previous investigation replacement, maintaining the data integrity and history of each.	Maven allows the user to merge cases as part of the deduplication process. Case unmerging, however, creates a data integrity issue that Maven is unable to resolve. For example if two records were merged and after merging additional information was entered in the patient event it would be impossible to determine which patient event this new data would be required to be assigned. Unmerging previously merged events would require WVDHHR staff to manually unmerge the events.
1.3.6.5	***General Capabilities***	
1.3.6.5.1	System must provide a way to create non-human cases to support investigations (e.g., rabies, West Nile) that may originate with an animal.	Maven allows WVDHHR to store different entities in the Maven-enable WVEDSS (e.g. persons, animals, organizations). Maven allows WVDHHR staff to flexibly configure which party fields are required and subsequently appear in the appropriate question package for these different entities (for example, animals will not have mother's maiden names)

	Requirement	Response
1.3.6.5.2	System must track legacy question data and make this data available to end users. For example, if a question on a specific disease questionnaire is replaced or dropped, the old question and its associated responses must remain available for query, export, and reporting purposes when accessing data for a timeframe during which the legacy data was relevant.	Maven fully complies. Using the Maven Model Manager, WVDHHR staff designates which start and end dates are specified for each question or group of questions. Each case investigation has a configurable, calculated Effective Date (default is the creation date), and if the Effective Date falls within the start and end dates for a question, then that question is asked for the case investigation. This way, if a specific question was asked last year, then today, users can still edit the answer for cases created last year, but not for new cases. That question's answer is stored in the database and is available to SQL queries, reports, workflows, and export.
1.3.6.5.3	System must provide integrated e-mail alerting and notification functionality with triggers for time, jurisdiction, and disease condition(s). Authorized users should only receive alerts for cases to which they have access. The alert e-mail must not contain any sensitive information including patient name, address, or disease condition.	Maven comes with a SMTP email sending interface and is capable of sending emails based on client requirements. The emails are generated based on configurable email templates stored in the system.
1.3.6.5.4	The system must provide a warning to a user upon investigation submission if the user will lose access to the case for any reason (out-of-jurisdiction investigation address, user is unauthorized for disease condition, etc.).	Maven, through its inherent automatic case share functionality, allows WVEDSS users who created the case to retain access to the case. If the case is for a different jurisdiction, the users from the owning jurisdiction can revoke the case share as required.
1.3.6.5.5	System must allow any list presented to the user to be sorted in ascending or descending order by any displayed field by clicking the column header.	Maven allows sorting by clicking on the list's column headers.
1.3.6.5.6	System must allow any presentation list to be exported in (CSV) format.	Maven allows all tabular reports to be exported into Excel.

	Requirement	Response
1.3.6.5.7	System must support multiple case status options including, at a minimum: - Confirmed - Not a Case - Probable - Suspect - Unknown	Maven allows WVDHHR to determine the case status options including but not limited to the options specified in this requirement.
1.3.6.5.8	System must support multiple levels of public health investigation. This includes, at a minimum: - private facilities (such as hospitals and laboratories) - local public health - regional public health - state public health	Maven supports multiple levels of investigation, and a flexible security model that can be configured to WVDHHR requirements including, but not limited to, the options specified in this requirement.
1.3.6.6	***Notes and File Attachments***	
1.3.6.6.1	System must allow users to attach files of any type to investigations. The maximum file size accepted cannot be less than one (1) megabyte.	Maven allows WVDHHR users to attach electronic documents to any case investigations. The current maximum file size is 10 megabytes, but can be increased as required. Attachments are compressed when stored to minimize the space required.
1.3.6.6.2	System must allow users to create investigation notes with a minimum length of 2,500 characters.	Maven allows users to create investigation notes, with each note being up to 2,500 characters. Each note is stamped with the time it was created and the user who created it.
1.3.6.6.3	System must allow the administrator to mask inappropriate investigation notes or attachments that were maliciously or mistakenly attached to an investigation without vendor involvement.	Users with a specific permission can remove attachments from an investigation. Notes can be removed through simple, direct SQL queries on the database.
1.3.6.6.4	System must provide a way to mask notes and attachments created by public health users from non-public health users.	Viewing of notes and attachments is controlled by permissions in Maven. Certain user roles for non-public health users can be configured to not allow access to attachments or notes. Furthermore, notes are marked as regular or sensitive at the time of creation, and there are two separate permissions for view regular or sensitive notes.

	Requirement	Response
1.3.6.7	***Printing Capabilities***	
1.3.6.7.1	System must provide the user with a method of producing a complete printed version of the case investigation with all notes and the filenames of any attachments.	Maven allows WVDHHR staff to dynamically develop, as needed, print templates including one that shows all the data for a particular case investigation, including notes and names of attachments.
1.3.6.7.2	System must provide the user with a method to print a completely blank disease questionnaire for field data collection.	Currently, in the system, an empty case may be opened to the questions page and then printed. Maven also includes an "offline mode" that allows users use mobile devices such as laptops, PDAs or telephones to the field and perform required Maven functions such as create new cases or make changes to existing ones. Once these cases are entered and Internet connectivity is established the mobile device is synchronized with the WVEDSS.
1.3.6.7.3	The user should be able to print a case investigation, even if data entry is incomplete.	Case investigations can be printed at any time using a built in Print Template mentioned in 1.3.6.7.1
1.3.6.7.4	System must be able to generate printed correspondence that can be sent to the following: · a physician requesting more data about subject · a subject requesting more data · a local health department or other entity requesting more data about subject	Maven supports both simple and complex generation letters from Print Templates. Existing Word or RTF documents can be used as Print Templates with Maven filling in information specific to a case investigation. The generated letters can be bulk printed for many cases at a time providing efficiency in the process
1.3.6.8	***Spatial Visualization***	
1.3.6.8.1	System must provide integrated address standardization, cleaning, and geo-coding functionality to accurately map physical addresses to latitude/longitude coordinates.	Maven provides integrated address standardization, cleaning and geo-coding functionality. Maven can interface with different geo-coding providers to map addresses to latitude/longitude coordinates.
1.3.6.8.2	System must provide integrated, Web-based geographic information system (GIS) data visualization/mapping functionality to the end user.	Maven provides data visualization/mapping functionality to the end user as reports which are tabular viewed, in a Google Map format, or in a standard KML file that can be opened in Google Earth or another WVDHHR designated GIS system.

	Requirement	Response
1.3.6.9	***Query Capabilities***	
1.3.6.9.1	System must provide an integrated query ability to find, at a minimum, matching investigations by patient name, jurisdiction, facility, disease condition, disease group, investigation status, disease onset date, disease report date, and case status.	Maven provides a customizable search capability. The search screen can be configured to contain all of the parameters mentioned in this requirement, as well as any question that is asked for case investigations.
1.3.6.9.2	System must provide an integrated disease question query to find matching investigations by using criteria based on disease questions. For example, if a disease questionnaire asks the question "Please select all symptoms below: Diarrhea, Vomiting, Fever, and Trouble Breathing", the user should be able to query that questionnaire for all cases that exhibited vomiting.	As highlighted in 1.3.6.9.1, Maven allows any question asked for case investigations to be used as a parameter for searching by the end users.
1.3.6.9.3	The results of any query must be exportable in (CSV) format.	Maven Ad Hoc reporting allows users to configure customizable case listing reports, the results of which can, subsequently, be exported to Excel.
1.3.6.9.4	System must allow users to define and store custom queries for easy re-use	Maven allows users with appropriate permissions to define and store reports with their own queries built either using a visual design tool within Maven or with SQL.

Reports and Data Export

	Requirement	Response
1.3.7.1	***Centers for Disease Control and Prevention (CDC) Exports***	
1.3.7.1.1	System must produce a CDC National Electronic Telecommunications System (NETSS) compatible file for weekly transmission to the CDC. This would include core and extended record data for specific conditions and the calculation of the correct Morbidity and Mortality Weekly Report (MMWR) week and year based on established CDC algorithms. Please request a copy of the NETSS Record Layout manual, if needed. Migrate the NETSS export as the NETSS legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available	Maven supports transmission of the required data to CDC for nationally notifiable infectious diseases. Maven comes with a variety of CDC extracts pre-built. These extracts include NETSS, TIMS, STD-MIS, eHARS and Arbonet. Consilience Software is currently working with CDC on the NNDS message framework as well.
1.3.7.1.2	System must be able to produce NETSS deletion and verification records as appropriate. System must migrate to meet the needs of the new **PHIN** message mapping guides as they become available.	As part of our maintenance agreement, Consilience Software provides timely Maven WVEDSS updates as needed to conform to PHIN certification and other relevant CDC standards. Typically, Consilience Software works with customers to incorporate additional features/standards determined in user group meetings as well as through mutually agreed upon change control processes.
1.3.7.1.3	System must allow the administrator to define the MMWR week used for the NETSS export as the report date — date that the investigation was entered into the system. Migrate all NETSS functionality as the NETSS application and legacy data format specifications will be replaced with PHIN Message Mapping Guides as they become available.	Maven allows the system administrator to define the MMWR week/month/year as parameters for the NETSS extract.
1.3.7.1.4	System must produce electronic messages that are compatible with finalized CDC messaging guides for specific disease conditions. See http://www.cdc.dov/phin/resources/duides.html.	Consilience Software has a working relationship with the CDC. We attend regular meetings and get/provide updates from CDC (NMUG calls, NOW meeting updates, PHIN certification meetings, NNDS message meetings). Maven supports finalized CDC protocols in accordance to the PHIN standard.

	Requirement	Response
1.3.7.2	***General Report and Export Functions***	
1.3.7.2.1	System must have an extendable report functionality that allows for the addition of new reports.	Existing reports can be modified or new reports can be added through the Maven System Administrator Dashboard. Maven EDSS comes with a large number of canned reports which WVDHHR can use.
1.3.7.2.2	System must allow the system administrator to create standard "canned" reports that can be made available to users.	Maven supports variety canned reports such as cross tabular, line list, as well as graphical analysis.

	Requirement	Response
1.3.7.2.3	System will restrict access to reports based on user roles.	Maven have extensive role and group based filtering and security as described below which is used to restrict report access. **Role-based security** Maven provides role based security where users are associated with a role and a role has a set of permissions that enable/disable particular parts of the application for that specific role. The roles are configurable. Permissions are extensible to cover custom extensions. Maven comes with a set of pre-defined roles and an N number of custom roles can be further defined during deployment. **Group-based security** Maven also provides the ability to group users. By default, these groups of users can share data within each other and not with members outside the group. However, if a user is part of a role that has appropriate permissions, they are not restricted by their user groups. This feature along with role based security provides substantial flexibility in security modeling. **Case-level security** Maven Security Manager can be extended to provide deployment specific case level security in advanced security schemes. Such is usually done through Security Expressions defined for a User Group. **Field-level security** Each data field within Maven has a restriction level indicating the sensitivity of the data field. Each role also has a permission indicating the level of sensitive information they can view/edit. For example, a user with Level 5 access can view/edit all fields with restriction level less than or equal to 5, but nothing above level 5. Furthermore data fields can be defined as read-only, editable and not-visible.
1.3.7.2.4	System must provide screen preview and printer options for all reports.	Maven contains preview, print, and export functionality for all reports.

	Requirement	Response
1.3.7.2.5	System will provide the capability to apply suppression rules for minimally aggregated data.	Maven can show minimally aggregated data if the result set is larger than WVDHHR defined criteria.
1.3.7.2.6	System must provide for the selective export of disease question data by an individual user, restricted by the user's privileges, in (CSV) text formats for further analysis in third party tools.	Maven allows WVDHHR, based on role and group security, to limit the export of specific question data. This export is in CSV data format.
1.3.7.2.7	System must export data and data field names in a human readable form based on the disease questionnaire instead of coded values.	Maven can export data and data field in human readable form or coded values based on the user configuration.
1.3.7.3	***Specific Reports and Exports***	
1.3.7.3.1	System must support an administrative report that can track timeliness between all levels of investigation and display the average number of days that have elapsed between investigation levels. This report will allow the user to select all or specific jurisdictions, investigation levels, and an onset/report date range and then display the average number of days by disease condition that an investigation is held at each level.	Maven supports this administrative report as defined.
1.3.7.3.2	System must also export the specific date data used to calculate the number of days specified in 1.3.7.3.1 for further analysis. For example, an epidemiologist should be able to specify an onset/report date range, disease condition(s), and jurisdiction(s) and then be presented with a data export in (CSV) format containing the last date that each investigation level handled the case in a line listing with other variables including, at a minimum, investigation ID.	All reports can take custom defined parameters and be exported as CSV file format.
1.3.7.3.3	System must provide a "line listing" report that can provide all patient demographic information, disease condition, onset and report date, jurisdiction, region, investigation status, and case status in CSV format.	Maven has the ability to allow system administrator to define line list reports that contain any case data as well as restricted by custom parameters and role/group security.

Electronic Laboratory Reporting (ELR)

	Requirement	Response
1.3.8.1	System must be capable of importing Health Level 7 (HL7) 2.3.x and 2.5.x messages.	Maven is currently deployed in production that process HL7 2.3.x and 2.5.x messages.
1.3.8.2	System must be easily modifiable to accept future HL7 versions as they are adopted and approved by the CDC.	HL7 processing is part of Maven core and as HL7 versions are adopted and approved by the CDC, the HL7 processing module will be updated as well.
1.3.8.3	System shall parse all required and any optional data fields as defined by the CDC implementation guidelines at http://www.cdc.flOv/phin/resources/quides.html.	Maven supports PHIN messaging standards as defined by CDC implementation guideline.
1.3.8.4	System must process all messages received, even if these messages are in HL7 batch format.	Maven processes all HL7 messages including HL7 batch format.
1.3.8.5	System must support Logical Observation Identifiers, Names and Codes (LOINC) and Systematized Nomenclature of Medicine (SNOMED) code assignments by individual facility.	Maven by default contains LOINC to SNOMED code mapping and this can be configured for individual facilities.
1.3.8.6	System must support local code assignments by each facility.	Maven supports local code assignments through Maven Reference Code Management facilities.
1.3.8.7	System must allow the system administrator to view, modify, and remove LOINC, SNOMED, and local facility code assignments without vendor intervention.	Maven allows an authorized user to modify data dictionaries. Such vocabulary is stored as reference data that is user configurable.
1.3.8.8	System must possess logic to identify problematic HL7 messages and present these for human review without detriment to system stability. The system will notify a designated user or users if a message cannot be parsed and hold the message in a separate queue for viewing to determine and resolve the problem, if possible. For example, messages that do not comply with HL7 syntax or have missing or unrecognized LOINC, SNOMED, or local facility codes should be manually reviewed.	Maven automatically identifies problematic HL7 messages and places them in the appropriate workflow queue for manual intervention.

	Requirement	Response
1.3.8.9	System must possess logic to identify ELR messages that could be associated with existing investigations. An authorized user will be able to view these messages and process them as the start of a new case investigation or append them to an existing case as a secondary laboratory report.	Maven uses a configurable field-weighted algorithm to evaluate matches between incoming data and existing cases or parties in the system. Incoming records that have a 100% (or other threshold) match to an existing entity can be linked automatically. Non-matches or matches with a less certain correlation can either create new parties and cases or queue into a workflow for manual inspection and linking by State personnel. This behavior is configurable, including field weights and threshold levels for matching.
1.3.8.10	System must identify duplicate ELR messages and send a notice to a designated user or users that a message has been received and is awaiting manual disposition.	Maven identify duplicate ELR messages and place them in the workflow queue for manual intervention
1.3.8.11	System must be able to send a notification to the message sender through Public Health Information Network Messaging System (PHINMS) that messages were received and parsed or rejected.	Maven securely sends and receives encrypted data over the Internet to public health information systems.
1.3.8.12	System must be able to poll folders to retrieve ELR messages.	Maven supports monitoring folders to retrieve ELR messages.
1.3.8.13	System must integrate with CDC's PHINMS and Rhapsody/Message Subscription Service (MSS) for message receipt and acknowledgement.	Maven integrates with CDC's PHINMS and Rhapsody/Message Subscription Service (MSS) for message receipt and acknowledgement. This functionality is in production in several deployments.
1.3.8.14	System must retain a log of all ELR transactions and the ultimate result of the transaction (successfully imported, error, manual review), etc. This log will be readily available in (CSV) format to the system administrator for review and analysis.	Maven records logs of all transaction and this can be exported to any format including CSV for review and analysis.
1.3.8.15	System must allow alerts to be generated informing appropriate users that new cases have been received via ELR.	Maven messaging module can be configured to notify appropriate users when new cases have been received via ELR.
1.3.8.16	Once an HL7 message is processed, information from this message must automatically populate the appropriate disease questionnaire for that disease condition with all available information.	Maven populates the appropriate disease questionnaire as result of HL7 processing. This can be highly configured to match the result to the question.

	Requirement	Response
1.3.8.17	System must only display ELR message content to those users who are approved to view that content based on disease condition restrictions (e.g., a user authorized to view foodborne disease conditions should never be able to view a tuberculosis lab report even if it is associated with a patient that also has a foodborne condition).	Maven is currently deployed at a number of jurisdictions handling highly sensitive and critical information, such as patient information and private citizen information. To this end Maven offers a strong, HIPAA compliant security model that allows access to data is limited to authorized users, and limit access to specific cases based on jurisdiction and program area specific groups. The permissions that each user has in the system are further controlled based on role based security.

Installation and Training

	Requirement	Response
1.3.9.1	The vendor will provide planning and implementation services as necessary.	Consilience Software's successful implementation of other EDSS projects of similar size and complexity centers around interactive project management and constant communications. Each deployment has a project plan. Consilience Software proposes holding weekly status meetings, either in person or telephonically, with the project status team. In order to complete this project in the allotted time, continuous communications between both the Consilience Software and the project teams is essential. In preparation for the meeting the Consilience Software project manager will prepare a meeting agenda and provide this to the WVDHHR project manager. During status meetings actions completed and new issues will be discussed. Decisions made and action items will be recorded and summary report will be provided. Consilience Software's incremental and iterative RCT project methodology also establishes Risk Reduction and Stakeholders Project Progress Review sessions to provide a review of that specific deliverable, garner WVDHHR approval and discuss lessons learned that can be used to mitigate project risk for the rest of the project. Consilience Software also proposes monthly steering committee meeting to

	Requirement	Response
		provide WVDHHR senior management continuous project updates and status so decisions can be made before major project issues arise. Consilience Software assumes that Consilience Software will have discussions whenever needed with the WVDHHR project sponsor. Consilience Software assumes the project sponsor will be assigned at project initiation and has final decision making approval authority for the WVEDSS project.
1.3.9.2	The successful vendor must demonstrate the ability to import legacy NETSS data into the system.	Consilience Software's experience converting legacy databases to the Maven-enabled EDSS requires, on average, approximately 2 months. Before Consilience Software can begin the conversion WVDHHR must provide: - data dictionary for the database provided - person responsible for sign off must be designated - any data cleansing of the database - de-identified data from database - access to actual database is set up and available during all stages of the conversion - a WVDHHR resource must be available for clarification and approval of the data mapping, then testing and finally sign off for the conversion Consilience Software typically performs the following data conversion tasks: - Identify and Validate Data Conversion Technical Requirements - Develop Detailed Data Conversion Requirements Document - Develop Data Conversion Code - Test Data Conversion Functionality - Modify Data Conversion Code - Retest Data Conversion Functionality - Approve Data Conversion Maven's inherent de-duplication function is used to when uploading additional databases and/or new cases.
1.3.9.3	The vendor must provide a mechanism to import and map existing WVEDSS data into the new system.	Consilience Software's experience converting legacy databases to the Maven-enabled EDSS requires, on average, approximately 2 months. Before Consilience Software can begin the conversion WVDHHR must provide: - data dictionary for the database provided - person responsible for sign off must be designated - any data cleansing of the database - de-identified data from database

	Requirement	Response
		- access to actual database is set up and available during all stages of the conversion - a WVDHHR resource must be available for clarification and approval of the data mapping, then testing and finally sign off for the conversion Consilience Software typically performs the following data conversion tasks: - Identify and Validate Data Conversion Technical Requirements - Develop Detailed Data Conversion Requirements Document - Develop Data Conversion Code - Test Data Conversion Functionality - Modify Data Conversion Code - Retest Data Conversion Functionality - Approve Data Conversion Maven's inherent de-duplication function is used to when uploading additional databases and/or new cases.
1.3.9.4	The vendor will train 25 state and regional personnel in system administration and user functions. A training room facility with computer workstations will be provided on-site.	Consilience Software will train the appropriate number of WVDHHR system administrators according to contractual agreement. These individuals will participate in a five (5) day training course that begins with the end user training, 1 ½ day course, and is typically followed by the system administrator course. To increase the system administrator understanding of Maven Consilience Software recommends that when possible these individuals work with Consilience Software to gain a deeper understanding of Maven before they are wholly responsible for the system after production roll-out. Our experience has shown that working together greatly increases the system administrator's depth of understanding of Maven and confidence in their abilities to use Maven. Consilience Software will provide train-the-trainer (T^3) for the appropriate number of WVDHHR staff. T3 course duration on the Maven EDSS system is up to 5 days + one additional day for each trainer. The initial Consilience Software training varies in accordance with the previous Maven experience of the WVDHHR trainers. The first part of the Consilience Software instructor-led T3 focuses on concepts specific to the system, as well as tips for the trainers. Subsequent days will provide for self- and group-study with the Consilience Software instructor available for questions and guidance. As outlined in our project plan, see Appendix C, Consilience Software will

	Requirement	Response
		provide training before and during initial testing of the WVEDSS.
1.3.9.5 1.3.9.5	The vendor must provide detailed installation, administration, user manuals a data dictionary and an entity relationship diagram one copy of each in paper and electronic formats with rights for the state to reproduce and or modify based on need.	Maven comes with a variety of System documentation. The documentation is provided in paper and electronic formats. These documents include (but are not limited to): • Maven Software Architecture Document • Maven Model Manager Guide • Maven Workflow Guide • Maven Reporting Guide • Maven Security Architecture • Maven Print Template Guide • Maven Public Javadoc • Maven Data Dictionary

Maintenance and Technical Support

	Requirement	Response
1.3.10.1	Provide annual maintenance support services to include all necessary software patches/fixes, updates due to changes in legal requirements, and any increased functionality brought about by the above. Maintenance costs should be included in the proposal for the first year and provided separately for years two and three.	Consilience Software provides upgrades and patches as outlined in its standard maintenance agreement to customers that are on the maintenance plan. Please note that for efficient support we expect remote access to non-production environments for collaboration. The exact particulars of such access will be determined during deployment. Typically Consilience Software makes a new core product release available in a shared version control repository. The release documentation and scripts are then used by WVDHHR staff to "overlay" WVDHHR specific configuration and then deploy to the appropriate environment. **Release Process Details:** A core Maven product release is distributed to the customer as a J2EE WAR file (Web Application Archive). Deployment specific customizations are typically overlaid on the base Maven WAR file (through the process of unzipping the WAR and overlaying an overlay that mimics the file structure).
1.3.10.2	Provide technical support services for the system to DSDC personnel. Technical support should be included in the proposal for the first year and provided separately for years two through three by year. Telephone support services shall be provided within 4 business hours, Monday through Friday, 8:30 am to 5:00 pm Eastern Time, excluding United States federal holidays.	As part of the annual maintenance support Consilience Software provides Tier 3 core product issue technical support per our Standard Level Agreement (SLA).

Compatibility

	Requirement	Response
1.3.11.1	Provide a system that uses a three-tier design that separates the Web-based user interface, application logic, and database components.	Maven EDSS is implemented in Java as a J2EE web application that separates the Web-based user interface, application logic, and database components
1.3.11.2	Utilize Hewlett Packard 64-bit Itanium-based system hardware running 64-bit Microsoft Windows Server and/or HP-UX.	Maven EDSS is a J2EE application, and supports multiple hardware architectures including Hewlett Packard 64-bit Itanium-based system hardware running 64-bit Microsoft Windows Server and/or HP-UX.
1.3.11.3	Utilize Oracle database software in a real-time clustered environment.	Maven EDSS fully supports high availability environments with advanced fail-over and load balancing configurations. Maven can be deployed on clustered application servers to provide load balancing and protection against single node failure. The database tier can also be configured for active-passive or active-active clustering depending on the selected database product. Furthermore, full fail-over to secondary data centers can be done with transaction level mirroring of database transactions to hot secondary site. Maven has been successfully deployed to clustered production environments in North Carolina with immediate fail-over capability to secondary off- site data center without losing any data and without any interruption in user operations.
1.3.11.4	Utilize Apache Tomcat or Oracle Application Server software.	Maven works on all J2EE compliant application servers (WebLogic, WebSphere, Oracle Application Server, Tomcat, JBoss etc), and can interface with Oracle 10g backend database in addition to MS SQL Server, IBM DB2 and other database products supporting JDBC.
1.3.11.5	Utilize Microsoft IIS or Apache Webserver.	Maven works with Apache Web server and can utilize Microsoft IIS as a proxy server.

Appendix E - WVEDSS Proposed Project Schedule

The pro forma project schedule below outlines Consilience Software's approach to implementing WVEDSS. Our unbroken record of successful Maven-enabled EDSS deployments, combined with Maven's innovative and flexible architecture, significantly reduce WVEDSS project risk. Using our formal and documented project management method, outlined in Appendix C above, Consilience Software proposes a three-phase project. This proposed three-phased approach to implementing WVEDSS is similar to our project approach on our other successful deployments.

Consilience Software typically begins each contract with an Implementation Assessment (IA) focused on developing a thorough understanding of the project concept and scope. Three deliverables, key to the project, result from the IA workshop. The first deliverable is a confirmed requirements traceability matrix (RTM) that will be used throughout the project to measure progress and verify that the Maven-enabled WVEDSS satisfies the requirements. The second deliverable is a confirmation and mutual agreement on the proposed project shedule. As this project schedule is finalized, it will be used as part of our Project Implemenation and Payment Plan (PIPP). The PIPP reflects the statement of work, the deliverables, the payment milestones, which are tied to the deliverables, and the project timeline (project schedule). This integrated document, the PIPP, provides a means for WVDHHR to determine if the statement of work is being accomplished as scheduled with acceptable deliverables. The IA is conducted prior to contract negotiations and contract signing to insure a mutual understanding by both parties of the scope to the WVEDSS implementation. The IA is usually a five day session in which all use cases, a finalized project plan and a scope document are developed to help expedite contract signing.

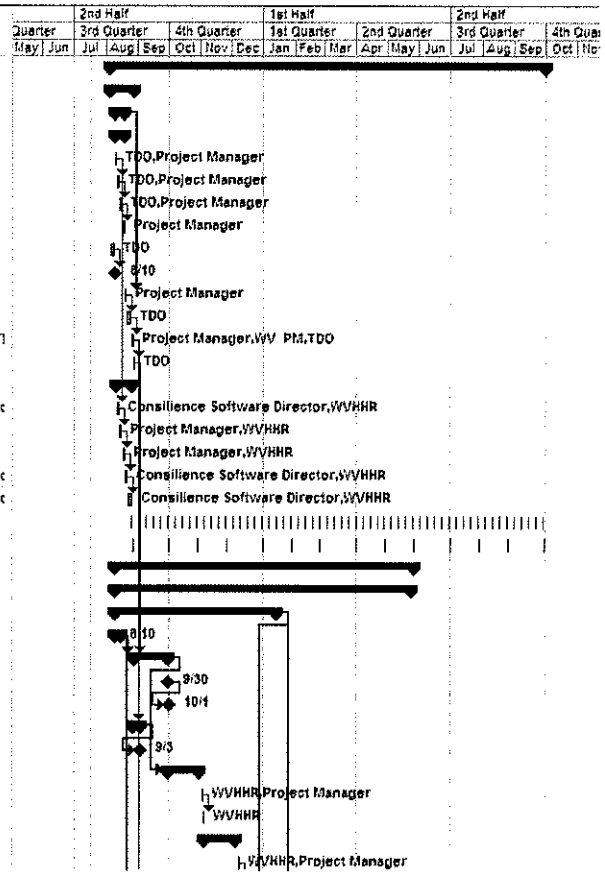
Phase 1, or the Initiation Phase, focuses on 1) loading Maven on WVDHHR servers and 2) confirming the proposed project plans and 3) initiating the project. Milestone 1, the loading of Maven on WVDHHR servers, is accomplished during this phase of the project. The Maven license is a perpetual, unlimited seat license used for general communicable diseases excluding sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV).

Phase 2, or the Modification Phase, focuses on working jointly with WVDHHR staff to implement the WVEDSS specific requirements. This work entails developing the required question packages and the concomitant rules; developing twenty (20) workflows, ten (10) reports and ten (10) print templates; developing two (2) interfaces – NETSS and ELR; and implementing one (1) database conversion – NETSS. The milestones aligned with each of these major project tasks are clearly identified in the project schedule.

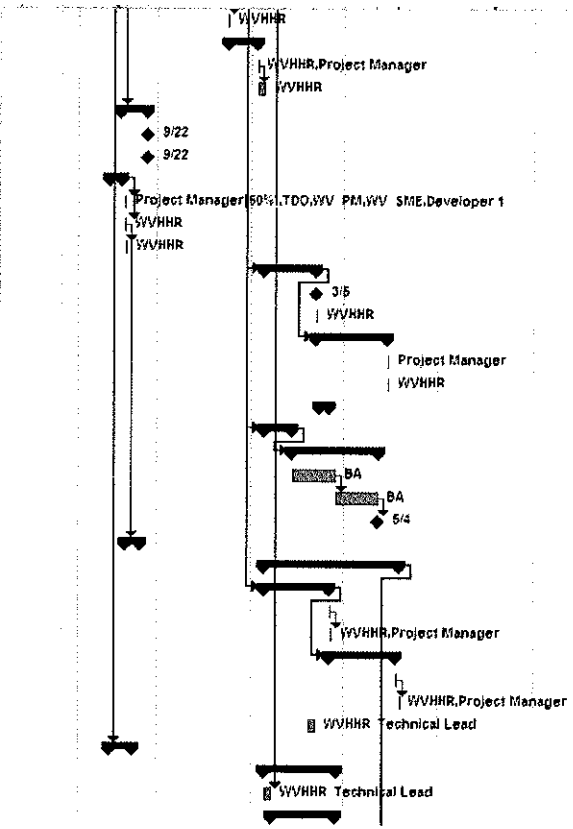
Phase 3, or the Transition Phase, focuses on conducting: the system administrator and end-user training, the integration and user acceptance testing, a pilot test, and a production roll-out. Consilience Software proposes providing train-the-trainer (T^3) end

user training for thirty (30) WVDHHR identified and authorized trainers. It is assumed training shall be conducted in Charleston, West Virginia. It is further assumed that five (5) staff receiving T^3 end user training will complete the system administrator training.

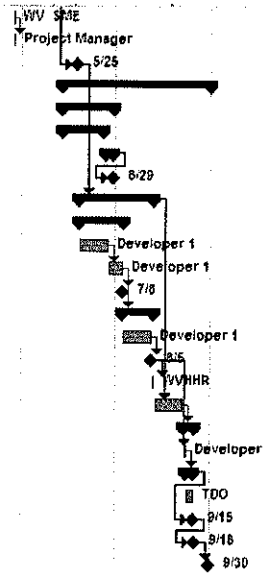
	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	WVHHR EDSS Project	302 days	Wed 8/5/09	Thu 9/30/10		
2	Initiate Project	17 days	Wed 8/5/09	Thu 8/27/09		
3	Conduct Project Initiation Meeting	7 days	Mon 8/10/09	Tue 8/18/09		
4	Review Project Scope with WVHHR Team	7 days	Mon 8/10/09	Tue 8/18/09		
5	Review Metrics & Acceptance Criteria	1 day	Mon 8/10/09	Mon 8/10/09		TDO,Project Manager
6	Create High Level Scope Document	2 days	Tue 8/11/09	Wed 8/12/09	5	TDO,Project Manager
7	Identify Roles and Responsibilities	2 days	Thu 8/13/09	Fri 8/14/09	6	TDO,Project Manager
8	Establish Project Status Meeting Schedule and Reporting Requirements	2 days	Mon 8/17/09	Tue 8/18/09	7	Project Manager
9	Install Maven EDSS on Selected Servers (Milestone 1)	3 days	Wed 8/5/09	Fri 8/7/09		TDO
10	Maven WVEDSS License Fee Payment	1 day	Mon 8/10/09	Mon 8/10/09	9	WVHHR,Project Manager
11	Establish Steering Committee	1 day	Wed 8/19/09	Wed 8/19/09	3	Project Manager
12	Create Requirements Traceability Matrix	3 days	Thu 8/20/09	Mon 8/24/09	11	TDO
13	High Level Scope Document and Requirements Traceability Matrix Signoff	2 days	Tue 8/25/09	Wed 8/26/09	12	Project Manager,WV PM,TI
14	Modeling Process Confirmation Meeting	1 day	Thu 8/27/09	Thu 8/27/09	13	TDO
15	Confirm Draft Plans	11 days	Tue 8/11/09	Tue 8/26/09		
16	Project Implementation and Payment Plan	2 days	Tue 8/11/09	Wed 8/12/09	5	Consilience Software Direc
17	Project Governance Plan	2 days	Thu 8/13/09	Fri 8/14/09	16	Project Manager,WVHHR
18	Training Plan	2 days	Mon 8/17/09	Tue 8/18/09	17	Project Manager,WVHHR
19	Change Management Plan	2 days	Wed 8/19/09	Thu 8/20/09	18	Consilience Software Direc
20	Production Handover Plan	3 days	Fri 8/21/09	Tue 8/25/09	19	Consilience Software Direc
21	Project Team Meeting - Meeting Notes	288 days	Tue 8/25/09	Tue 9/28/10		
80	Monthly project status report, Steering Committee Meeting	288 days	Wed 8/26/09	Wed 9/29/10		
95	Maven Modification Phase	208 days	Mon 8/10/09	Wed 6/23/10		
96	Maven Disease Surveillance	206 days	Mon 8/10/09	Mon 6/24/10		
97	Model Question Packages	112 days	Mon 8/10/09	Tue 1/12/10		
98	Provide Modeling Requisite Information	5 days	Mon 8/10/09	Fri 8/14/09		WVHHR
102	Develop Tranche 1 Models (Milestone 2)	23 days	Fri 8/28/09	Tue 9/29/09	98,14	
110	Risk Reduction and Stakeholders Project Progress Review - Approve	1 day	Wed 9/30/09	Wed 9/30/09	109	WVHHR,Project Manager
111	Confirm Tranche 1 Model Completion Sign Off	1 day	Thu 10/1/09	Thu 10/1/09	110	WVHHR
112	Provide Modeling Requisite Information for Tranche 2, 3 and	5 days	Thu 8/27/09	Wed 9/2/09	13	WVHHR
116	Assign MSDH Approval Authority and Provide Letter of Assignment to	1 day	Thu 9/3/09	Thu 9/3/09	112	WVHHR
117	Develop Tranche 2 Models (Milestone 3)	23 days	Wed 9/30/09	Fri 10/30/09	102	
125	Risk Reduction and Stakeholders Project Progress Review - Approve	1 day	Mon 11/2/09	Mon 11/2/09	124	WVHHR,Project Manager
126	Confirm Tranche 2 Model Completion Payment	1 day	Tue 11/3/09	Tue 11/3/09	125	WVHHR
127	Develop Tranche 3 Models (Milestone 4)	23 days	Wed 11/4/09	Fri 12/4/09		
135	Risk Reduction and Stakeholders Project Progress Review - Approve	1 day	Mon 12/7/09	Mon 12/7/09	134	WVHHR,Project Manager



136		Confirm Tranche 3 Model Completion Payment	1 day	Tue 12/8/09	Tue 12/8/09	135	WVHHR
137		**Develop Tranche 4 Models (Milestone 6)**	**20 days**	**Wed 12/9/09**	**Tue 1/5/10**		
145		Risk Reduction and Stakeholders Project Progress Review - Approve	1 day	Wed 1/5/10	Wed 1/5/10	144	WVHHR,Project Manager
146		Confirm Tranche 4 Model Completion Payment	4 days	Thu 1/7/10	Tue 1/12/10	145	WVHHR
147		**Develop Test Plans (Milestone 8)**	**18 days**	**Thu 8/27/09**	**Mon 9/21/09**	13	
151		Risk Reduction and Stakeholders Project Progress Review	1 day	Tue 9/22/09	Tue 9/22/09	150	Project Manager[50%],TDO
152		Test Plan Completion Payment	1 day	Tue 9/22/09	Tue 9/22/09	150	WVHHR
153		**Identify All 20 Workflows and 10 Reports to be Modeled**	**10 days**	**Mon 8/17/09**	**Fri 8/28/09**		
161		Risk Reduction and Stakeholders Project Progress Review	1 day	Mon 8/31/09	Mon 8/31/09	153	Project Manager[50%],TDO
162		Identify and Provide 15 Print Template	1 day	Mon 8/31/09	Mon 8/31/09	153	WVHHR
163		Assign Print Template Approval Authority	1 day	Tue 9/1/09	Tue 9/1/09	162	WVHHR
164		**Configure 20 Workflows (Milestone 7)**	**37 days**	**Wed 1/13/10**	**Thu 3/4/10**	97	
171		Risk Reduction and Stakeholders Project Progress Review	1 day	Fri 3/5/10	Fri 3/5/10	170	Project Manager
172		Workflow Completion Sign Off	1 day	Fri 3/5/10	Fri 3/5/10	170	WVHHR
173		**Configure 10 Reports (Milestone 9)**	**49 days**	**Fri 3/5/10**	**Wed 5/12/10**	184	
180		Risk Reduction and Stakeholders Project Progress Review	1 day	Thu 5/13/10	Thu 5/13/10	179	Project Manager
181		Report Completion Sign Off	1 day	Thu 5/13/10	Thu 5/13/10	179	WVHHR
182		**Security**	**8 days**	**Mon 3/8/10**	**Wed 3/17/10**		
188		**Create 10 Print Templates (Milestone 10)**	**19 days**	**Wed 1/13/10**	**Mon 2/8/10**	97	
191		**Develop Training Materials (Milestone 11)**	**61 days**	**Tue 2/9/10**	**Tue 5/4/10**	185	
192		Modify Training Material	30 days	Tue 2/9/10	Mon 3/22/10		BA
193		Customize User Documentation	30 days	Tue 3/23/10	Mon 5/3/10	192	BA
194		Risk Reduction and Stakeholders Project Progress Review	1 day	Tue 5/4/10	Tue 5/4/10	193	Project Manager,BA,WV P
195		**Identify and Validate WVEDSS Laboratory Interface Requirements**	**9.5 days**	**Tue 9/1/09**	**Mon 9/14/09**	182	
201		**Develop WVEDSS Specified Interfaces**	**94 days**	**Wed 1/13/10**	**Mon 5/24/10**		
202		**Configure ELR HL7 (LIMS) Import Interface (Milestone 12)**	**46 days**	**Wed 1/13/10**	**Wed 3/17/10**	97	
206		Interface Completion Sign Off	1 day	Thu 3/18/10	Thu 3/18/10	207	
209		Risk Reduction and Stakeholders Project Progress Review	1 day	Fri 3/19/10	Fri 3/19/10	208	WVHHR,Project Manager
210		**Configure NETSS Extract Interface (Milestone 13)**	**46 days**	**Thu 3/18/10**	**Thu 5/20/10**	202	
216		Interface Completion Sign Off	1 day	Fri 5/21/10	Fri 5/21/10	215	
217		Risk Reduction and Stakeholders Project Progress Review	1 day	Mon 5/24/10	Mon 5/24/10	216	WVHHR,Project Manager
218		Provide Technical Details on HL7 Messaging to CDC Extract Interface	5 days	Thu 2/25/10	Wed 3/3/10		WVHHR Technical Lead
219		**Identify and Validate NETSS Database Conversion Requirements**	**18 days**	**Mon 8/17/09**	**Mon 9/7/09**	98	
226		**Implement NETSS Data Conversions (Milestone 14)**	**61 days**	**Wed 1/13/10**	**Wed 3/24/10**		
227		Provide NETSS Database Data Dictionary and De-Identified Data Set	5 days	Wed 1/13/10	Tue 1/19/10	97	WVHHR Technical Lead
228		**Convert NETSS Database**	**44 days**	**Wed 1/20/10**	**Mon 3/22/10**		



236		Database Completion Sign Off	1 day	Tue 3/23/10	Tue 3/23/10	235	WV SME
237		Risk Reduction and Stakeholders Project Progress Review	1 day	Wed 3/24/10	Wed 3/24/10	236	Project Manager
238		Confirm Initial Operational Capability	2 days	Tue 5/25/10	Wed 5/26/10	201	Project Manager,TDO,WV
239		**Transition Phase**	**104 days**	**Mon 5/10/10**	**Thu 9/30/10**		
240		**Conduct Train the Trainer (T3) Training**	**37 days**	**Mon 5/10/10**	**Tue 6/29/10**		
241		**Conduct WVHHR Staff (End User Audience) (Milestone 15)**	**30 days**	**Mon 5/10/10**	**Fri 6/18/10**		
243		**Maven System Administrator Training (5 System Administrators)**	**6 days**	**Mon 6/21/10**	**Mon 6/28/10**		
250		Risk Reduction and Stakeholders Project Progress Review	1 day	Tue 6/29/10	Tue 6/29/10	243	Project Manager
251		**Testing and Signoff**	**52 days**	**Thu 5/27/10**	**Fri 8/6/10**	238	
252		**Integration Testing (Milestone 17)**	**31 days**	**Thu 5/27/10**	**Thu 7/8/10**		
253		Systems Integration Testing	20 days	Thu 5/27/10	Wed 6/23/10		Developer 1
254		Performance Testing	10 days	Thu 6/24/10	Wed 7/7/10	253	Developer 1
255		Risk Reduction and Stakeholders Project Progress Review	1 day	Thu 7/8/10	Thu 7/8/10	254	Project Manager
256		**User Acceptance Testing (Milestone 18)**	**22 days**	**Thu 7/8/10**	**Fri 8/6/10**	254	
257		Conduct User Acceptance Testing (UAT)	20 days	Thu 7/8/10	Wed 8/4/10		Developer 1
258		Risk Reduction and Stakeholders Project Progress Review	1 day	Thu 8/5/10	Thu 8/5/10	257	Project Manager[50%],TDO
259		Testing and Signoff Payment - Provide Final Acceptance Letter	1 day	Fri 8/6/10	Fri 8/6/10	258	WVHHR
260		Conduct Proof of Concept Pilot	20 days	Mon 8/9/10	Fri 9/3/10	251	
261		**Production Migration**	**8 days**	**Mon 9/6/10**	**Wed 9/15/10**	260	
262		Update WVEDSS Migration Plan	2 days	Mon 9/6/10	Tue 9/7/10	258	Developer 1,TDO[50%]
263		**Move WVEDSS to Production (Milestone 19)**	**5 days**	**Wed 9/8/10**	**Tue 9/14/10**	262	
264		Transition Maven WVEDSS to Production	5 days	Wed 9/8/10	Tue 9/14/10		TDO
265		Risk Reduction and Stakeholders Project Progress Review	1 day	Wed 9/15/10	Wed 9/15/10	263	Project Manager
266		Project Wrap-up and Product Release (Milestone 20)	10 days	Thu 9/15/10	Wed 9/29/10	265	Project Manager
267		System Roll-out Payment	1 day	Thu 9/30/10	Thu 9/30/10	266	WVHHR



State of West Virginia, Department of Health and Human Resources Electronic Disease Surveillance System (WVEDSS) – RFQ: EHP90097 Consilience Software Proposal Submission

Cost Proposal - Original

Consilience software

23 July 2009

Consilience
SOFTWARE

State of West Virginia
Department of Health and Human Resources
Electronic Disease Surveillance System (WVEDSS)
Cost Proposal

Consilience Software
9005 Mountain Ridge Drive, Suite 190
Austin, TX 78759
Telephone: 512.795.1300
POC: Mr. Richard Ehni
E-mail: info@consiliencesoftware.com
Web page: www.consiliencesoftware.com

Consilience
software

9005 Mountain Ridge Drive • Suite 190 • Austin Texas 78759

23 July 2009

Department of Administration, Purchasing Division
ATTN: Roberta Wagner
2019 Washington Street, East
Charleston, WV 25311

Subject: West Virginia Disease Surveillance System (WVEDSS) Consilience Software Proposal Submission

Dear Ms. Wagner,

Consilience Software is pleased to provide the attached cost proposal in response to your request for proposal for an automated, web-based, statewide electronic disease surveillance system (EDSS) for the State of West Virginia, Department of Health and Human Resources (WVDHHR).

Throughout Consilience Software's technical response, we have directed our answers to reflect the business needs of WVDHHR. It is from our understanding of the business requirements outlined in the WVDHHR RFQ tender document for a streamlined, web-based, statewide West Virginia EDSS (WVEDSS), and our unbroken record of implementing disease surveillance systems of similar size and complexity for other jurisdictions and your RFQ defined Bid Quotation Sheet that Consilience Software has developed our pricing proposal.

Based on Consilience Software's incremental and iterative RCT project methodology, the project plan has three phases (initiation, modification and transition). Consilience Software allocated costs derived from the project plan, as best we could, into the appropriate task topics provided. The entire proposed Consilience Software costs for implementing a West Virginia specific Maven EDSS system are reflected in the Cost Schedule below.

The Cost Schedule reflects the one-time cost, unlimited seat Maven EDSS. Unlike traditional software, which requires West Virginia to buy individual modules, Maven is an integrated EDSS which may provide West Virginia with an efficient, effective disease surveillance and outbreak management system without individual modules needing to be integrated.

Besides the very competitive implementation costs outlined in the Cost Schedule below, Maven provides West Virginia significant life cycle cost savings because future changes to the Maven—required to meet changing state or federal statutory, regulatory, medical, emergency or bioterrorism requirements—can be done by WVDHHR business users without the need for expensive IT programmer or Consilience Software support. Maven, therefore, provides WVDHHR an extremely cost effective, future-oriented, highly flexible and easy to use WVEDSS.

We look forward to providing you a demonstration of Maven and working with you in the near future. Should you have any questions please contact me at 512.795.1300 ext 207 or Mr. Joy Alamgir at 512.769.1889.

Best regards,

Richard Ehni
President
Consilience Software, Inc.

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Assumptions

1. *Consilience Software assumes Maven software license fee shall be paid upon project initiation.*
2. *All pricing is defined in United States Dollars (USD)*
3. *Consilience Software will work with WVDHHR's financial and legal staff to develop a strategy that will minimize the impact of these taxes.*
4. *Pricing is based on assumptions highlighted herein and Consilience Software's interpretation of WVDHHR's RFQ requirements.*
5. *WVDHHR will pay Consilience Software within thirty (30) days of invoice date for project deliverables that are accepted.*
6. *During the deployment of the project, WVDHHR will provide Consilience Software remote access to its network and IT assets.*
7. *WVDHHR will provide Consilience Software staff engaged in the deployment and implementation of Maven at WVDHHR adequate on-site facilities in order to properly conduct business during the life of this contract. Such facilities include telephone access, Internet access, desk, site access and VPN access as needed.*
8. *Consilience Software assumes a WVDHHR technical lead will be assigned to work jointly with Consilience Software developers.*
9. *Consilience Software assumes no more than 50 WVDHHR staff end users and 5 WVDHHR system administrators shall be trained during the project.*
10. *Consilience Software assumes end user class size shall be no more than 10 people per class.*
11. *Consilience Software assumes WVDHHR shall provide training facilities suitable to conduct MEDSS system training.*
12. *Consilience Software assumes that training shall be located in Charleston, West Virginia.*
13. *Consilience Software assumes WVDHHR training facilities will have sufficient computers and web browser access for the 10 person class that will be conducted.*
14. *Consilience Software assumes WVDHHR will coordinate scheduling WVDHHR trainees for appropriate classes in accordance with agreed upon training schedule.*
15. *Consilience Software assumes training materials and training plan shall be approved by WVDHHR within 5 days of submission of said documents.*
16. *Consilience Software reserves the right to redesign the proposal architecture and revalidate submitted cost modules based on volume projections agreed between Consilience Software and the WVDHHR during BAFO.*
17. *Consilience Software will incur no financial penalty if a delay to the project is the cause of non-performance of any third party introduced by the state or of non-performance by state employees.*
18. *Consilience Software will charge additional time and materials if there are project delays due to non-performance of any third party introduced by the state or of non-performance by state employees. If such non-performance is perceived, Consilience Software will communicate to WVDHHR, in writing, of the perceived non-performance and will start charging time and materials for any services provided during the delay.*
19. *Consilience Software assumes ten (10) print templates will be provided.*
20. *Consilience Software assumes paper and, if possible, electronic examples of all print templates shall be available at project start.*
21. *Consilience Software assumes no custom functions shall be developed for WVEDSS print templates.*

22. *Consilience Software assumes the business analyst modeler will implement the print template and will, therefore, associate model fields to the corresponding print template auto-population fields.*
23. *Consilience Software assumes no print template will exceed five pages and each page will not exceed more than ten (10) auto-population fields.*
24. *Consilience Software assumes twenty (20) workflows will be developed.*
25. *Consilience Software assumes ten (10) reports will be developed and each report shall have no more than fifteen (15) auto-population fields per report.*
26. *Consilience Software assumes defined report parameters shall behave consistantly throughout the report.*
27. *Consilience Software assumes WVEDSS license is for general communicable diseases excluding sexually transmitted diseases and human immunodeficiency virus.*
28. *Consilience Software assumes one (1) NETSS database will be developed.*
29. *Consilience Software assumes two interface adapters will be developed: 1) ELR and 2) NETSS.*
30. *Consilience Software assumes existing security certificates owned by WVDHHR will be used for secure HTTP and also for secure FTP.*
31. *Consilience Software assumes WVDHHR shall provide required database management software licenses.*
32. *Consilience Software assumes WVDHHR shall host the WVEDSS and provide J2EE application server.*

Cost Proposal

Consilience Software provides the following Cost Proposal Matrix in response to the requirements identified in RFQ. Consilience Software assumes twenty (20) WVDHHR specific workflows, ten (10) WVDHHR specific print templates, and ten (10) WVDHHR specific reports will be developed during this project. Consilience Software also assumes, based on our understanding of the RFQ, that two (2) interfaces – ELR and NETSS – will be developed as well as a NETSS database will be developed. It must be noted that Consilience Software estimates that each interface will take two (2) months per interface to implement and the NETSS database will take approximately two (2) months to convert the data based on our interpretation of the requirements outlined in the RFQ and our experience converting similar databases at North Carolina, Massachusetts and most recently Connecticut.

Addtionally Consilience Software offers a one time license that allows WVDHHR to deploy on the Production, Test, Failover, and Deployment systems outlined in the table below.

Initial Purchase – Phase 1			
Quantity	**Description**	**Unit Cost**	**Total Cost**
1 each	Production system Maven General Communicable Disease License (excluding STD and HIV) (Milestone 1)	$350,000.00 *	$350,000.00
1 each	Test system	Included	Included
1 each	Failover system	Included	Included
1 each	Deployment system	Included	Included

* Licensing Fee
The Maven EDSS license is $350,000 and the first year maintenance is $120,000.

Modification – Phase 2			
Quantity	**Description**	**Unit Cost**	**Total Cost**
160 hours	Technical Services **	$140.00	$22,400.00
	• Implementation Planning	$140.00	Task is subcomponent of Technical Services total cost above.
	• Installation	$140.00	Task is subcomponent of Technical Services total cost above.
	• Configuration and Customization	$140.00	Task is subcomponent of Technical Services total cost above.
	• Documentation Development	No charge for providing the documents highlighted in the table below.	No charge for providing the documents highlighted in the table below. ***
40 hours	Conduct WVEDSS System Administrator Training for 5 WVDHHR Staff (Milestone 16) On-site Training	$160.00	$6,400.00

** Professional Services
Consilience Software is providing indicative pricing for the technical services outlined in the RFQ which can be used for implementation planning, installation and configuration and customization tasks. We prepared a

project schedule, as seen in Appendix E of the technical proposal, that reflects our understanding of the level of effort required to implement the WVEDSS. Consilience Software recommends conducting an Implementation Assessment (IA) focused on developing a thorough understanding of the project concept and scope so that an accurate WVEDSS project cost estimate can be provided prior to contract signing. Consilience Software assumes the Technical Services total cost shall be part of the overall project cost.

Documentation ***			
Quantity	**Description**	**Unit Cost**	**Total Cost**
1 ea	System Installation Manual	No Charge	No Charge
1 ea	System Administration Manual	No Charge	No Charge
1 ea	User Manual	No Charge	No Charge
1 ea	Data Dictionary	No Charge	No Charge
1 ea	Entity Relationship Diagram	No Charge	No Charge

Post-Production Maintenance Support			
Quantity	**Description**	**Unit Cost (per year)**	**Total Cost**
Year 2	Tier 3 Maven EDSS Maintenance Support	$120,000.00 *	$120,000.00
Year 3	Tier 3 Maven EDSS Maintenance Support	$123,600.00	$123,600.00

Quantity	Description	Unit Cost (per hour)
Year 2	Maven EDSS Technical Support	$144.20
Year 3	Maven EDSS Technical Support	$148.53