Deloitte.

State of West Virginia

Department of Health and Human Resources RAPIDS Project

CRFP 0511 HHR1600000001

10/08/15 09:42:16
WV Purchasing Division

Technical Proposal Original
October 8, 2015 | 1:30 PM EST

WV Department of Health and Human Resources
Management Informatioin Services RAPIDS Project
CRFP-0511-HHR1600000001

West Virginia
RAPIDS

Title Page

WV Department of Health and Human Resources RAPIDS Project

CRFP 0511 HHR1600000001

Deloitte Consulting LLP

2500 One PPG Place

Pittsburgh, PA 15222

USA

Telephone: +1.412.402.5170

Fax: +1.412.402.5530

www.deloitte.com

Rick Dorman

rdorman@deloitte.com

October 8, 2015

Table of Contents

Deloitte.

October 8, 2015

Robert P Kilpatrick, Senior Buyer
West Virginia Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

RE: Deloitte's Response to the State of West Virginia and its Department of Health and Human Resources, Management Information Services RAPIDS Project CRFP 0511 HHR1600000001 for Management Information Services regarding the RAPIDS Project.

Dear Mr. Kilpatrick:

Deloitte Consulting LLP (Deloitte) is pleased to submit this proposal in response to the Request for Proposal CRFP 0511 HHR1600000001, for Management Information Systems regarding the RAPIDS project. We have thoroughly reviewed your request and prepared a proposal that responds to your requirements for this critical initiative and delivers the best value for the State and for the citizens of West Virginia.

Transmittal letters like this one often represent an opportunity for vendors to promote their key selling messages. In Deloitte's case, the West Virginia Department of Health and Human Resources (DHHR) is very familiar with Deloitte given our many years of service to you. Over the last two decades, we have been privileged to demonstrate our commitment to your success on a daily basis. Our proposal will speak to our strong RAPIDS qualifications, our RAPIDS-proven methods and our highly qualified RAPIDS-experienced team.

We also like to take this opportunity to communicate a single message: The best predictor of a vendor's future performance is their recent and relevant past performance. Side-by-side, Deloitte has worked with DHHR to deliver results to the citizens of West Virginia. You know the quality of our people and our commitment to your success. As Deloitte's Account Lead for the State of West Virginia, I am personally committed to making our work meet – or exceed – your needs and expectations every day.

As we worked together over the years, we have always appreciated your feedback on our performance, whether positive comments, concerns, or expectations for the future. We believe we met – and even exceeded – your expectations, delivered an "A" team who collaborated with your staff, and developed a strong level of trust.

In reading your RFP and thinking about our desire to have a lasting and successful relationship with the State, we know that we can't just rely on what we have achieved in the past. We must build on the foundation that has made us successful as a collective team with a constant goal for improvement.

With that in mind, we have responded to your RFP with the intent of meeting and exceeding every specification and expectation. To build on this objective, we want to highlight the foundational elements of our proposal. We believe that these will lead us to successfully serve you well into the future.

We will:

1. Exceed your goals

2. Deliver the team you know and trust

3. Deliver the staffing levels you need

4. Set the performance standard

1. Exceed your goals

We believe that we have a very good understanding of your goals for RAPIDS. As we have over the years serving you, we take your goals and make them ours. We believe that achieving your goals will optimize the investments in RAPIDS and will require a vendor with the right balance of familiarity, capability, and innovation. To help mobilize us to exceed your goals, we sorted them into two categories.

Your Operational Goals

- Improve caseworker ability to serve the client

- Improve client access to benefits and services

- Improve program accuracy and efficiency

We are relentlessly committed to exceeding your goals and are already working to do so. Collectively, we continue to look for opportunities to enhance RAPIDS performance. This is a completely natural course. Together we are designing and implementing a variety of initiatives to achieve your operational goals of improving case worker performance, client access, and program accuracy and efficiency. These initiatives will streamline and simplify policies and procedures, will enable data sharing across programs, services, and systems, and will improve client access to benefits and services.

Your Infrastructure Goals

- Use technology to improve business operations

- Fully automate eligibility and benefits determination

- Provide rapid IT response to changing business needs

As in the case with your operational goals, we have also collectively recognize the need to use RAPIDS to achieve many of your goals, and together we have mobilized efforts to focus on these improvement opportunities. Together we are already designing and/or implementing a variety of technology initiatives to achieve your goals, including initiatives that will automate eligibility and benefits determination, eliminate manual workarounds, eliminate redundant data entry, and increase client access to automated processes. These initiatives will accomplish your goals while also increasing the automation of eligibility and benefits determinations and achieving standardization of processes and codes.

2. Deliver the team you know and trust

In carefully considering the requirements outlined in your RFP, we are proposing to offer you a team that you know and trust - an experienced, qualified team with the right management oversight, experience and technical prowess. How do we know? Because our proposed team is the same team of individuals that have been collaborating with you over the last several years. Our proposal includes mostly the same team of resources, mostly local to the Charleston area, who are currently on-the-ground delivering services to you today. Our team is not only proven on paper with their resumes, they are proven in practice at DHHR delivering RAPIDS. Collectively, our team has almost 200 years of RAPIDS experience.

For more than 21 years Deloitte has worked with the Department of Health and Human Resources (DHHR) to enhance and maintain the RAPIDS suite of applications in support of integrated eligibility and the DHHR enterprise. We believe our commitment to the State, as established by our strong and successful relationship with the Agency, will help demonstrate the type of commitment, effort, and collaboration we bring to the next phase of the DHHR modernization strategy.

3. We will deliver staffing levels you need

With our experience and knowledge of RAPIDS and other Integrated Eligibility systems, we closely analyzed your requirements. Our staffing plan is based on our familiarity with your current environment and goals. We can adjust this staffing plan based on your guidance or unforeseen, unplanned needs; however, we have provided you with resumes for all forty-two (42) requested positions from the RFP. All of these resources are available to begin work immediately upon your approval to proceed. We will not require ANY transition time to onboard and to learn "the RAPIDS Way". We believe that continuity with existing resources is a major differentiator because it allows DHHR to start enhancements sooner, maintain high performance levels at much lower risks, and provide much higher service quality. Our staff will prove to be instrumental to successfully deliver continued system enhancements and maintenance and operations activities to RAPIDS. With that said, there is always the opportunity to enhance our effectiveness and we commit to work with you to continuously evaluate and improve our performance.

4. Set the performance standard

DHHR will always be one of our most valued clients. Period. Your success is our success. Our proposal comes with the determination to raise performance to help you serve the needs of the citizens of this great State. With this in mind, we are committed to setting the performance standard through:

- Uninterrupted delivery through transition with a team that built RAPIDS alongside you

- A focus on improving the application's performance, ease of use, and caseworker accuracy/productivity

- Continued alignment with your M&O processes, tools, methods, and governance, while elevating these methods with emerging techniques in the HHS space

- Our continued collaboration, support, and effort to exceed your expectations every day

- Seamless continuity and performance on business critical initiatives vital to your success

We appreciate the opportunity to serve you.

Deloitte acknowledges the required Performance Bond in the amount of 100% of the contract value.

Please find signed addenda, the Bid Bond for 5% of the total amount of the bid, and the other required forms immediately following this letter.

If you have any questions or would like additional information, please do not hesitate to contact me at +1.412.402.5170, or e-mail me at rdorman@deloitte.com.

Sincerely,

DELOITTE

By: _____
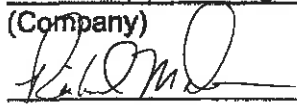
Rick Dorman, Principal

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Request for Proposal in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that, to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Deloitte Consulting LLP
(Company)

Rick Dorman, Principal
(Representative Name, Title)

Phone: +1.412.402.5170 / Fax: +1.412.402.5530
(Contact Phone/Fax Number)

October 8, 2015
(Date)

Fidelity and Deposit Company of Maryland
Home Office: P.O. Box 1227, Baltimore, MD 21203-1227

Bond No. **N/A**

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, **Deloitte Consulting LLP**, as Principal, (hereinafter called the "Principal"), and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, of Baltimore, Maryland, a corporation duly organized under the laws of the State of Maryland, as Surety, (hereinafter called the "Surety"), are held and firmly bound unto The State of West Virginia-Department of Health and Human Resources, Office of Management Information Services.

as Obligee, (hereinafter called the "Obligee"), in the sum of **Five Percent of Bid Amount** Dollars (**$5% of Bid Amount**), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Proposal No. CRFP 0511 HHR1600000001**
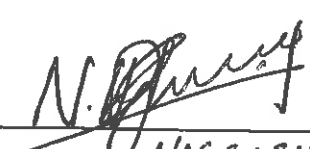
NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the principal to enter into such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 10 day of September A.D. ,2015.

NEIL KILLEY , Witness
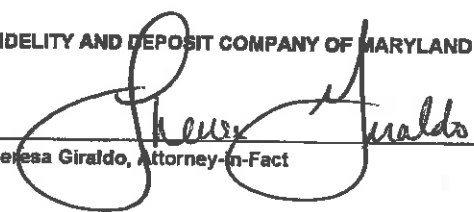
Deloitte Consulting LLP   (SEAL)

Principal

By _____

NAGEN SURIYA , Title Director

Peter Healy, Witness

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By _____ (SEAL)

Theresa Giraldo, Attorney-in-Fact

C325-150M,

Approved by The American Institute of Architects,

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **James P. HOLLAND, Francesca PAPA, Theresa GIRALDO, Migdalia OTERO, TerryAnn GONZALES-SELMAN, Peter HEALY, Mary LAWRENCE, Vincent T. MOY and William G. MORRISSEY, all of New York, New York, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 17th day of March, A.D. 2014.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By:

Assistant Secretary
Gregory E. Murray

Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 17th day of March, A.D. 2014, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and GREGORY E. MURRAY, Assistant Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Constance A. Dunn, Notary Public
My Commission Expires: July 14, 2015

POA-F 093-5603

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this _10_ day of _September_, 20_15_.
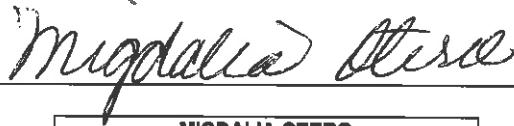
_____
Geoffrey Delisio, Vice President

ACKNOWLEDGEMENT OF ANNEXED INSTRUMENT

STATE OF NEW YORK
COUNTY OF NEW YORK

On <u>September 10, 2015</u> before me, the undersigned, a Notary Public in and for said county, personally appeared <u>Peter Healy,</u> who is to me well known, who being duly sworn, did depose and say that he resides in New York, NY that he is Attorney-in-Fact of <u>Fidelity and Deposit Company of Maryland</u> a corporation, the corporation described in and who executed the within instrument as surety. That he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was thereto affixed by order to the Board of Directors of said corporation, and that he signed his name thereto by like order.

_____

MIGDALIA OTERO
Notary Public, State of New York
No. 01OT6316321
Qualified in Kings County
Commission Expires December 8, 2018

FIDELITY AND DEPOSIT COMPANY
OF MARYLAND
600 Red Brook Blvd., Suite 600, Owings Mills, MD 21117

Statement of Financial Condition
As Of December 31, 2013

ASSETS

Bonds	$ 139,272,722
Stocks	22,258,887
Cash and Short Term Investments	6,595,113
Reinsurance Recoverable	17,970,134
Other Accounts Receivable	33,409,916
TOTAL ADMITTED ASSETS	$ 219,506,772
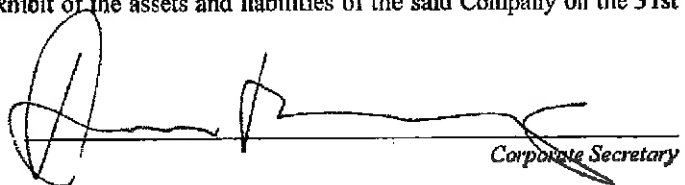
LIABILITIES, SURPLUS AND OTHER FUNDS

Reserve for Taxes and Expenses		$ 1,787,480
Ceded Reinsurance Premiums Payable		42,146,005
Securities Lending Collateral Liability		6,613,750
TOTAL LIABILITIES		$ 50,547,235
Capital Stock, Paid Up	$ 5,000,000	
Surplus	163,959,537	
Surplus as regards Policyholders		168,959,537
TOTAL		$ 219,506,772

Securities carried at $58,378,690 in the above statement are deposited with various states as required by law.
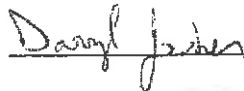
Securities carried on the basis prescribed by the National Association of Insurance Commissioners. On the basis of market quotations for all bonds and stocks owned, the Company's total admitted assets at December 31, 2013 would be $223,222,696 and surplus as regards policyholders $172,675,461.

I, DENNIS F. KERRIGAN, Corporate Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company on the 31st day of December, 2013.

Corporate Secretary

State of Illinois }
City of Schaumburg } SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2014.

Notary Public

OFFICIAL SEAL
DARRYL JOINER
Notary Public - State of Illinois
My Commission Expires May 3, 2014
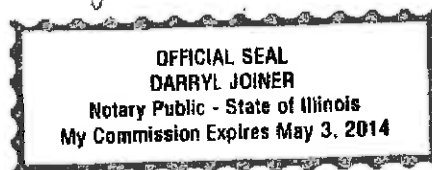
STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: __Deloitte__

Authorized Signature: _____ Date: _10/1/15_

State of _West Virginia_

County of _Kanawha_, to-wit:

Taken, subscribed, and sworn to before me this _1st_ day of _October_, 20_15_.

My Commission expires _September 11_, 20_22_.

AFFIX SEAL HERE   NOTARY PUBLIC _Ann M Carpenter_

OFFICIAL SEAL
Notary Public, State of West Virginia
ANN M CARPENTER
55 Ranchland Rd.
Charleston, WV 25312
My commission expires September 11, 2022
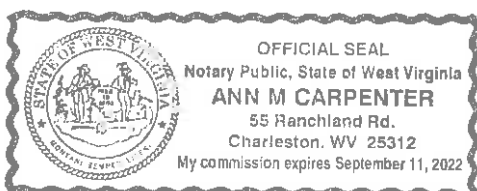
Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Proposal
21 — Info Technology

Proc Folder: 131814

Doc Description: RFP IV-A Software RAPIDS

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2015-08-08	2015-10-08 13:30:00	CRFP 0511 HHR1600000001	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON   WV   25305
US

VENDOR

Vendor Name, Address and Telephone Number:

Deloitte Consulting LLP
2500 One PPG Place
 ʼsburgh, PA 15222
 ʼ ı.412.402.5170

FOR INFORMATION CONTACT THE BUYER

Robert Kilpatrick
(304) 558-0067
robert.p.kilpatrick@wv.gov

Signature X   FEIN #   06-1454513   DATE   October 8, 2015

All offers subject to all terms and conditions contained in this solicitation

FORM ID : WV-PRC-CRFP-001

Proc Folder: 131814

Doc Description: RFP IV-A Software RAPIDS

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No		Version
2015-09-16	2015-10-08 13:30:00	CRFP	0511 HHR1600000001	2

BID RECEIVING LOCATION

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON   WV   25305

US

VENDOR

Vendor Name, Address and Telephone Number:

Deloitte Consulting LLP

2500 One PPG Place

`tsburgh, PA 15222

. 1.412.402.5170

FOR INFORMATION CONTACT THE BUYER

Robert Kilpatrick

(304) 558-0067

robert.p.kilpatrick@wv.gov

Signature X   FEIN #   06-1454513   DATE   October 8, 2105

All offers subject to all terms and conditions contained in this solicitation

Proc Folder: 131814

Doc Description: RFP IV-A Software RAPIDS

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No		Version
2015-09-25	2015-10-08 13:30:00	CRFP	0511 HHR1600000001	3

BID RECEIVING LOCATION

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON   WV   25305

US

VENDOR

Vendor Name, Address and Telephone Number:

Deloitte Consulting LLP

2500 One PPG Place

ttsburgh, PA 15222

. 1.412.402.5170

FOR INFORMATION CONTACT THE BUYER

Robert Kilpatrick
(304) 558-0067
robert.p.kilpatrick@wv.gov

Signature X   **FEIN #**   06-1454513   **DATE**   October 8, 2015

All offers subject to all terms and conditions contained in this solicitation

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: HHR1600000001

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[X]   Addendum No. 1   [   ]   Addendum No. 6

[X]   Addendum No. 2   [   ]   Addendum No. 7

[   ]   Addendum No. 3   [   ]   Addendum No. 8

[   ]   Addendum No. 4   [   ]   Addendum No. 9

[   ]   Addendum No. 5   [   ]   Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Deloitte Consulting LLP
_____
Company

_____
Authorized Signature

October 8, 2015
_____
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

Revised 6/8/2012

West Virginia
RAPIDS

Request for Proposal
WV Department of Health and Human Resources
Management Information Services
RAPIDS Project
CRFP 0511 HHR1600000001

Attachment A: Vendor Response Sheet

RFP Reference: Attachment A, page 1

As per Attachment A: Vendor Response Sheet, our proposal has been organized into the following sections and subsections:

- Section 4, Subsection 3.1, Corporate Qualifications and Experience
  - 4.3.1, Corporate Qualifications and Experience
  - 4.3.2, Staff Qualifications and Experience
- Section 4, Subsection 4.0, Project Goals
  - 4.4.1, Goal I: Management Plan
  - 4.4.2, Goal II: Technical Approach

Section 4, Subsection 3.1: (Corporate Qualifications and Experience)

RFP Reference: RFP page 5B
Section 4, Subsection 3.1: (Corporate Qualifications and Experience)
Vendors should provide in Attachment A: Vendor Response Sheet information regarding their firm, such as firm history, company references, proposed staffing plan, and staffing qualifications and experience. Vendor should also provide documentation of experience in completing similar projects by including the location of the project, project manager name and contact information, type of project, and what the project goals and objectives were.

RFP Reference: Attachment A, page 1
Provide a response regarding the following: firm and staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.

Deloitte brings more than 35 years of experience assisting Health and Human Services (HHS) state, local and federal agencies. Our track record includes more than 100 successful implementations in the areas of Integrated Eligibility (IE), Child Welfare, Child Care, and Child Support Enforcement and we continue to have a rich legacy serving clients like the State of West Virginia. Our IE experience spans over 25 years and includes the development and maintenance of eligibility case management and service delivery systems in 27 states and the federal government.

Our commitment to West Virginia Department of Health and Human Resources (DHHR) spans more than two decades. We have embraced the Agency's vision to transform incrementally in a stable manner and have developed numerous releases and enhancements for RAPIDS over that period. We uniquely understand your application landscape, people and processes, and have the experience required to maintain and modernize your systems in a cost-effective way, without disrupting your ongoing business operations.

SECTION HIGHLIGHT

The Agency benefits from Deloitte's broad capabilities and deep industry experience

- Globally Deloitte includes more than 210,400 professionals in 150+ countries and territories.
- Deloitte clients include 79% of the 2014 Fortune Global 500® companies
- More than 35 years of experience serving HHS agencies
- More than 6,500 practitioners focused on the Public Sector

Because of the highly complex business environment of an IV-A delivery program, the scale and complexity of the multiple technical modules that serve to support the Agency's overall integrated IV-A welfare system is staggering. And with a significant portion of the population of West Virginia depending on the RAPIDS-managed benefit programs (like Medicaid and SNAP), the stakes are very high for DHHR and the citizens of the State. The system is directly responsible for taking applications, processing renewals, determining eligibility, sending enrollments to MMIS, and sending notices – all critical functions subject to State policy and diligent Federal oversight. This sophisticated system serves a critical role in the well-being of many West Virginia citizens. In August 2015 alone, the RAPIDS system supported more than 340,000 households, managing $41M in SNAP benefits, $2.1M in TANF benefits, and providing medical assistance to over 535,000 citizens. An experienced vendor is critically important to

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maintain smooth operations, understand and implement policy, and assist you with Federal requests related to policy compliance.

Deloitte is such an experienced vendor with a rich history of successful system implementation and support projects in Integrated Eligibility (IV-A) as well as other HHS program areas and a current client base of 26 active State Government Integrated Eligibility clients. But we are also much more than just an experienced vendor – we also use our experience and the breadth of our HHS practice to help our clients collaborate and solve their most critical challenges. As an example, we successfully helped 19 states achieve their Affordable Care Act goals. With the sweeping regulatory changes of the Affordable Care Act, Deloitte teams collaborated across State boundaries and shared information provided by CMS to all the States where we were developing and/or maintaining eligibility systems. CMS recognized Deloitte's national leadership position in Medicaid eligibility systems, conducted one-on-one discussions with Deloitte leadership and we then used this forum to advocate for our clients.

In addition to such collaboration and sharing of information, our teams share technology solution components. For example, Deloitte implemented a complete inROADS (citizen portal) refresh, leveraging a solution from Georgia (that originated in Wisconsin). Another example is that during the IV&V testing for the Federal Data Hub, Deloitte created technology to convert complex CMS spreadsheets into automated test cases and shared that collateral with WV and all other states where we do work. So overall, while we provide several specific references later in this section, which are based on your RFP requirements, we are more than just a vendor who can say "we've done this before". We are THE national leader in Eligibility solutions and the full depth and breadth of our practice directly benefits DHHR and the citizens of West Virginia.

In order to support your business needs, the RAPIDS suite of applications supports a large amount of functionality including quality control, mass change jobs, user access management, client scheduling, benefit issuance and recovery, fair hearings, reporting, integration with a self-service solution, seamlessly interfacing with various other systems behind the scenes, auditing capabilities, and multiple business critical batch jobs that run almost every night of the calendar year. Furthering the solution's complexity, this functionality is supported by various technologies, including COBOL, Java, Cognos, Adobe LiveCycle, Corticon, and two database platforms, Oracle and DB2. In fact, a fully Integrated Eligibility system like the RAPIDS suite is one of the most complex systems in any State Government agency, similar in scale to an Enterprise Resource Planning (ERP) solution, and knowledge specifically in such solutions is required in order to successfully support and enhance it so as to not interrupt service delivery to some of your most vulnerable citizens. Below are just a few statistics which demonstrate the solution complexity.

DID YOU KNOW?

10+ MILLION LINES OF CODE
COBOL 5,875,822
JAVA 4,679,396

COGNOS REPORTS
100+ CANNED & INTERACTIVE REPORTS

DATABASE TABLES
ORACLE DB2: 756
(DATA WAREHOUSE): 648
ORACLE (INROADS): 183

857 GB OF DATA
DB2 TABLES: 656 GB
ORACLE TABLES (DATA WAREHOUSE): 165
ORACLE TABLES (INROADS): 36

8,000+ CORTICON RULES SPREAD ACROSS **550** RULESHEETS

84 ADOBE LIVECYCLE NOTICES

Figure 4.3.1-1. To support the various critical business functions, the RAPIDS Suite requires a considerably large technical footprint.

The current business environment is such that you have to make system changes faster and provide services to your clients with more accuracy than ever before. DHHR faces pressure from the Federal government, your State government, your constituents and many other entities to quickly meet new mandates and make sure the right benefits get into the right hands at the right time. This environment, coupled with the intricate welfare policies of WV, is what drives your extensive and highly critical IE system footprint. The RAPIDS suite is truly a business driven solution and every single feature is necessary to administer your business. For this reason, the Agency should be looking for a partner that not only has a set of technology skills, but also has the IV-A business knowledge as well as the WV specific knowledge to achieve your goals. Partnering with a technology-only or policy focused firm alone will not be enough to successfully maintain the RAPIDS suite and deal with all the pressures that come along with this undertaking. Deloitte has more national IV-A knowledge than anyone else and we're a top tier technology vendor. In addition, we have unmatched West Virginia specific expertise from our long-standing 21 year relationship. We are clearly the vendor most qualified and prepared to help DHHR meet your business goals.

#	Quality/Trait	Deloitte Brings This to WV DHHR
1	Decades of experience in supporting IV-A welfare systems across the nation	✓
2	Can rely on a practice of over 6,500+ practitioners dedicated to the public sector	✓
3	Decades of experience supporting IV-A welfare system modules in WV	✓
4	WV welfare policy knowledge	✓
5	WV welfare business process knowledge	✓
6	Has existing working relationships with WV eligibility system analysts	✓
7	Successfully assisted over a dozen State Agencies in implementing Affordable Care Act system changes	✓

Figure 4.3.1-2. Deloitte is well positioned to continue supporting and enhancing the Agency's IV-A Welfare system.

In addition to our national and West Virginia specific IV-A and technology knowledge, as the world's largest professional services firm, Deloitte is different from other major consulting firms in that we are a full service, multi-functional professional services organization providing consulting, audit, tax, and financial advisory businesses under a single Deloitte brand. Our consulting practice services six major industries with a dedicated group of more than 6,500 practitioners and solutions focused on the Public Sector. As a leader in State Government Consulting in the United States, we have the distinction of having served 47 of 50 U.S. states. Our State Government practitioners provide our full range of services, bringing informed viewpoints and providing a 360-degree perspective to each State Government project we undertake.

NOTABLE QUOTABLE
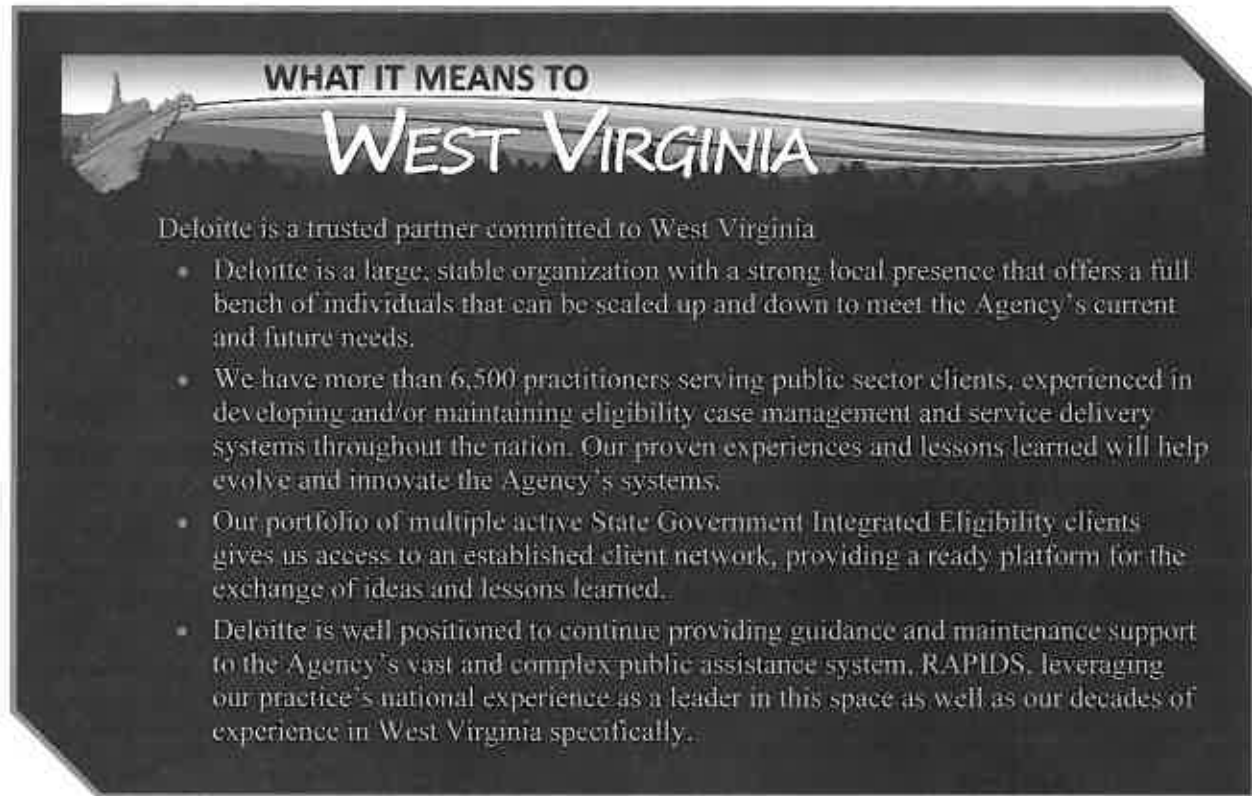
Deloitte named *the* leader in U.S. State & Local Government Consulting by Kennedy

Source: Kennedy Consulting Research & Advisory; United States State & Local Government Consulting; Kennedy Consulting Research & Advisory estimates. © 2014 Kennedy Information, LLC. Reproduced under license

Deloitte is the recognized market leader in integrated eligibility system projects with an unblemished record of developing and/or maintaining eligibility case management and service delivery systems throughout the United States. Our dedicated professionals have a long history of collaborating with states to deliver and support integrated, end-to-end business solutions that help agencies promptly achieve measurable value. States from across the nation continue to select Deloitte as their systems integrator to maintain, operate, and enhance their public assistance systems.

Deloitte is committed to delivering a highly-qualified and experienced team to successfully enhance and maintain the Agency's systems. Our Project Management team, Track Managers, Programmer Analysts, and technical staff have experience working with Agency processes and enterprise solutions and the team brings in-depth knowledge of the technical environment. We also have developed a respectful and collegial relationship with the Agency, MIS and the State Office of Technology resources. These relationships provide a working atmosphere that has helped enable the most difficult of enhancements to be implemented within the time and budget parameters established by the Agency. The Agency is requesting a firm with the experience and capability for undertaking a project of the size

and complexity of the RAPIDS suite of applications (and to provide modification services for RAPIDS and other DHHR initiatives). Deloitte is that firm. Details of our proposed staffing plan and staffing qualifications and experience are included in **Section 4, Subsection 3.2.**

WHAT IT MEANS TO WEST VIRGINIA

Deloitte is a trusted partner committed to West Virginia

- Deloitte is a large, stable organization with a strong local presence that offers a full bench of individuals that can be scaled up and down to meet the Agency's current and future needs.

- We have more than 6,500 practitioners serving public sector clients, experienced in developing and/or maintaining eligibility case management and service delivery systems throughout the nation. Our proven experiences and lessons learned will help evolve and innovate the Agency's systems.

- Our portfolio of multiple active State Government Integrated Eligibility clients gives us access to an established client network, providing a ready platform for the exchange of ideas and lessons learned.

- Deloitte is well positioned to continue providing guidance and maintenance support to the Agency's vast and complex public assistance system, RAPIDS, leveraging our practice's national experience as a leader in this space as well as our decades of experience in West Virginia specifically.

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Subsection 3.1.1: Firm History

RFP Reference: Attachment A, page 1

3.1.1 Firm History: The Agency requests that the vendor provide the following information:
a. Change in ownership within the previous five years;

Vendor Response:

We have not had a change in ownership within the previous five years. Additional details about the Firm's history are included further in this section.

Currently Deloitte Consulting LLP is a limited liability partnership that was formed in Delaware in 2003, with more than 500 principals, partners, and directors; all with less than 1% ownership. At this time, Deloitte does not anticipate changes to our ownership status.

RFP Reference: Attachment A, page 1

b. Current office headquarters;

Vendor Response:

Deloitte is currently headquartered at 30 Rockefeller Plaza, New York, NY 10112.

RFP Reference: Attachment A, page 1

c. Background of the parent and/or subsidiary company, its size, lines of business, and personnel and technical resources;

Vendor Response:

Deloitte Consulting LLP is a subsidiary of Deloitte LLP, which is a member firm of Deloitte Touche Tohmatsu Limited (DTTL), a global company with member firms in more than 150 countries.

Globally, "Deloitte" is the brand under which tens of thousands of dedicated professionals in independent firms throughout the world collaborate to provide professional services to clients. Its lines of business include the following:

- Audit
- Consulting
- Advisory
- Tax and related services.

These services are provided by member firms of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). Each DTTL member firm provides services in particular geographic areas and is subject to the laws and professional regulations of the particular country or countries in which it operates.

NOTABLE QUOTABLE

"Deloitte's breadth of capabilities is unique in that they extend beyond technical business consulting to tax and audit consulting, including tax and audit implications of outsourcing decisions. The company also has a strong vision for the impact of emerging technologies."
- Forrester Research

Across all member firms, Deloitte employs approximately 225,000 people across 150 countries and territories, including more than 34,500 technical resources globally.

In the United States, Deloitte LLP is the member firm of DTTL and provides services through its four subsidiaries: Deloitte Consulting LLP, Deloitte & Touche LLP, Deloitte Tax LLP, and Deloitte Financial Advisory Services LLP.

Through these subsidiaries Deloitte LLP employs more than 70,000 practitioners in 108 offices in the U.S, including more than 9,000 technology resources.

RFP Reference: Attachment A, page 1
d. Date established;

Vendor Response:

Deloitte & Touche was established in December 1989 by the merger of Deloitte, Haskins & Sells (founded in 1845) and Touche Ross (founded in 1947). In June 1995, Deloitte & Touche Consulting Group was created as a separate division of Deloitte & Touche LLP to set the foundation for the creation of a global, integrated consulting firm. While the organization has gone through a series of name changes over the years, since December 2003 Deloitte has been providing consulting services through Deloitte Consulting LLP.

RFP Reference: Attachment A, page 1
e. Primary business;

Vendor Response:

In the United States, Deloitte LLP has the following Primary Businesses

Deloitte Business Area	
Consulting	The Consulting practice creates value for clients by providing business insights with tangible, measurable, attributable results. Delivering this kind of value requires a broad range of capabilities aligned to the unique needs of specific sectors, businesses and organizations. As the world's largest management consulting firm, Consulting delivers solutions that address some of the most complex needs of the most sophisticated clients.
Audit	Leading the way in Audit, Deloitte's professionals are committed to excellence and to enhancing the trust of the investing public and capital markets. Quality is our top priority, and by focusing on innovation, we continue to raise the bar on quality and deliver greater value to our clients.
Tax	Smart companies know that managing taxes is a critical part of an effective business strategy. Minimizing the tax effect of complex decisions, as well as a company's overall tax rate, are essential to achieving performance objectives today. With more 8,000 Deloitte professionals in the U.S. and in India, we help clients use the latest tax strategies to significantly impact performance.
Advisory	Advisory helps organizations turn critical and complex business issues into opportunities for growth, resilience and long-term advantage. Our market-leading teams help clients manage strategic, financial, operational, technological, and regulatory risk to maximize enterprise value, while our experience in mergers and acquisitions, fraud, litigation, and reorganizations helps clients move forward with confidence.

Figure 4.3.1-3. Deloitte's Business Area Descriptions.

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Among these four primary business areas, Deloitte's consulting practice (Deloitte Consulting LLP) has been serving the Agency since the development of the State's first Integrated Eligibility System in 1994 and seeks to continue this relationship by delivering the RAPIDS suite for the State of West Virginia. The section below describes Deloitte's consulting practice and the value it provides to the Agency in more detail.

As is represented in the below organization structure, our Consulting Practice provides services in three key areas – technology, human capital, and strategy and operations – in the following industries: public sector; consumer and industrial products; energy resources; financial services; health sciences & government; technology, media and telecommunications. To serve our clients effectively, our national practice is divided into three separate geographic regions – East, Central and West. Grouping our capabilities and offices this way allows us to provide focused and tailored solutions to clients, while leveraging our national presence and broad capabilities.

The following figure shows our organization across the functional areas.

DID YOU KNOW?

Deloitte at a glance:

- Largest professional services firm in the U.S. in revenues and headcount
- Top 10 company for working mothers, diversity, and multicultural women
- *Fortune* magazine announced Deloitte U.S. Firms as one of the "100 Best Companies to Work for" for the 14th time since 1998

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Deloitte Organization Across Service Areas
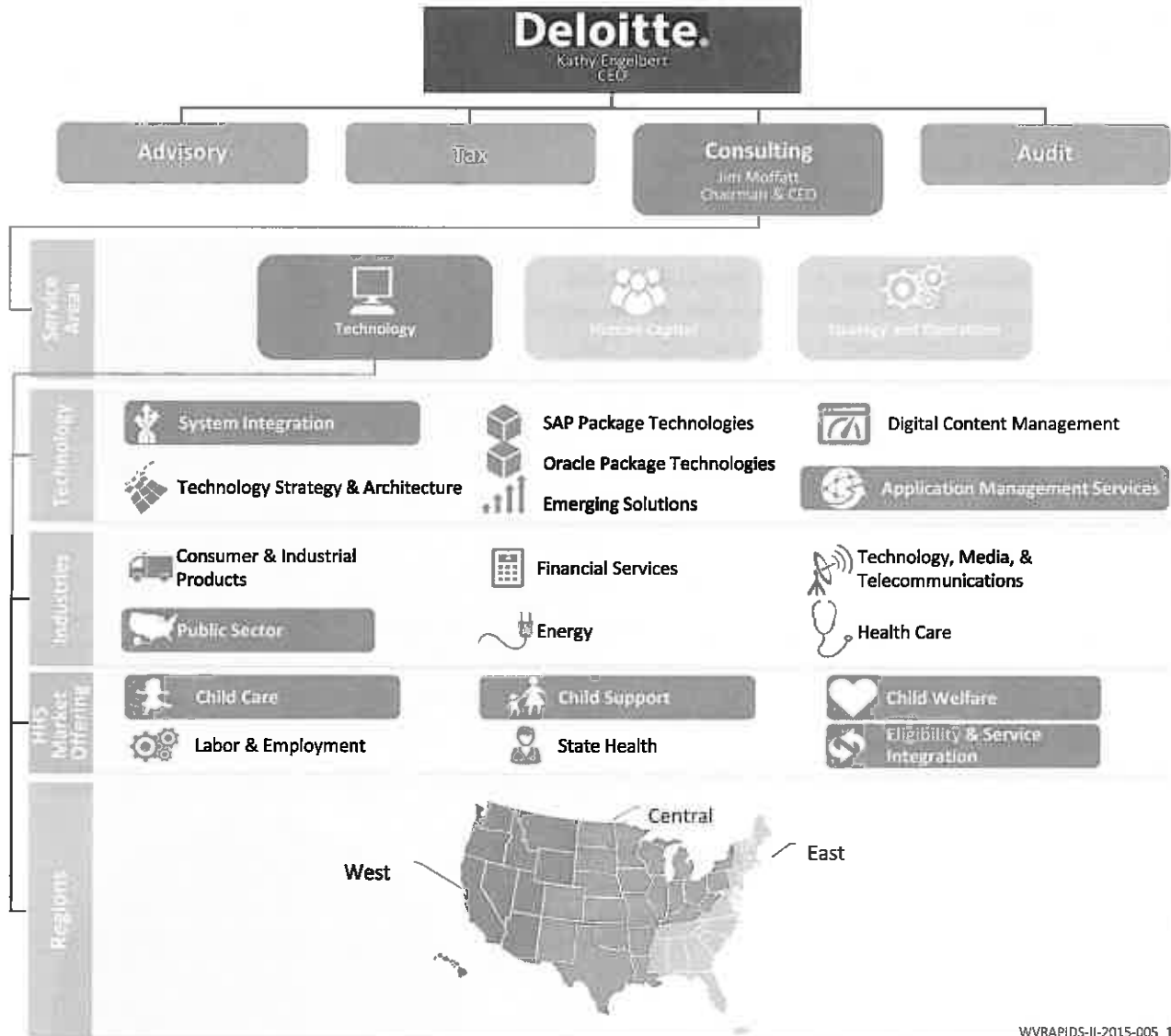
Figure 4.3.1-4. Deloitte Across Service Areas.

The following sections describe Deloitte Consulting's three main service areas – Technology, Human Capital and Strategy & Operations.

Technology Practice

Deloitte's Technology practice helps clients in their efforts to solve their toughest business challenges through the combination of deep technology competence and practical business strategy capabilities. We apply technology as both an enabler and as a transforming element — delivering current business "better, cheaper, faster," and creating new modes of business in an industry, sector, or client. We match solutions to the needs of each client and deliver advice, implementation, management, and operations — from strategy through sustainment.

Our investments and scale are aligned around those issues and industry sectors where we have specialized experience, knowledge, and skills to deliver more complete services and solutions. Our Technology practitioners have core capabilities in the following areas:

- Technology Strategy & Architecture
- Information Management
- SAP Package Technologies
- Oracle Package Technologies
- Deloitte Digital
- Systems Integration
- Application Management Services

Figure 4.3.1-5. Deep Technology Delivery
Deloitte's business led and technology enabled approach provides end-to-end services from strategy to implementation to operations

The services requested in this RFP most align with the experience within our Application Management Services (AMS) and System Integration (SI) practices, both of which are part of our Technology Consulting area. AMS specializes in maintenance and operations and SI specializes in development and incremental modernization of large-scale, technology solutions, similar to what is required in West Virginia.

Human Capital Practice

Deloitte's Human Capital practice specializes in providing broad-based business consulting services designed to help organizations in their efforts to integrate people issue resolution with their business strategy. Human Capital services are designed to help organizations in their efforts to enhance their performance, productivity, and profitability through their workforce. Human Capital goes to market by sectors, relying on deep industry experience, knowledge and skills, and providing innovative and broad services and solutions designed to help clients in their efforts to address their most complex issues. Our Human Capital practitioners have core capabilities in the following areas:

Figure 4.3.1-6. Business-Led. People-Driven.
Deloitte Consulting's Human Capital practice is a leading advisor and implementation partner working to improve our clients' organizational results

- Actuarial, Rewards & Analytics
- HR Transformation
- Organization Transformation & Talent

Strategy and Operations Practice

Deloitte's Strategy and Operations practitioners bring deep industry experience, rigorous analytical capabilities, bold ideas, and a pragmatic mindset to help our clients in their efforts to address their most complex business problems. As a result, they help our clients in their efforts to identify new possibilities, make tough choices, bridge the gap between vision and execution, and, ultimately, achieve significant and sustainable results.

We work with senior executives to help them in their efforts to address challenges ranging from profitable growth to strategic cost management to intelligently managing risk. Our strategy capabilities span corporate and business unit strategy, mergers and acquisitions (M&A) strategy, and sales and marketing, while our operational capabilities reflect the unique issues facing manufacturing organizations, service businesses, and infrastructure operations. We couple these with strong capabilities in finance, performance management, and business restructuring. Our Strategy & Operations practitioners have core capabilities in the following areas:

- Business Model Transformation
- Finance
- Mergers & Acquisitions
- Monitor Deloitte
- Service Operations
- Social Impact
- Supply Chain and Manufacturing Operations
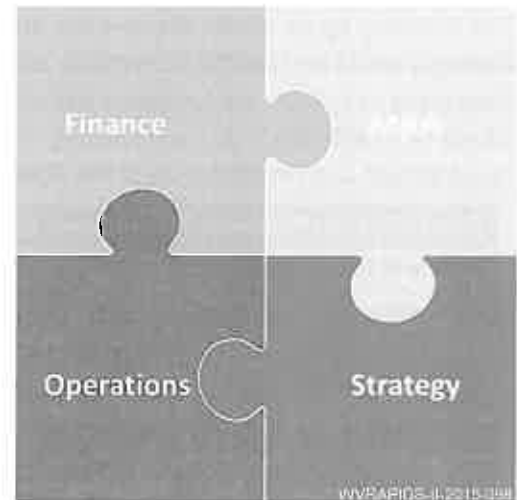
Figure 4.3.1-7. Linking strategy with execution.
Our Strategy & Operations professionals draw on the strength of Deloitte's full suite of professional services and industry experience to focus solutions on the real issues affecting businesses

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f. Total number of employees;

Vendor Response:

Globally, Deloitte employs around 225,000 people across 150 countries and territories.

In the United States, Deloitte LLP has over 70,000 practitioners across all functions working across 108 offices. This includes more than 6,500 Public Sector practitioners, more than 2,000 of whom are focused specifically on Health and Human Services projects.

The following figure shows the revenue breakdown by area for the business areas for Deloitte LLP and its subsidiaries. As illustrated, Deloitte Consulting LLP accounts for nearly half of our U. S. revenue. Our size allows us to effectively and successfully support the application development and maintenance of the Agency enterprise solutions.

NOTABLE
QUOTABLE

"Deloitte ranked largest global Consulting provider, based on revenue and marketshare, by Kennedy"

Source: Kennedy Consulting Research & Advisory; Global Consulting Index 2012; Kennedy Consulting Research & Advisory estimates © 2012 Kennedy Information, LLC. Reproduced under license

Consolidated Revenue Breakdown By Area	2015	2014	2013
Audit and Enterprise Risk Services	29.4%	29.4%	30.7%
Consulting	48.4%	47.7%	46.0%
Tax	17.5%	17.9%	17.9%
Financial Advisory Services	4.7%	5.0%	5.4%

Source: Deloitte LLP, New York

Figure 4.3.1-8. Deloitte's Consolidated Revenue Breakdown by Area.
Deloitte Consulting accounts for nearly half of Deloitte's overall US revenues.

We draw upon the combination of audit, consulting, tax, and financial advisory services to understand and evaluate client issues more broadly and more deeply than other companies. Our understanding of the regulatory environment and federal, state, and local programs drives rich solutions that are sustainable and reflect the complexity of our clients' day-to-day operations.

RFP Reference: Attachment A, page 1

g. Number of individuals involved in human services computer systems maintenance, transfer, and development; and

Vendor Response:

Deloitte has more than 2,000 practitioners dedicated to working on Health and Human Services projects. More than half of these resources are currently focused on Integrated Eligibility and the remaining primarily support Child Care, Child Support Enforcement and Child Welfare engagements across the nation.

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h. Litigations and Claims made against professional liability insurance (pending or settled) or the collection of performance bonds which have occurred within the past three years.

Vendor Response:

Deloitte Consulting LLP, as one of the leading providers of consulting services, is routinely involved in complex consulting projects, often involving large-scale systems implementations and multiple service providers. Although we are justifiably proud of our record of client satisfaction, such projects do occasionally give rise to disagreements over contract requirements, and we are occasionally, though rarely, involved in litigation with clients pertaining to our consulting services. We do not believe that such matters will affect our ability to provide consulting services, or that they will affect our ability to serve DHHR in connection with this proposed engagement. Throughout our extensive history working with the State of West Virginia we have not had a single contract dispute.

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Subsection 3.1.2: Corporate Experience

RFP Reference: Attachment A, page 1

Subsection 3.1.2: Corporate Experience
The vendor should provide credible, detailed evidence of four projects which used its related experience and capabilities in implementing and maintaining web-based enhancements to other IV-A systems, as well as data warehousing, Enterprise Service Bus (ESB), Business Rules Engine (BRE) and Master Data Management (MDM) experience. Of these four references, three (3) should be current customers and one should be a former customer. The Agency is not interested in a voluminous description. A concise, but thorough, description of relevant experience is required. Descriptions should also include the size and complexity of the systems the vendor designed, implemented, or for which it provided ongoing support, including the number of screens and reports, total number of programs and lines of code, transaction volume, system response times, etc. The description should also include project manager name and contact information.

Vendor Response:

The RAPIDS application suite supports a multitude of IV-A welfare business processes. The web-based system supports scheduling, IV-A data collection, an eligibility rules engine, business critical data interfaces, security maintenance, executive reporting, benefit issuance, program review functionality, citizen self-service functions, and automated notices/mailing to name a few. We have experience in supporting all of these IV-A business functions, not only via the technical modules in the existing RAPIDS suite, but also in numerous projects across the country. It is this distinct and unique experience in IV-A welfare systems that helps differentiate our service offerings from those of our competitors.

While credible, detailed evidence of IV-A system experience is the primary qualification you have asked for in this requirement, the Agency also is interested in a partner that has experience in Data Warehouses, Enterprise Service Bus (ESB), Business Rules Engine (BRE), and Master Data Management (MDM) within the IV-A welfare domain. To demonstrate this experience and be compliant with the RFP requirement of four such customers (three current and one former), we have chosen our projects from the States of Wisconsin, Pennsylvania, Virginia, and California (which is the former customer). This is just a small sampling of our IV-A system experience, as no other vendor can match the breadth of our IV-A qualifications. The table below shows a summary of these IV-A system projects as related to the technical areas mentioned in this RFP requirement. This experience ultimately benefits the Agency, for not only do we have experience in these areas within the RAPIDS suite, but also have specialists in other States that are merely a phone call away. Additional details for each project are provided later on in this section.

State	Project Name(s)	IV-A System	Data Warehouse	Enterprise Service Bus (ESB)	Business Rules Engine (BRE)	Master Data Management (MDM)
WI	CARES	✓	✓		✓	✓
PA	iCIS, PACSES, PELICAN	✓	✓	✓	✓	✓
VA	Virginia Case Management System (VaCMS)	✓		✓	✓	✓
CA (former customer)	ISAWS	✓				

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Figure 4.3.1-9. As requested in the RFP, we have provided a sampling of 4 projects that support the functionalities that the Agency is seeking.

Deloitte has experience customizing, implementing, and maintaining 38 eligibility case management and 23 self-service solutions. Our public sector experience spans 35 years, including over 25 years of specific integrated eligibility experience. This provides us with the development, implementation, installation, and maintenance support experience to maximize the benefits to the Agency. Our public sector practice also has successfully implemented Health and Human Service projects in other domains, such as Child Support, Child Welfare, and Health Insurance Exchanges. This breadth across HHS market offerings, in conjunction with our deep knowledge in the IV-A integrated eligibility, serves to truly differentiate our capabilities from those of other vendors.

The following figure depicts our rich history in innovative HHS solutions.

Deloitte Heritage as the Leading HHS Systems Integrator
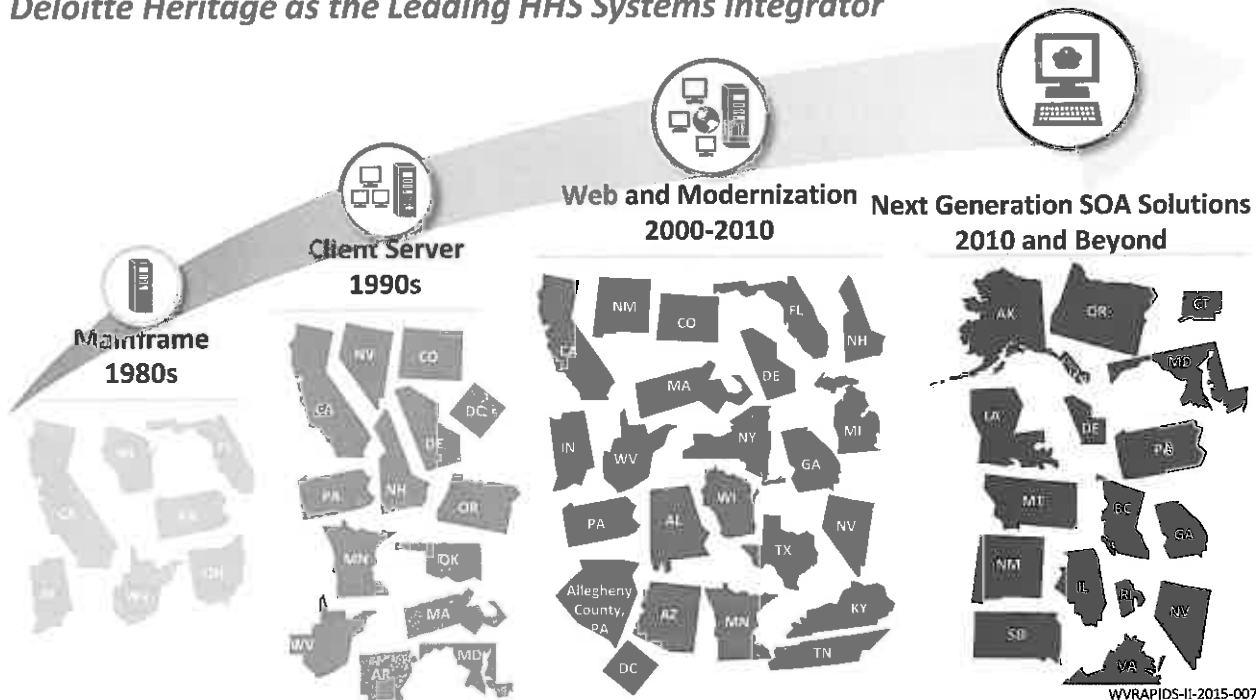
Figure 4.3.1-10. Deloitte's Heritage as the Leading HHS Systems Integrator.
Deloitte has a wealth of experience helping clients modernize and support their systems.

A significant reason for our success on these projects has been the effort we take in understanding the unique circumstances of each of our clients. This allows us to leverage our resources, industry leading practices, and reusable artifacts to provide the right team and reliable, production proven solutions. As a result we are able to help the Agency stay at the forefront of the HHS industry.

Our investments to equip and enable our staff have matured over the many years of experience and work we have completed on HHS projects similar to and including West Virginia. Specific to West Virginia, not only do we have the long-standing partnership and track record with the State on the RAPIDS suite of applications related to Integrated Eligibility, but we were also the development vendor for FACTS. We led that project to an on-time and within budget implementation and FACTS was SACWIS compliant before most other States' Child Welfare systems. In addition, this application was successfully transferred to the District of Columbia and SACWIS certified there as well. Through a similar dedication to successful projects and implementations, we have also established long term partnerships with many other states. Below are just a few of many such examples:

- **Wisconsin.** In 1991, Deloitte started in Wisconsin and has since been reselected three times to provide additional delivery of integrated solutions as part of the CARES suite of applications.

- **Texas.** In 2001, Deloitte started work on Texas's integrated eligibility system (TIERS) where we continue to provide maintenance and operations support, recently integrating Children's Health Insurance Program (CHIP) into the system.

- **Pennsylvania.** In 2002, Deloitte implemented a full-scale Child Support Enforcement system (PACSES) and has since been selected to continue providing maintenance and operations services.

Deloitte's State and Local government experience is illustrated by our clients' desire to continue working with Deloitte beyond initial development and implementation. As shown in the figure that follows, many of our clients have chosen to continuously work with Deloitte for over 20 years.
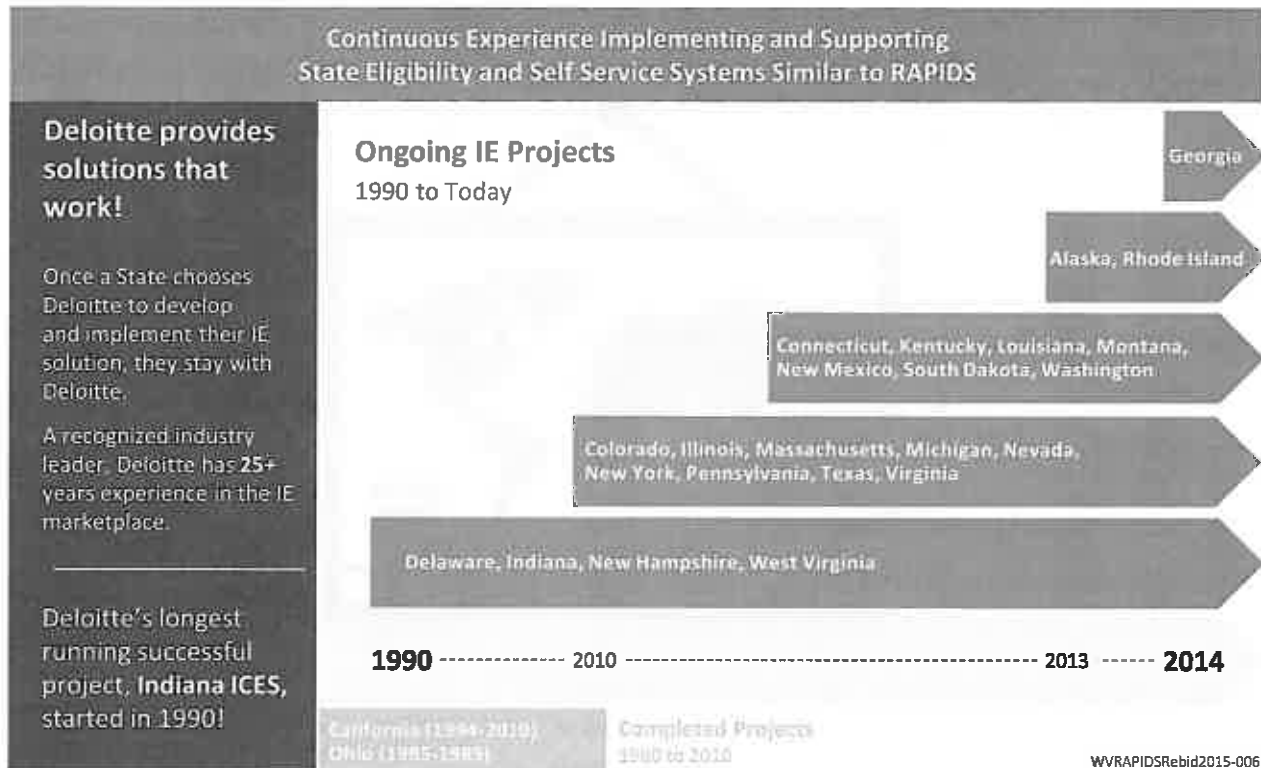
Figure 4.3.1-11. Continuous Experience Implementing & Supporting State Eligibility and Self-service Systems Similar to West Virginia.
Deloitte is a recognized industry leader in the integrated eligibility marketplace and has a history implementing and supporting state eligibility systems.

Collaborating with Deloitte gives the State of West Virginia access to the experience and knowledge that comes with our background of effective HHS implementations across Integrated Eligibility, Child Welfare, Child Care and Child Support Enforcement program areas.

The section below details four large HHS M&O and Enhancements projects we have implemented. Out of these, Pennsylvania, Wisconsin and Virginia are existing clients, whereas California is a client where Deloitte successfully transitioned ownership of the solution to the State.

These projects are comparable to West Virginia in terms of program coverage, size, scale and complexity. We have included the information required in the RFP, as available, including size and complexity of the systems, number of screens and reports, total number of programs and lines of code, transaction volume, and system response times. The description also includes project manager name and contact information.

Corporate Qualification 1

Client Name: State of Wisconsin

Project name: Client Assistance for Re-employment and Economic Support (CARES) System

| **Project Manager** | Jennifer Mueller, Deputy Bureau Director, Eligibility | **PM Contact Information** | 1 W Wilson St Madison, Wisconsin 53703 JenniferM.Mueller@dhs.wisconsin.gov 608 267-3371 |

☑ IV - A System

Other Relevant Experience

☑ Data Warehousing ☑ Business Rules Engine ☑ Master Data Management

Programs Supported

☑ Integrated Eligibility ☑ Child Care

Why We Selected This Qualification

While the State of Wisconsin is not in West Virginia's region, the two states are similar in their technical landscape and have closely collaborated in the past. Wisconsin has a mainframe for backend services, Corticon Business Rules Engine, Informatica for ETL and an Oracle Data Warehouse. These similarities have allowed the State of West Virginia to benefit from the transfer and reuse of multiple assets from Wisconsin, and Wisconsin has gained information and solutions from West Virginia. In addition, like West Virginia, the State of Wisconsin has benefited by adopting an approach of incremental modernization of its key systems, allowing the State of Wisconsin to continue serving their clients during periods of transformation, with minimum disruption to its ongoing operations.

QUALIFIACTION HIGHLIGHTS

- Continuous partnership with State of Wisconsin's Department of Health Services and Department of Children and Families since 1992
- Utilize Oracle Data Warehouse, Informatica for ETL, and Corticon as Business Rules Engine
- Support applications providing services utilized by more than 1 million people

Overview

Deloitte works directly with the State of Wisconsin's Department of Health Services (DHS) and Department of Children and Families (DCF), which provide many key HHS programs that are administered throughout the state. These programs provide residents with various forms of assistance, including disability, nutrition, health care, and cash-assistance programs, and are utilized by more than one million individuals across the State of Wisconsin.

Deloitte has worked with DHS and DCF since 1992. As a key partner to the State, Deloitte has and continues to provide a number of strategic services that have supported the State's ongoing ability to better serve the citizens of Wisconsin. The services provided include varying levels of application design, development, maintenance, change leadership, field support, training services, and strategic planning. These services have helped the State of Wisconsin incrementally renew how it does business in times of tight budgetary pressures.

Deloitte is the sole contractor for supporting the maintenance and operations of the Client Assistance for Re-employment and Economic Support (CARES) system. CARES is an automated eligibility determination and case management system for Medicaid, SNAP, Child Care and TANF public assistance programs.

Although the CARES system evolved over time to satisfy business and policy needs, its user interface was limited by its "green-screen" mainframe restrictions and the system had become increasingly more expensive for the State to operate and maintain. Since 2003, Deloitte Consulting has worked with DHS to implement several phases of CARES Worker Web (CWW), an incremental renewal effort to transform the CARES mainframe application into a modern, feature-rich, Web-based application that streamlines business processes, promotes improved data integrity, and reduces training time.

CWW went live in February 2005, and was the first incrementally implemented, state-of-the-art, J2EE IBM WebSphere/Mainframe DB2 eligibility and case management system in the country. The three main phases of CWW included moving Client Registration and Application Entry to the web, implementing an application inbox to accept and process electronically submitted self-service applications and change reports, and enabling workers to initiate eligibility and view the results from the web. Since the State's primary objective was to improve the front-end tool, Deloitte designed and implemented an approach whereby backend eligibility business logic and batch cycles remained on the mainframe platform, while the user interface was migrated to the Web. With the help of Deloitte, the State continues to move forward enhancing the CWW application in order to address changing program policy, streamline service delivery, and reduce program error rates.

In addition, Deloitte maintains and enhances a public facing web portal, ACCESS, which allows citizens to screen, apply for benefits, report case changes, renew benefits, submit verification documents and view case status information. The ACCESS solution has been successfully transferred and implemented in many other States, including the State of Georgia, from which it was later transferred to the State of West Virginia.

Deloitte has also worked with the State to implement an electronic document management and workflow solution called ECF. This solution provides anytime, anywhere access to citizens' case files, facilitating the movement of clients between counties, expediting SNAP and Medicaid quality control checks, reducing paper file storage costs, and centralizing the receipt of documents and applications.

System Size and Complexity

Size and complexity of the systems the vendor designed, implemented, or for which it provided ongoing support:

- CARES Mainframe: 870 screens (many are read-only and have been moved to the web)
- CARES Worker Web (CWW): 322 screens
- Access to Eligibility Support Services (ACCESS): 376 screens
- Program Participation System (PPS): 77 screens
- Functional Screen Information Access (FSIA): 144 screens
- Employer Verification of Health Insurance (EVHI): 58 screens
- Wisconsin Integrated Security Application (WISA): 55 screens
- Wisconsin Incident Tracking System (WITS): 20 screens
- Master Customer Index (MCI): 55 screens

Transaction Volume (Average Monthly Numbers)

- 75 million transactions in CARES/CWW system per month
- 1.3 million documents added to ECF per month
- 16,000 Request for Benefit applications submitted through ACCESS per month

System Response Times

- Under one second page response time to access a page in CWW

Corporate Qualification 2

Client Name: Commonwealth of Pennsylvania Pennsylvania Department of Human Services	
Project Name:	iCIS (Integrated Eligibility), PACSES (Child Support Enforcement), PELICAN (Child Care), CWIS (Child Welfare)

Department of Human Services, Commonwealth of Pennsylvania		
Project Manager	James A. Weaver, Deputy CIO Public Welfare, Insurance and Aging PA Department of Human Services	**PM Contact Information** Bureau of Information Systems 1006 Hemlock Drive, Room 60 Willow Oak Building Harrisburg, PA 17110 jamweaver@pa.gov 717.772.7120

☑ IV - A System

Other Relevant Experience

☑ Data Warehousing ☑ Business Rules Engine ☑ Master Data Management

☑ Enterprise Service Bus

Programs Supported

☑ Integrated Eligibility ☑ Child Welfare ☑ Child Support Enforcement ☑ Child Care

Why We Selected This Qualification

The Commonwealth of Pennsylvania (CoPA) is one of our largest and oldest public sector clients. The depth and breadth of services we deliver to CoPA demonstrates our ability to successfully maintain cross-HHS systems in the areas of Integrated Eligibility, Child Care and Child Support Enforcement, across a large number of users and agencies.

Overview

Deloitte provides Maintenance and Operations services to the Commonwealth of PA Department of Human Services (DHS). These services include new development, enhancements, maintenance, middleware, database, configuration, content management, business intelligence, architecture, platform, security and release management.

Our teams support multiple major projects at the Commonwealth, including: iCIS (Integrated Eligibility), PACSES (Child Support Enforcement), PELICAN (Child Care) and CWIS (Child Welfare). There are currently more than 300 Deloitte and subcontractor practitioners on the project team.

QUALIFIACTION HIGHLIGHTS

- Service more than 3.5 million citizens and more than 25,000 end users.
- On a monthly basis the Deloitte team provides over 50 application migration services that minimize issues and rework and provide significant value to the client
- Solution includes a cross program Oracle Data Warehouse, Informatica for ETL, Cognos for Reports, Corticon Business Rules Engine, BizTalk, webMethods using a custom ESB framework and a custom developed MDM

These applications are the cornerstone components for a portfolio of systems that these agencies use to support HHS service delivery for their constituents. Collectively these systems are used to serve over 3.5 million Pennsylvania users and residents.

iCIS (Integrated Eligibility)

The Integrated Client Information System (iCIS) application suite consists of three main components: COMPASS (Commonwealth of Pennsylvania Access to Social Service), eCIS (electronic Client Information System), and CIS (Client Information System). COMPASS is a web-based self-service portal application, designed to extend the accessibility of the social service application process to citizens and business partners of the Commonwealth. CIS is a mainframe application which provides comprehensive functionality to determine Cash Assistance, Medical Assistance, SNAP, and LIHEAP eligibility and issue benefits to over one million clients. eCIS is the web-based version of CIS.

PACSES (Child Support Enforcement):

The Pennsylvania Child Support Enforcement System (PACSES) provides the ability to input and track cases, manage the financial processes related to the cases, and locate delinquent members. The system includes extensive data integration with other systems including the Federal Office of Child Support Enforcement (OCSE) Federal Case Registry (FCR), IRS, Multistate Financial Institution Data Match (MSFIDM), the Pennsylvania Department of Transportation (PennDOT), the Pennsylvania Justice Network (JNET), and several others. The system also includes an external Paternity Tracking System used for the establishment of paternity. In addition to the base mainframe application, other components of the PACSES application suite include browser-based applications that support the functioning of the child support program in the state such as the Performance Improvement Module (PIM), Child Support Web site (CSWS), PACSES Data Warehouse, DRS Dashboard, Co-Browsing, webPACSES, DRS-at-a-Glance, Query Interstate Case for Kids (QUICK) and the PACSES Home Page (PHP).

PELICAN (Child Care)

The Pennsylvania Enterprise to Link Information for Children Across Networks (PELICAN) application suite supports the Commonwealth's early childhood programs. Components of the PELICAN suite include the Certification & Licensing System (CLS), Child Care Works (CCW), Early Learning Network (ELN), Pre-Kindergarten Counts (PKC) and Provider Self-Service (PSS).

CWIS (Child Welfare)

Over the last few years, 24 new regulations were passed by PA state legislature with the goal of ensuring safety for the children of Pennsylvania by improving efficiency of county administered child welfare programs and increasing the visibility of information. To implement these regulations the Commonwealth of PA turned to Deloitte to consolidate current, disparate state-level systems and provide near real-time data exchanges with the county applications. The first phase of this initiative improved child abuse referral functionality, as the Child Welfare Information Solution (CWIS) interfaces with counties' child abuse case management systems. This foundation provides the input to an exhaustive Business Intelligence solution that integrates data from the 67 Pennsylvania county systems and the CWIS application. We provide up to date dashboards and the ability to report on abuse and neglect cases across the Commonwealth.

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System Sizes and Complexity

Size and complexity of the systems the vendor designed, implemented, or for which it provided ongoing support:

- iCIS Application Suite:
  - 980 screens and pages.
- PACSES Application Suite:
  - 357 screens, 438 reports, 1560 batch programs, and 3.9M lines-of-code.
- PELICAN Application Suite:
  - 988 screens.
- CWIS Application Suite:
  - 89 screens, 23 batch programs and 895,140 lines of code

Transaction Volumes (Average Monthly Numbers)

- iCIS Application Suite:
  - COMPASS transactions include 26,000 logins per month, 40,000 applications per month submitted, 7,000 renewals per month and 1,200 account changes per month, with a total of 80,000 hits per month.
  - CIS & eCIS transactions include an average of 5.1 million mainframe transactions/day (~112,200,000 transactions /month), an average of 149,000 applications for services per month, 665,224 images scanned per month, 75,000 renewals per month, and 1,220,000 workload dashboard items per month.
- PACSES Application Suite:
  - Combined, the PACSES Mainframe and Open Systems components support approximately 3.4 million transactions per day (~74,800,000 transactions per month).
- PELICAN Application Suite:
  - Combined, the complete set of PELICAN subsystems and application components support approximately 961,000 transactions per month.
- CWIS Application Suite:
  - Approximately 15,760 transactions per day (~472,800 transactions per month)

System Response Times

- iCIS Application Suite:
  - COMPASS: approximately 2.10 sec
  - eCIS: approximately 3.76 sec
- PACSES Application Suite:
  - Mainframe: approximately 0.2 sec
  - Open Systems: approximately 1.46 sec

- PELICAN Application Suite:
  - Screens/pages: approximately 3.00 sec
  - Reports: approximately 9.00 sec
- CWIS Application Suite:
  - Interfaces: approximately 1.80 sec

Corporate Qualification 3

Corporate Qualification: Commonwealth of Virginia

Project Name: Virginia Case Management System (VaCMS)

Project Manager	Dottie Wells Director, Enterprise Delivery Systems	**PM Contact Information**	Virginia Department of Social Services 801 East Main Street Richmond, VA 23219-2901 (804) 726-7639 dottie.wells@dss.virginia.gov

☑ IV - A System

Other Relevant Experience

☑ Business Rules Engine ☑ Enterprise Service Bus ☑ Master Data Management

Programs Supported

☑ Integrated Eligibility ☑ Child Care

Why We Selected This Qualification

Deloitte has a long history with Virginia Department of Social Services (VDSS) in the Commonwealth of Virginia. In addition to being a prime system integrator and having built many of their key systems, Deloitte has been contracted to support systems that are used to deliver benefit programs like SNAP, TANF, Medicaid/CHIP and LIHEAP, as well as Child Care Services to more than two million clients. In addition, like eRAPIDS at DHHR, the Virginia Case Management System (VaCMS) that Deloitte built and currently supports is powered by Java Enterprise Edition (JEE) framework, leverages an Enterprise Service Bus (ESB) and an external rules engine for eligibility determination. Our partnership with VDSS is a strong example of our ability to support cross HSS applications of similar size and scope like those at DHHR.

QUALIFIACTION HIGHLIGHTS

- Deloitte engaged in supporting systems that deliver benefit programs like SNAP, TANF, Medicaid/CHIP and LIHEAP, as well as, Child Care Services
- Supported system delivery services to over two million clients in 120 cities and counties.
- Utilizes Deloitte's Java Enterprise Edition (JEE) framework, Fast4J, Service Oriented Architecture (SOA) and leverages an open source Enterprise Service Bus (ESB).

Overview

The Virginia Case Management System (VaCMS) implementation consists of modernizing the systems used to manage and deliver the health and social services programs by implementing fully integrated, web-based applications using the latest technology framework. The implementation includes leading an organization transformation effort across 3,000 employees and 120 unique local departments. The project resulted in improved delivery of benefits to more than two million clients.

The project implementation approach includes multiple phases. The VaCMS implementation started with automating the rules used to deliver Child Care subsidy to more than 50,000 families in Virginia. This was followed by creation of a citizen centric portal "CommonHelp" that increased customer service and citizen's options for applying for social services by allowing 24/7 access to apply for assistance. 800,000 citizens currently use Virginia CommonHelp to pre-screen and apply for programs like Temporary Assistance for Needy Families (TANF),

Medicaid, Supplemental Nutrition Assistance Program (SNAP), Child Care and Energy Assistance. Program participants also check their benefit status, renew their applications and report any changes to VDSS.

The next phase enabled Medicaid processing in the VaCMS to comply with Federal Patient Protection and Affordable Care Act (PPACA) milestones and CMS rules. The final and a very important part of the project in progress now consists of migrating the remaining eligibility programs (SNAP, TANF, LIHEAP) from multiple legacy systems into the VaCMS apart from implementing document management, centralized printing, fraud, CommonHelp enhancements, and quality assurance capabilities.

The VaCMS solution is powered by Deloitte's Java Enterprise Edition (JEE) framework, Fast4J, is Service Oriented Architecture (SOA)-based and leverages an open source Enterprise Service Bus (ESB) to support continuous change that occurs as a result of changing regulations and improvements to the service delivery model. The solution is augmented with COTS products to enhance the core platform functions and capabilities, and tailored to meet VDSS's unique requirements.

In addition to providing system integration, Deloitte partners with VDSS to increase adoption of the new system capabilities by providing training and business readiness support. These activities include designing, developing, and delivering training and online help materials, completing and executing a communication assessment and plan, business process analysis, assessment, and improvement, developing operational strategies, supporting performance measurement and delivering organizational design services.

System Size and Complexity

Size and complexity of the systems the vendor designed, implemented, or for which it provided ongoing support:

- Combined total of around 550 pages.

Transaction Volume

- Averaging 500,000 transactions per month

System Response Times

- Ranging from two to five seconds

Corporate Qualification 4

Corporate Qualification: State of California (former customer)

Project Name: ISAWS

Project Manager	Mary Margaret Wilson ISAWS Project Manager	**PM Contact Information**	Office of System Integration (OSI) 2525 Natomas Park Drive Suite 200 Sacramento, CA 95833 mmwilson@sco.ca.gov 916-997-7989

☑ IV - A System

Programs Supported

☑ Integrated Eligibility

Why We Selected This Qualification

Deloitte's experience working with California's Office of System Integration (OSI) exemplifies our ability to not only undertake the implementation of a complex solution but also support its successful transition to our client. The multi-year project delivered a comprehensive IV-A welfare solution that improved service delivery by allowing workers to focus on high value activities instead of common functions which are now automated by the system. After being successfully delivered to OSI, the solution was transitioned to the State with minimal interruption to service delivery and service quality.

Overview

The ISAWS system was a robust, online system that automated the administration of public assistance benefits, namely Food Stamps, TANF/CalWORKs, Medi-Cal, Foster Care, and Refugee Cash Assistance, in the State of California. To enable this automation, the system interfaced with various county and state systems. To develop and maintain ISAWS, Deloitte worked with various state agencies, namely CDSS (California Dept of Social Services), DHCS (Department of Health Care Services), OSI (Office of System Integration) and 35 counties of California.

The foundation of ISAWS was the NAPAS system developed by Deloitte in 1991 for Napa County as an online, interactive system to support the workers in accurate and timely disbursement of public assistance benefits. NAPAS was selected as the pilot for statewide implementation and was renamed as ISAWS in January 1994. After the last development phase completed in 1998, Deloitte provided maintenance and operations support to all 35 ISAWS counties for the next twelve years, until 2010.

The ISAWS application helped achieve uniformity and consistency in the application of public assistance programs, policies, and provides tangible cost savings through the automation. In addition, ISAWS interfaced with 14 statewide agencies to fully automate the timely disbursement of benefits and meet other data exchange requirements of state and federal agencies. Some of the key interfaces were MEDS (Medi-Cal Eligibility Data System), SCI (Statewide Client Index), Foster Care Bureau, EBT (Electronic Benefits Transfer), CCSAS (California

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Child Support Automated System), IEVS/PVS, QC (Quality Control), and FDRAB (Federal Data Reporting and Analysis Bureau).

System Size and Complexity

- The ISAWS solution included 1,200+ screens, 6,000+ eligibility rules, 1,500+ online programs, and 800+ batch programs.
- Supported 580,000+ CalWORKS cases, 900,000+ Food Stamp cases, and 1.5M+ Medi-Cal cases

Transaction Volume

- Approximately 153 Million system transactions processed per month (~5.1M transactions per day)

Subsection 3.1.3: Company References

RFP Reference: Attachment A, page 1

Subsection 3.1.3: Company References
The vendor should submit names, mailing addresses, email addresses, and current telephone numbers of individuals from a at least three separate organizations who can be used as corporate references for work performed within the past five years in the area addressed by this RFP or closely related areas. These references should be able to provide information on overall performance, punctuality in submitting reports, staff competence, cooperation and communication with the contracting Agency, and reputation.

Vendor Response:

In the following section we provide the client references required in your RFP to demonstrate our experience working with projects of similar size and scale to RAPIDS. The following references for the State of Wisconsin, Commonwealth of Pennsylvania and Commonwealth of Virginia are examples of how we meet the requirements identified by West Virginia. We can also provide additional references upon request.

Reference 1: State of Wisconsin

Jennifer Mueller, Deputy Bureau Director, Eligibility

Reference Organization	Wisconsin Department of Health Services
Reference Phone	608.267.3371
Reference Email Address	JenniferM.Mueller@dhs.wisconsin.gov
Reference Mailing Address	1 W Wilson St, Madison, WI 53703

Reference 2: Commonwealth of Pennsylvania

James A. Weaver, Deputy CIO, Bureau of Information Systems

Reference Organization	Pennsylvania Department of Human Services
Reference Phone	717.772.7120
Reference Email Address	jamweaver@pa.gov
Reference Mailing Address	1006 Hemlock Drive, Room 60 Willow Oak Building, Harrisburg, PA 17110

Reference 3: Commonwealth of Virginia

Dottie G. Wells, Director, Enterprise Delivery Systems

Reference Organization	Virginia Department of Social Services
Reference Phone	804.726.7639
Reference Email Address	dottie.wells@dss.virginia.gov
Reference Mailing Address	801 East Main Street Richmond, VA 23219-2901

Section 4, Subsection 3.2: (Staff Qualifications and Experience)

RFP Reference: Attachment A, page 2

Section 4, Subsection 3.2: (Staff Qualifications and Experience)
All key personnel must be assigned 100 percent (full-time) to the RAPIDS Maintenance Project and work on-site for the term of the contract unless noted otherwise. As with all personnel hired for the contract, the Agency will have approval over personnel assigned to the project. The vendor should notify the Agency one calendar month prior to replacing any key staff. The Agency will not prevent termination of employees by the vendor. However the Agency will have the right to approve replacements. If key personnel remain with the vendor but are not assigned to the RAPIDS Project after they are proposed, replacements must meet or exceed qualifications of the proposed staff. The state reserves right of refusal of any contractor staff.

Qualified, experienced staff is of paramount importance to the success of maintaining and enhancing the mission critical West Virginia Department of Health and Human Resources (DHHR) systems. DHHR Agency workers and many citizens of West Virginia depend on the quality and experience of the people involved in its day-to-day management and operations. It consists of tenured specialists, most of whom are local to Charleston. We bring more than two and a half centuries (including M&O and SMP staff) of experience working on RAPIDS. Our continued success on the RAPIDS project from the initial implementation beginning in 1994 through multiple phases of maintenance, enhancement and operational support spanning more than 20 years, is directly attributable to the quality of our team members and the collaborative working relationship we have formed with the Agency.

SECTION HIGHLIGHT

Deloitte Features:
- More than 250 cumulative years of experience with the RAPIDS system (M&O and SMP)
- Strong local team experienced with the RAPIDS system
- The right blend of industry, technical and management expertise

Each member of the Deloitte project team is well suited to the needs of the position, and many exceed the experience requirements identified in this RFP. Our staff are specialists with the RAPIDS suite of applications, and understands the vision of how they will grow and adapt to current and future business needs. By proposing local staff, many members of our team are a part of the community, have no travel restrictions, and are available to support the agency. Our traveling members are often on rotational assignments allowing them to obtain varied experiences in multiple states and represent the future leadership of our firm. By bringing in new blood with knowledge and experience from other states, we are also bringing fresh ideas to the RAPIDS team. Our mix of an experienced local project team, infused with traveling staff with varied experiences from different states, makes us uniquely qualified to continue to provide quality M&O and solution enhancement services to the Agency and its changing business and system needs.

The Deloitte proposed team represents a strong set of resources, most with significant experience providing M&O services to the RAPIDS suite of systems for DHHR. The resumes document how each resource aligns with DHHR requirements for that position and how they meet or exceed your qualifications.

Deloitte reserves the right to supplement the team with additional personnel, at no cost to the agency, as needed to meet SLA requirements and deliver the required services.

WHAT IT MEANS TO WEST VIRGINIA

Retention of existing management and other key staff:

- The agency will start with the existing RAPIDS team that already knows your people, processes and technology. This means no transition, no learning curve, and no delays for citizens receiving their SNAP and other benefits.

- A strong local presence with a vested interest in the State and the people of West Virginia.

Staffing Approach and Org Chart

The organization chart below shows the structure of our M&O team, which comprises the key staff positions requested in the proposal.
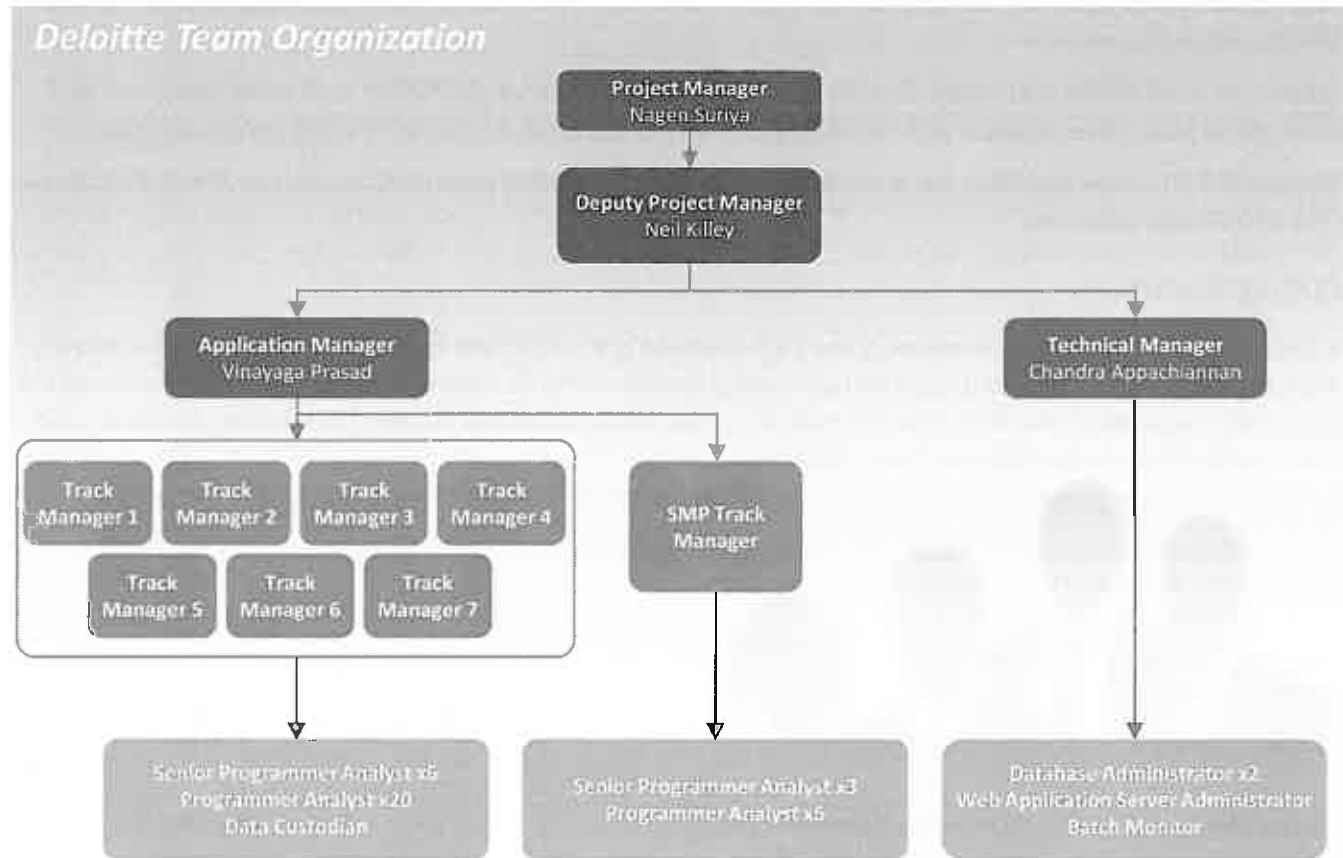
Figure 4.3.2-1. Deloitte Team Organization.

The following provides staff highlights from our experienced leadership team:

Nagen Suriya, the current RAPIDS project manager, will be overall project manager for the RAPIDS suite of applications, with overall responsibility and accountability to the DHHR leadership team. His knowledge and experience will be continue to be leveraged to direct the delivery of all Deloitte services required per the RFP and to provide the required support to the DHHR leadership team for RAPIDS..

Neil Killey, the current RAPIDS deputy project manager, will fulfill the key "deputy project manager" role requested in the RFP. He will focus on the continued M&O and enhancement of the RAPIDS suite of applications. Neil is extremely well versed in the RAPIDS system, having demonstrated strong analytic and project management capabilities. His close working relationships with the OMIS RAPIDS management team enable him to effectively guide the RAPIDS project.

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Vinny Prasad, a long tenured member on RAPIDS with extensive integrated eligibility and technical experience, will continue to play a key role in supporting RAPIDS and mentoring its track leads as RAPIDS application manager.

Chandra Appachiannan, also a very experienced RAPIDS practitioner, is proposed to continue to provide leadership and management to the RAPIDS technical team, which provides operations and DBA support for the RAPIDS suite of applications.

In addition to the RAPIDS M&O team, Deloitte is also proposing a dedicated RAPIDS SMP team comprised of functional and technical specialists with the skills necessary to successfully deliver RAPIDS enhancements.

In **Section 3.2.21** below describes the approach for the additional staffing potentially needed for the 20,000 hours for the DHHR-wide initiatives.

Staffing Summary

The following table provides an overview of the staff positions of the RFP and formally acknowledges the meeting of each position's RFP designated roles and associated commitments as described in the RFP. The numbered staff are positions requested in the RFP. The resumes are presented immediately following the Staffing Summary and confirm position specific requirements and qualifications.

Position	Resources	Currently staffed on RAPIDS	Years on RAPIDS
On-Site Project Manager (1)	(1) Nagen Suriya	✓	1 year
On-Site Deputy Project Manager (1)	(1) Neil Killey	✓	4 years
Application Manager	(1) Vinayaga Prasad	✓	18 years
Technical Manager (1)	(1) Chandra Appachiannan	✓	17 years
Track Managers (7)	(1) Nag Nagisetty	✓	15 years
	(2) Venkata Kaza		13 years
	(3) Hannah Hass		5 years
	(4) Akhil Pillai		2 years
	(5) Dan Chimes		3 years
	(6) Keegan King		2 years
	(7) Sheema Shireen		8 years
Database Administrators (2)	(1) Rafi Basha	✓	7 years
	(2) Rajulan Chidambarajan		2 years
Web Application Server Administrator (1)	(1) Harish Kumar	✓	1 year
Sr. Programmer Analysts – Mainframe (2)	(1) Venu Arumalla	✓	5 years
	(2) Siva Babu		18 years

Position	Resources	Currently staffed on RAPIDS	Years on RAPIDS
Sr. Programmer Analysts – Java (3)	(1) Manasa Sesham	✓	7 years
	(2) Krishna Reddy		7 years
	(3) Subbu Padharthi		7 years
Sr. Programmer Analyst-Corticon (1)	(1) Anjan Bhattacharjee	✓	7 years
Programmer Analysts – Mainframe (5)	(1) Srinivasvas Basavanbail	✓	3 years
	(2) Smita Sahoo		9 years
	(3) Wasim Bargir		3 years
	(4) Abhishek Shrivastava		3 years
	(5) Mohammed Arshad Abdul Salam		1 year
Programmer Analysts- Java (8)	(1) Dhamo Venkatesan	✓	2 years
	(2) Ravindranath Chenna		3 years
	(3) Venu Khyri		5 years
	(4) Rajneesh Ranjan		1 year
	(5) Sureshkumar Veluchamy		2 years
	(6) Haymanot Ayele		1 year
	(7) Kapileshwar Mittapelly		5 months
	(8) Shobhit Jaiswal		1 month
Programmer Analyst-Adobe (1)	(1) Bhaskara Mutyala	✓	4 years
Programmer Analyst – Corticon (1)	(1) Santhosh Vodela	✓	1 year
Programmer Analyst-Enterprise Service Bus (1)	(1) Suchandan Kasula	✓	2 years
Programmer Analyst- Master Data Management (1)	(1) Manvendra Tiwari	✓	8 years
Programmer Analyst-Cognos (2)	(1) Klayton Shannon	✓	2 years
	(2) Madhavi Nade (new position)		--
Programmer Analyst-Extract Transform and Load (1)	(1) Janardhana Dhage	✓	2 years
Batch Monitor (1)	(1) Noordin Amlani	✓	2 years
Data Custodian - Master Data Management (1)	(1) Brian Pierce	✓	3 years

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Subsection 3.2.1: On-Site Project Manager (one position)

RFP Reference: Attachment A, page 2

Subsection 3.2.1: On-Site Project Manager (one position)

The project manager should be the primary point of contact with the Agency's project director for activities related to contract project management and scheduling, correspondence between the Agency and the vendor, and deliverable reviews. This position is considered key personnel and should not serve in any other key personnel position for another client. The project manager should be assigned 100 percent (full-time) to the RAPIDS Project, should be present from the first day of the contracting period through the elected option years, and should be housed on-site full-time. The project manager should have the following qualifications:

1. Two (2) or more years of project management experience on a system comparable in complexity to RAPIDS;

2. Five (5) years of system analysis, including design, development, and implementation on an automated IV-A system comparable in size and complexity to RAPIDS; and

3. A Bachelor's Degree.

Vendor Response:

Nagen Suriya
On-Site Project Manager

Summary

Nagen has more than 25 years of experience as an information technology professional ranging from programming and software design to engagement management and oversight. He is an experienced Technical Architect, with extensive experience in designing, developing and maintaining complex, mission-critical Health And Human Services (HHS) systems.

Nagen Meets the Position Requirements

Position Description
Primary point of contact with the Agency's project director for activities related to contract project management and scheduling, correspondence between the Agency and the vendor, and deliverable reviews.
Considered key personnel and will not serve in any other key personnel position for another client
Assigned 100 percent (full-time) to the RAPIDS Project
Intends to be present from the first day of the contracting period through the elected option years
Housed on-site full-time

Nagen Meets Your Qualifications

RFP Requirement	Additional Details
Two (2) or more years of project management experience on a system comparable in complexity to RAPIDS	Nagen has more than fourteen years of Project Management and Leadership experience on a number of HHS projects in the Public Sector.
Five (5) years of system analysis, including design, development, and implementation on an automated IV-A system comparable in size and complexity to RAPIDS	Nagen has more than twenty years of experience working on public sector projects, including work with IV-A systems of similar size and complexity in New Hampshire, LA County, Massachusetts, Pennsylvania, Connecticut, New York and for the past year, West Virginia.
A Bachelor's Degree	Nagen has a bachelor's and a master's degree.

Education

University of Manchester, Manchester, England	Bachelor of Science in Computer Science and Accounting.
University of Pittsburgh	Master of Business Administration

Work Experience

State of West Virginia DHHR – RAPIDS Project

Project Manager
November 2014 - Current

Nagen transitioned to the Project Manager role in November 2014 and is responsible for managing the Deloitte teams at DHHR.

- He is accountable to the senior leaders (CIO and MIS Director) of WV DHHR.
- He has assisted DHHR to procure a six month extension to the current Deloitte contract and is actively working with the department to help them with establishing new change control and governance for the project.

State of Connecticut – Access Health CT

Engagement Director
October 2012 – November 2014

Connecticut's Official Health Insurance Marketplace, access health CT (ahCT), engaged Deloitte to design, develop and deploy the systems required to offer health care coverage under the Affordable Care Act. The CT Exchange was implemented on a very tight timeline and is considered one of the leading exchanges in the country.

Responsibilities:

- As the Engagement Director, Nagen was responsible for directing the Deloitte teams at ahCT, and accountable to the senior leaders (CEO and CIO) of the exchange.
- Nagen led a team of over 150 Managers, analysts and developers in architecting, designing and developing the exchange software. The team was located across an on-site and an off-site location.
- He was instrumental in advising and serving ahCT to become one of the most successful State Health Insurance Marketplaces in the nation.

State of Connecticut – Department of Social Services

Engagement Director
November 2011 – June 2014

The State of Connecticut Department of Social Services engaged Deloitte to design, develop and deploy a statewide workflow and document management system for social service workers; a self-service HHS portal for citizens seeking State assistance; and a Telephony and Integrated Voice Response (IVR) system. The solution leveraged the legacy mainframe components integrated with front end Java code and also with external service providers, such as Federal Data Services Hub.

Responsibilities:

- As the Engagement Director for Deloitte, Nagen was responsible for directing the Deloitte project management, overseeing team performance and reporting to the Commissioner and CIO on contract performance in delivering the application solution required by the State.
- Nagen successfully delivered the project, on time and budget, while coordinating with multiple key stakeholders to work through the full lifecycle of the project from inception to implementation.

Allegheny County, PA – Department of Human Service

Engagement Director
March 2009 – October 2011

Allegheny County Department of Human Services engaged Deloitte to provide IT consulting and advisory services. Deloitte supports Allegheny County DHS with all its Application Maintenance and Operations needs. Deloitte is also engaged in designing and developing new systems including the Child Welfare System – KIDS.

Responsibilities:

- Nagen was the Engagement Director for Deloitte. He directed the overall engagement and served as an advisor to the senior executives (Director and CIO) and key project management staff.
- He was responsible for overseeing team performance, managing contract performance and leading the new system implementations.

Additional Experience

2001-2005

State of New York, Office of Temporary Disabilities – Engagement Director
Commonwealth of Pennsylvania, Department of Public Welfare – Project Director
City of New York, Deputy Mayor for Health and Human Services – Engagement Director
State of New York, Office of Temporary Disabilities – Engagement Director
Commonwealth of Massachusetts – Executive Office of Health and Human Services – Project Director

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Subsection 3.2.2: On-Site Deputy Project Manager (one position)

RFP Reference: Attachment A, page 2

Subsection 3.2.2: On-Site Deputy Project Manager (one position)

The person in this position is to be responsible for the functional area of the contract, such as production maintenance or software changes/enhancements.

This individual should supervise the track managers as well as backup the project manager. The deputy project manager is considered key personnel, should be full-time to the RAPIDS Project, and should be housed on-site full-time. The deputy project manager should have the following qualifications:

1. Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a federal or government Agency;

2. Three (3) years of analysis and design experience on an IV-A statewide system similar to RAPIDS;

3. Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame;

4. Two (2) years of CICS/DB2 experience in the last five (5) years with the last twelve (12) months being with DB2 Version 9 or greater;

5. Two (2) years of experience with Java enterprise application development projects; and

6. A Bachelor's Degree.

Vendor Response:

Neil Killey, PMP
On-Site Deputy Project Manager

Summary

Neil has more than 17 years of management experience in the design, development, operation, and maintenance of large-scale integrated eligibility systems. He has in-depth program knowledge of cash, SNAP, and Medicaid programs, and with a developer's background has a solid understanding of the various technologies involved in integrated eligibility systems. Neil is also intimately familiar with the Agency's staff and processes, having spent the last four years as deputy project manager at RAPIDS.

STAFF HIGHLIGHT

Neil Killey has experience in:

- Being part of the management team of five of the largest Integrated Eligibility systems in the country: CA ISAWS and CalWIN, TX TIERS, MI Bridges, and WV RAPIDS.
- Racing! He is the reigning North East Division Sports Car Champion.

Neil Meets the Position Requirements

Position Description
Responsible for the functional area of the contract, such as production maintenance or software changes/enhancements
Supervises the track managers as well as backup the project manager
Assigned 100 percent (full-time) to the RAPIDS Project
Considered key personnel
Fulltime to the RAPIDS Project
Housed on-site full-time.

Neil Exceeds Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a federal or government Agency	Neil has management experience in five of the largest Integrated Eligibility (including IV-A) systems in the country: CA ISAWS and CalWIN, TX TIERS, MI Bridges, and WV RAPIDS.
Three (3) years of analysis and design experience on an IV-A statewide system similar to RAPIDS	Neil has seventeen years of experience in the analysis and design of IV-A systems similar to RAPIDS.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Neil's has sixteen years of experience working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.

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RFP Requirement	Additional Details
Two (2) years of CICS/DB2 experience in the last five (5) years with the last twelve (12) months being with DB2 Version 9 or greater	Neil meets this requirement. Since joining WV RAPIDS in 2011 as Deputy Project Manager, Neil has spent the last four years supervising the Deloitte technical team and gaining the required experience in CICS/DB2, which has been at DB2 Version 9 for the last 30 months.
Two (2) years of experience with Java enterprise application development projects	Neil has eleven years of experience with Java enterprise application development projects.
A Bachelor's Degree	Bachelor's Degree Equivalent: As part of the process to become a U.S. Citizen, Neil demonstrated to the satisfaction of DHS (formerly INS) that his experience equated to a bachelor's degree in information technology.

Professional Certifications

Project Management Institute   Project Management Professional (PMP)

Work Experience

WV DHHR

Deputy Project Manager
June 2011 – Current

As deputy project manager, Neil is responsible for managing the teams that conduct maintenance and operations, and managing the SDLC phases of each enhancement.

With his focus on eRAPIDS, Neil has managed the team through the incremental modernization from legacy to web-based through the major releases: release 4 which comprised of Application Entry through Confirmation; release 5 which was predominantly Caseload Management modernization, with supporting subsystems; release 6 which consisted of Benefit Issuance and Quality Control subsystem modernization.

With his focus on the Software Modification Pool (SMP) Neil has managed the SDLC phases totaling 80,000 hours (4 years) of enhancements to the RAPIDS system.

Neil also supports the Project Manager in other project initiatives and administration, including personnel management of 50 Deloitte and subcontractor staff, and budget/fiscal management. Key roles of responsibility in the area of project management include: participating in project direction setting, project plan creation, process improvement, interviewing and selection of new staff, team building and coaching, staff evaluations, risk management, and project reporting. Neil reports to, and guides, client management in regard to project status and initiatives.

Over the past two years RAPIDS successfully integrated the Medicaid parts of the Affordable Care Act into the system, and as one of Deloitte's specialists on this statute Neil provided extensive guidance and expert review on the development and implementation activities.

State of Michigan

Release and Test Manager
November 2009 – May 2011

Help Desk Manager
July 2009 – October 2011

Testing Manager
April 2006 – June 2009

Michigan's state-wide automated welfare system, known as Bridges, is a comprehensive welfare program management application providing eligibility determination and reporting functionality for the Temporary Assistance to Needy Families (TANF) program, SNAP, Medicaid, and State Disability Assistance, among others. Maintenance includes modifying the system to address new legislation, adding new features and functionality, and repairing defects.

Responsibilities:

- Compiled the prospective changes for scheduled releases of the system and recommended the scope of the releases to State management.
- Monitored, tracked and reported progress as development of the scheduled releases progressed, and worked on scope management collaboratively with State management during a release cycle to control scope creep while assessing the inclusion of critical production fixes.
- Managed the full cycle of implementing critical system fixes into production via an immediate release process, from the assessment phase through the development, testing, and communication of status project-wide.
- Led the strategic direction of testing on the project, providing managerial oversight to QAT (Quality Assurance Testing), including planning, monitoring execution, and reporting status to the project leadership.
- Provided guidance to the client on UAT (User Acceptance Testing) for planning, execution and monitoring.
- Participated in critical management decision discussions, provided back-up for the project manager, and played the role of principle communicator to State management as a contributing member of Deloitte's leadership team

State of Texas and Texas Access Alliance

Test Manager Consultant
November 2005 – March 2006

Test Manager
December 2002 – October 2005

Texas' replacement automated welfare system, known as TIERS (Texas Integrated Eligibility and Reporting System) is a comprehensive welfare program management application providing eligibility determination and reporting functionality for the Temporary Assistance to Needy Families (TANF) program, SNAP, and Medicaid, including Texas' Long-Term Care and Community Care programs.

Texas Access Alliance's contract with the State of Texas was to use TIERS as the continued base welfare program management application while expanding into the area of privatized call centers to manage welfare applicants and recipients. For TAA to maintain and use this application, significant knowledge transfer needed to occur between the experienced Deloitte practitioners and the TAA team members. The knowledge transfer activities were the central objective for the Deloitte members of this project.

Responsibilities:

- Managed a testing team of more than 25 Deloitte practitioners and subcontractors. Neil had the overall responsibility for the testing of all aspects of the newly developed application.
- Provided documentation, guidance and recommendations for the State Testing team, and monitored and assisted their testing efforts.
- Performed knowledge transfer of testing management, process and execution to TAA as it pertained to the TIERS application.
- Managed client staff who had been assigned to the TAA project. This management role was designed to help both the client and the TAA staff come together in transitioning to the different business approach employed by the project.
- Worked with the leadership of the TAA project in a consulting role with regard to testing strategy advice and management of client expectations as they pertained to testing.

Additional Experience

1993 – November 2002

- Deloitte Consulting Internal Project – development manager building internal competencies and knowledge around the Curam software
- State of California (CalWIN) – Statewide Integrated Eligibility – Eligibility Determination and Benefit Computation (EDBC) Team Lead
- State of California (ISAWS) – Statewide Integrated Eligibility – began as lead analyst/programmer for EDBC; advanced to manager for all online subsystems; finally advanced to Application Manager for the project
- County of Napa – Statewide Integrated Eligibility proof of concept – analyst/programmer for multiple subsystems, including EDBC

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Subsection 3.2.3: Application Manager

RFP Reference: Attachment A, page B

Subsection 3.2.3: Application Manager (one position)

The application manager/senior application developer is the primary point of contact for all software design and support functions of RAPIDS. This includes but is not limited to the implementation of system modification enhancements as well as software defect resolution.

Responsibilities include quality review and sign-off of Business Requirements and contribute materially to the development of functional design. Leads development of source code, including descriptions, for Software Components in accordance with the Detailed Software Requirements Specification, the functional design and technical design documents. Measures and analyzes code for quality. Verifies the developed source code by reviews. Manages maintenance of applications and performs technical change requests scheduled according to Release Management processes. Verifies integrated software components by unit and integrated software testing according to the software test plan. Software test findings must be resolved.

This individual is considered key personnel and should not serve in any other key personnel positions for another client. Any additional assignments must have the approval of the Agency. The application manager should have the following qualifications:

1. Ten (10) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects;

3. Six (6) years of experience architecting and designing scalable, robust, and secure browser-based enterprise applications to support over 2,000 users;

4. Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration;

5. Two (2) years of experience developing web-based applications in an integration environment such as Oracle SOA, Corticon, and WebLogic;

6. Two (2) years of experience integrating Enterprise Information Portals and systems Integration;

7. Three (3) years of experience using DB2 Version 8 or greater; and

8. A Bachelor's Degree in Information Technology or a related field.

Vendor Response:

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Vinayaga C. Prasad
Application Manager

Summary

Vinny has more than 18 years of experience in in public sector program management and Information Technology (IT) projects. Vinny brings deep experience and knowledge of Health and Human Services (HHS) programs. Vinny has over 20 years' experience working in the public sector on large-scale systems development projects to automate Health and Human Service programs such as Medicaid, SNAP (Food Stamps), TANF (WV Works), Medicare Premium Assistance, and special programs such as School Clothing Allowance and Low Income Energy Assistance Program.

Vinny has served WV RAPIDS project at various levels and capacity ranging from Programmer Analyst to Application Manager. Vinny has developed strong communication, organization, and project management skills by participating in all phases of the system development life cycle including requirements, design, construction, testing, implementation and maintenance. Vinny is looking forward to continuing to serve WV RAPIDS project being 100% on-site for the term of the contract.

STAFF HIGHLIGHT

- Vinny came to Charleston as a young immigrant who now calls Charleston home
- Vinny is excited to be part of the RAPIDS family for 18 years and looking forward to continuing to serve the great mountain state
- Vinny has the passion to provide solutions with a can-do attitude to improve efficiency and productivity

Vinny Meets the Position Requirements

Position Description

Primary point of contact for all software design and support functions of RAPIDS. This includes but is not limited to the implementation of system modification enhancements as well as software defect resolution.

Responsibilities include

- Performing quality review and sign-off of Business Requirements
- Contributing materially to the development of functional design
- Leading development of source code, including descriptions, for Software Components in accordance with the Detailed Software Requirements Specification, and the functional design and technical design documents.
- Measuring and analyzing code for quality and verifies the developed source code by reviews
- Managing maintenance of applications and performs technical change requests scheduled according to Release Management processes
- Verifying integrated software components by unit and integrated software testing according to the software test plan. Software test findings must be resolved.

Considered key personnel and will not serve in any other key personnel positions for another client. Any additional assignments will have the approval of the Agency.

Vinny Exceeds Your Qualifications

RFP Requirement	Additional Details
Ten (10) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;	Vinny exceeds the requirement with more than eighteen years of experience in WV RAPIDS. His experience includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects;	Vinny exceeds the requirement with more than six years of Application Manager experience in which he was involved in designing, documenting, and communicating technical architecture for the eRAPIDS Java enterprise application
Six (6) years of experience architecting and designing scalable, robust, and secure browser-based enterprise applications to support over 2,000 users;	Vinny exceeds the requirement with more than six years of Application Manager experience guiding the developers and track managers design and develop a scalable, robust, and secure browser-based enterprise applications to support over 2,000 users
Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration;	Vinny exceeds the requirement with more than four years of Application Manager experience guiding the developers and track managers design and develop solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration
Two (2) years of experience developing web-based applications in an integration environment such as Oracle SOA, Corticon, and WebLogic;	Vinny exceeds the requirement with more than three years of Application Manager experience guiding the developers and track managers develop a web-based applications in an integration environment such as Oracle SOA, Corticon, and WebLogic
Two (2) years of experience integrating Enterprise Information Portals and systems Integration;	Vinny exceeds the requirement with more than two years of Application Manager experience guiding the developers and track managers integrate Enterprise Information Portals and systems Integration
Three (3) years of experience using DB2 Version 8 or greater; and	Vinny exceeds the requirement having seven years of experience in RAPIDS using DB2 version 8 and greater.
A Bachelor's Degree in Information Technology or a related field.	Vinny has a Bachelor's Degree and also a Master's Degree in an Information Technology field (Computer Science).

Education

Madurai Kamaraj University	Bachelor of Science in Computer Science
Bharathidasan University	Master of Science in Computer Science

Work Experience

State of West Virginia, Department and Health and Human Resources	As application manager, Vinny is responsible for the overall application management including design, development and implementation of all development, enhancements, and maintenance activities for West Virginia RAPIDS system, including inROADS, RAFT, and eRAPIDS.
Application Manager June 2007 – Current	With his wealth of experience Vinny guided the RAPIDS development team through the incremental modernization from legacy to web-based solution.

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Vinny has implemented several functional change orders, including some of the changes listed below:

- Simplified eligibility process for past date runs
- Auto enrollment process for Medicaid expansion
- Application aging report
- Changes related to ARRA
- Timely generation of reports for legislature
- eRAPIDS releases 1 through 6

Track Manager
Dec 1999 – May 2007

As a Functional Track Manager, Vinny was responsible for the management of the following RAPIDS's mission critical subsystems: Client Registration (CR), Application Entry (AE), Standard Filing Unit (SFU), Eligibility Determination & Benefit Calculation (EDBC), Reports (RP), Work Programs (WP), Client Scheduling (CS), Data Exchange (DX), Online Manuals (OM) & Reference Tables (RT).

His responsibilities included preparing work plans, requirements validation with client staff, general and detailed design, implementation of system enhancements, setting subsystem goals, tracking subsystem issues, preparing status reports to higher management and supervising the subsystem teams.

Vinny implemented several functional change orders including the ones listed below:

- Work Programs system to track and perform case maintenance activities for TANF and SNAP customers
- FNS 583, FNS 209, ABAWD reports, and many reports to meet FNS and ACF requirements for West Virginia
- Interface to receive SNAP, Children's Health Insurance Program (CHIP), and other Medicaid applications from self-service portal inROADS
- Interface to send data from RAPIDS to inROADS so that customers can perform the SNAP, and Medical assistance re-determinations online
- TANF re-authorization
- Farm bill changes

Programmer Analyst
Feb 1997 – Nov 1999

As a programmer analyst on RAPIDS, Vinny was responsible for the maintenance and enhancement of several systems, including Quality Control (QC), Conversion (CV), Reports (RP), Reference Tables (RT), Online Manuals (OM), IVA/IVD interface (IV), Work Programs During his role he:

- Led and successfully implemented an automated project management reporting system
- Led the migration of application development environment from OS/2 to Windows 95
- Led the Y2K testing effort for multiple projects with in the engagement

Additional Experience

Wipro
1995 – Jan 1997

- As a team lead Vinny lead the maintenance / enhancements of Global Installed Base (GIB) project developed as part of General Electric (GE) commitment towards maintaining global installed base information and providing quality information to its sales, service and marketing areas.
- As a senior developer Vinny developed multiple modules for the GE Medical Systems re-engineering project Service Information System (IRI). IRI is a centralized system for monitoring Magnet Performance and Material Consumption. Vinny analyzed code written in Focus and developed new code in COBOL / DB2 / CICS.

Subsection 3.2.4: Technical Manager (one position)

Subsection 3.2.4: Technical Manager (one position)

The technical manager/senior technical architect is the primary point of contact for all technical functions of RAPIDS and should be available to work closely with the State Office of Management Information Services (OMIS) staff, the Governor's Office of Technology staff, the RAPIDS database administrators (DBAs), and the technology administrator.

Responsibilities include quality assurance, monitoring, code reviews, and ensuring RAPIDS meets specified response times, system changes and upgrades; routine program reviews; technical documentation update; migrations of any tool sets, environments, or software; and disaster recovery. Responsibilities for this position also includes monitoring and providing DASD usage and implementation, performance and statistics, and CPU projection for CICS DB2 and the application servers.

This individual is considered key personnel and should not serve in any other key personnel positions for another client. Any additional assignments must have the approval of the Agency. The technical manager should have the following qualifications:

1. Ten (10) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects;

3. Six (6) years of experience architecting and designing scalable, robust, and secure browser-based enterprise applications to support over 2,000 users;

4. Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration;

5. Two (2) years of experience developing web-based applications in an integration environment such as Oracle SOA, Corticon, and WebLogic;

6. Two (2) years of experience integrating Enterprise Information Portals and systems Integration;

7. Three (3) years of experience using DB2 Version 8 or greater; and

8. A Bachelor's Degree in Information Technology or a related field.

Vendor Response:

Chandra Appachiannan
Technical Manager

Summary

As Technology Manager at RAPIDS, Chandra has built a strong relationship with WV OT and DHHR technology teams and implemented numerous technical solutions.

He has more than 20 years of experience in application design and development, including 17 years on RAPIDS. His focus has been on database management, batch operations team and design and architecture review of online and batch functions, and he has produced innovative solutions for the Agency. For example, Chandra led the team that developed the proof of concept for a legacy application to consume web services, which led to the RAPIDS Business Rules Engine design. This concept is now leveraged by other eligibility projects.

Chandra Meets the Position Requirements

Position Description

Primary point of contact for all technical functions of RAPIDS and should be available to work closely with the State Office of Management Information Services (OMIS) staff, the Governor's Office of Technology staff, the RAPIDS database administrators (DBAs), and the technology administrator.

Responsibilities include

- Quality assurance, monitoring, code reviews, and ensuring RAPIDS meets specified response times,
- System changes and upgrades;
- Routine program reviews;
- Technical documentation update;
- Migration of any tool sets, environments, or software; and disaster recovery.
- Monitoring and providing DASO usage and implementation, performance and statistics, and CPU projection for CICS DB2 and the application servers.

Considered key personnel and will not serve in any other key personnel positions for another client. Any additional assignments will have the approval of the Agency.

Chandra Meets Your Qualifications

RFP Requirement	Additional Details
Ten (10) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Chandra exceeds the requirement with more than seventeen years of RAPIDS experience. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.

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RFP Requirement	Additional Details
Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects	Chandra has two years of direct experience in designing, documenting and communicating technical architecture for Java enterprise applications. In addition to those two years, he has four additional years performing technical management oversight of the technical team performing these Java activities.
Six (6) years of experience architecting and designing scalable, robust, and secure browser-based enterprise applications to support over 2,000 users	Chandra has two years of direct experience in architecting browser based enterprise applications to support over 2000 users. In addition to those two years, he has four more years performing technical management oversight of the technical team performing these activities. Chandra has strong legacy RAPIDS experience of more than 10 years in architecting online and batch solutions.
Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration	Chandra has five years of experience designing the architecture and solutions that includes Web Services (three years), XML (five years), SOAP (three years), object persistence methodologies (five years) and application integration (five years).
Two (2) years of experience developing web-based applications in an integration environment such as Oracle SOA, Corticon, and WebLogic	Chandra has more than two years of experience developing web-based applications in an integration environment such as Oracle SOA (two years), Corticon (two years), and WebLogic (three years).
Two (2) years of experience integrating Enterprise Information Portals and systems Integration	Chandra has more than two years of experience integrating Enterprise Information Portals (Hub Integration - two years) and systems Integration (five years).
Three (3) years of experience using DB2 Version 8 or greater	Chandra exceeds the requirement with more than seven years of experience in RAPIDS using DB2 version 8 and greater. Chandra is also an IBM certified DB2 DBA.
A Bachelor's Degree in Information Technology or a related field	Chandra has a bachelor's and a master's degree.

Education

Bharathiar University	Bachelor of Science in Computer Science
Bharathidasan University	Master of Science in Computer Science

Professional Certifications

IBM	IBM Certified Database Administrator - DB2 10 for z/OS
IBM	DB2 10.1 Fundamentals
IBM	DB2 UDB V8.1 for z/OS Database Administration
IBM	DB2 UDB V8.1 Family Fundamentals

Work Experience

State of West Virginia
DHHR – RAPIDS Project

Technology Manager
May 2014-Current

DBA Manager and Technology Team Co-Lead
May 2011-April 2014

Database Administrator
May 2005-April 2011

Senior Programmer Analyst for RAPIDS Maintenance and Operations
May 1998 – April 2005

For the past 17 years Chandra has grown in this project, starting as a developer and progressing through database administrator, to his current position as Technology Manager where he is responsible for:

- Managing all technical functions of RAPIDS.
- Working closely with the State Office of Management Information Services (OMIS) staff, the Office of Technology staff, the RAPIDS database administrators (DBAs), and the technology administrator.
- Monitoring and providing DASD usage and implementation, performance and statistics, and CPU projection for CICS DB2 and the application servers.
- Managing the DBA team, database installation and upgrades, and batch operations.
- Managing teams in design reviews, quality assurance, monitoring and code reviews.
- Confirming that RAPIDS meets specified response times, system changes and upgrades. Guiding the track managers and project management to clarify requirements, manage testing status and drive PCRs to completion.
- Supporting design, development and maintenance of RAPIDS databases.
- Working with programmers and track leads to review database requirements and provide review recommendations.
- Developing data models, creating database objects and promoting them to the production environments.
- Participating in disaster recovery exercises and successful recovery of RAPDIS database and mainframe application environments.

WIPRO systems
Euroclear - Belgium

Programmer Analyst
August 1996 – March 1998

The Euroclear System is the world's largest clearance and settlement system for internationally traded securities. Sophisticated securities industry professionals, from more than 80 countries, settle their trades through the Euroclear System. The system was developed using Object Oriented methodology for securities clearance and settlement.

Responsibilities:

- Managed design and development of order sequencing module using Object Oriented methodology.
- Prepared detailed design of Class Responsibility Collaborator (CRC) models, Object interaction diagrams, coding and testing.

WIPRO systems
IBM - UK

Programmer Analyst
January 1995 – July 1996

Customer Support System (CSS) is developed for three electricity companies in UK. IBM was involved in the analysis and design phase and Wipro in the coding and unit-testing phase.

Responsibilities:

- Involved in the development of CICS transactions based on the design specifications of IBM UK, testing and code review, keeping in mind that all programs must adhere to CSS standards as well as ISO specifications.

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Subsection 3.2.5: Track Managers (seven positions)

RFP Reference: Attachment A, page 5

Subsection 3.2.5: Track Managers (seven positions)

The track managers are responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments should have the approval of the Agency. Track managers should supervise the work of senior programmer analysts and programmer analysts. These persons are considered key personnel and should be housed on-site full-time. The track managers should the following qualifications:

1. Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency;

2. Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS;

3. Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation;

4. Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined lime frame; and

5. A Bachelor's Degree.

Vendor Response:

Nag Nagisetty
Track Manager 1

Summary

Nag has nearly 15 years on the RAPIDS project with unquestionable commitment and dedication as a developer, leader and track manager. Nag started as a track lead in 2008 when he took over the responsibility of the Data Exchange subsystem. He is now leading the Eligibility Determination track and is excited to continue his work with the Agency and make further enhancements and improvements to the EDBC and Mass Changes subsystems and supporting architecture.

NOTABLE QUOTABLE

"I am excited to continue on the RAPIDS project. With one child already at West Virginia University and another joining in the fall, I am thrilled for the opportunity to continue serving the community I call home."

Nag Meets the Position Requirements

Position Description

Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.

Supervise the work of senior programmer analysts and programmer analysts.

Considered key personnel and will be housed on-site full-time.

Nag Exceeds Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Nag has more than six years of Track Management experience involving development and maintenance on the RAPIDS project for DHHR. Specifically, he has worked in the EDBC, Mass Changes, inROADS, MMIS interface, Data Exchange, IV A/IV D, Security Maintenance and History Maintenance subsystems. He has also backed up most of the other sub-systems when required.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Nag has more than six years of experience of analyzing and designing the RAPIDS application.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Nag has more than six years of experience in the full Systems Development Lifecycle of the RAPIDS project.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Nag has more than six years of experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.

RFP Requirement	Additional Details
A Bachelor's Degree	Nag has a bachelor's degree.

Education

SV University
Andhra Pradesh India

Bachelor of Technology

Professional Certifications

ORBIT Computer Education
Hyderabad, India

Post graduate diploma in Computer Applications

LCC Hyderabad, India

Diploma in Computer applications in Mainframes

Work Experience

State of West Virginia
DHHR – RAPIDS Project

Track Manager for ED/BC and Mass Changes
December 2013-Current

Track lead
September 2008 – December 2013

Senior Programmer Analyst
July 2000 – August 2008

Nag is the Eligibility Determination and Benefit Computation (EDBC) and Mass Changes Track Manager, and is responsible for maintaining and enhancing these modules including fixing defects and implementing enhancements through development, testing and deployment. His responsibilities include:

- Maintaining and enhancing the eligibility system and processing Mass Changes.
- Fixing defects and implementing enhancements through development, testing and deployment.
- Delivering the solutions to production, and monitoring and reviewing production queries related to eligibility determinations, as needed.
- Planning and executing multiple Mass Changes throughout the year such as COLA, reference table Mass Changes to implement new business rules and values, and automated issuance of SCA and LIEAP.
- Developing scenarios and testing plans.
- Controlling plans to be adequately implemented so that a quality product is released to the client for testing.
- Identifying issues and problems related to the system and suggesting solutions to solve the problems while coordinating with the State staff to resolve the issues.
- Conducting/participating in client requirement meetings.
- Planning and assigning tasks, and helping to keep design, development, and testing on schedule.
- Performing integration testing and coordinating user acceptance testing with the State.
- Coordinating functionality between the legacy EDBC modules and the Business Rules Engine implemented for MAGI based Medicaid.
- Working with the project management to clarify requirements, manage testing status and drive PCRs to completion.

Venkat Kaza
Track Manager 2

Venkat
EXCEEDS

Summary

With Venkat's 13-plus years of experience on the RAPIDS project and his experience in implementing new initiatives and enhancements with high quality, strong commitment and dedication, Venkat is an excellent choice for the role of Track Manager. In his time at RAPIDS, Venkat has been involved in multiple tracks/subsystems, and most recently has become the Subject Matter Specialist and a trusted advisor to the State for Benefit Issuance, RAPIDS-OASIS Interface, Benefit Recovery, and the Work Programs subsystems.

Venkat Meets the Position Requirements

Position Description

Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.

Supervise the work of senior programmer analysts and programmer analysts.

Considered key personnel and will be housed on-site full-time.

Venkat Exceeds Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Venkat has two years, of Track Management experience involving development and maintenance on the RAPIDS project for DHHR. Specifically, he has worked in the BI, BV, MMIS interface, ESB, OASIS Interface, JPMorgan Interface, TOP Interface and Work Programs subsystems. He has also backed up most of the other sub-systems when required.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Venkat has thirteen years, experience of analyzing and designing the RAPIDS application.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Venkat has thirteen years, experience in the full Systems Development Lifecycle of the RAPIDS project.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Venkat has two years, experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system, and producing outputs satisfying those needs in a pre-determined time frame.
A Bachelor's Degree	Venkat has a bachelor's and master's degree.

Education

Nagarjuna University - India	Bachelor of Science in Computer Science
Osmania University- India	Master of Computer Applications

Professional Certifications

IBM	IBM Certified DB2 9 Associate

Work Experience

**State of West Virginia
DHHR – RAPIDS Project**

**Track Manager
August 2012 – Current**

**Senior Programmer Analyst
January 2002 – July 2012**

Venkat is the Benefit Issuance, Benefit Recovery, and Work Programs Track Manager, and is responsible for maintaining and enhancing these modules through maintaining and fixing defects and implementing enhancements through development, testing and deployment. Additionally he:

- Assists State Management in addressing any functional or technical questions/issues related to state vendors (JP Morgan), OASIS, DHHR Finance staff or any other special issuances.
- Develops scenarios and testing plans.
- Determines whether the plans are adequately implemented so that a quality product is released to the client for testing.
- Identifies production issues and problems related to the subsystems, suggests solutions to solve the problems, co-ordinates with the State staff, and resolves the issues.
- Conducts/participates in client requirement (JAD) meetings.
- Plans and assigns tasks, and helps to determine design, development, and testing is completed on schedule.
- Works with other track managers and project management to clarify requirements, manage testing status and drive PCRs to completion.
- Performs integration testing and coordinates user acceptance testing
- Uses his SME skills to train new developers and BTA's in both functional and technical areas.
- Led the web initiative Release 6 – transforming Benefit Issuances business process to web-based application from inception through implementation.
- Led the provider integration with MDM (Master Data Management) application from inception through implementation.
- Led the RAPIDS-OASIS (the new West Virginia payment interface) interface from inception through implementation.
- Supported the execution of several automated issuances of SCA and LIEAP.
- Provided functional support to inROADS team in switching from the old MBA application to new inROADS account application.
- Led the team during D-SNAP 1.0 and 2.0.

Hannah Hass
Track Manager 3

Summary

Hannah is an excellent candidate for the role of Track Manager, as demonstrated through her years of quality service on the RAPIDS project. Hannah`s broad experience in multiple subsystems while maintaining and enhancing the current system provides her the knowledge to continue serving in this role. In addition to managing the all-important Application Entry subsystem at RAPIDS and the monthly releases, she has also been responsible for creating and maintaining the RAPIDS Response Team worker network, which provides a direct path of communication between the field workers and the RAPIDS Project Office. Hannah looks forward to continuing her time on the RAPIDS project to the benefit of the workers of the Agency as well as the citizens of the State of West Virginia.

STAFF HIGHLIGHT

Hannah Hass is a West Virginia native. Her local roots allow her to make quick connections with State staff, and helps put field staff at ease when she interacts with them in the local offices as well as in the conference calls she frequently hosts.

Hannah Meets the Position Requirements

Position Description
Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.
Supervise the work of senior programmer analysts and programmer analysts.
Considered key personnel and will be housed on-site full-time.

Hannah Exceeds Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Hannah has more than four years of Track Management experience on development and maintenance of the RAPIDS project.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Hannah has more than four years of experience in analyzing and designing the RAPIDS application.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Hannah has more than four years of experience in the full Systems Development Lifecycle of the RAPIDS project.

RFP Requirement	Additional Details
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Hannah has more than four years of experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system and producing outputs satisfying those needs in a pre-determined time frame.
A Bachelor's Degree	Hannah has a bachelor's degree.

Education

West Virginia University   Bachelor of Science in Industrial Engineering

Work Experience

State of West Virginia DHHR – RAPIDS Project

Track Manager
August 2010 – Current

Production Release Manager
April 2013-Current

Communications Manager
May 2014-Current

Hannah serves or has served as the Track Manager for a variety of subsystems including Application Entry, Caseload Management, Client Registration, IV-A/IV-D, Periodic Reporting, and Work Programs. She also has overall responsibility for the monthly releases to production, coordinating build and planning activities with the Track Managers of all the other subsystems.

For the subsystems she manages she drives defects and enhancements through all phases of the SDLC, and acts as a main point of contact for these subsystems for the State staff, other Track Managers, and State and Deloitte management.

As part of her overall responsibility for the monthly releases to production she tracks all Production defects and enhancements through initiation, development, testing and implementation. She also runs the weekly production defect and enhancement triage meetings to prioritize defects and enhancements and allocate an appropriate number to each production release.

As the Communications Manager from the Deloitte team to manage outreach and communications with DHHR workers, she initiated the creation of the RAPIDS Response Team worker network. This network serves to improve communications between the RAPIDS project and field workers and supervisors across the state. She continues to play a prominent role in this capacity alongside the State's designated communications staff member.

State of Michigan DHS – Bridges Project

Technology Intern
June 2009 – August 2009

The Bridges project is an integrated eligibility project in the State of Michigan with a population of 9.8 million residents.

Responsibilities:

- Served as an intern under the testing team and the project management team.
  - Worked to standardize defect reporting and tracking on the project to provide for a more efficient resolution of issues

Akhil Pillai
Track Manager 4

Summary

Akhil's experience as a Track Manager for Data Exchange on the RAPIDS project makes him a valuable asset to the team. He is best known for his work on the critical Account Transfer component to exchange application data with the CMS Health Insurance Marketplace. He possesses a mix of business knowledge, technology know-how, communication skills, and practical experience with Federal Data Hub services.

Akhil Meets the Position Requirements

Position Description

Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.

Supervise the work of senior programmer analysts and programmer analysts.

Considered key personnel and will be housed on-site full-time.

Akhil Meets Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Akhil has two years of Track Management experience involving development and maintenance on the RAPIDS project for DHHR. Specifically, he has worked in the Data Exchange, ESB, CHIP and MMIS Interface subsystems.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Akhil has two years of experience analyzing and designing the RAPIDS application.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Akhil has more than four years of experience in the full Systems Development Lifecycle of both the RAPIDS and MATRIX projects.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Akhil has more than four years of experience working with the Agency and other users on defining needs and requirements for various enhancements to the RAPIDS system, and producing outputs satisfying those needs in a pre-determined time frame.
A Bachelor's Degree	Akhil has a bachelor's degree.

Education

Ohio State University	Bachelor of Engineering in Computer Science and Engineering

Work Experience

State of West Virginia DHHR – RAPIDS Project

Track Manager
June 2013 – Current

Lead Developer
June 2013–January 2014

RAPIDS data exchanges occur in two different ways with external State, Federal, and Commercial sources. This includes 37 batch data exchanges which occur mostly on the mainframe and 61 real-time integrations with State and Federal partners. Akhil is the Track Manager for these data exchanges. His responsibilities include:

- Overseeing maintenance and new implementation for all services interacting with RAPIDS. These include FACTS, OSCAR, inROADS, CMS/Federal Data Hub, MMIS, and CHIP.
- Ensuring that mainframe batch interfaces run successfully and managing any data exchange production issues.
- Leading the full lifecycle of new implementations of new services, like the recent eDRS initiative, from estimation, requirements and design through development and testing.
- Leading the Account Transfer interface activities with CMS. In this capacity he has:
  - Led JADs to gather detailed requirements.
  - Developed detailed understanding of the RAPIDS data model to allow AT data to be successfully loaded into RAPIDS case and inbox tables.
  - Developed presentations, meeting minutes, SRS (requirements) documents, and other artifacts of development and testing.
  - Helped determine work around strategies for CMS sourced AT defects and issues.
  - Processed AT load cycles using the "process the backlog" strategy.
  - Performed and later managed Java development tasks and testing.

Hewlett-Packard

MATRIX Project, State of NJ

Development Team Lead (Interfaces)
September 2010 – June 2013

MATRIX was a legacy modernization project tasked with providing New Jersey DMV workers a modern system that would simplify their daily tasks. The project brought together nearly 50 different technology systems and required interaction with more than 20 different federal and local agencies.

Responsibilities:

- Served as the development lead for the Interfaces track on the MATRIX project.
  - Led a SCRUM team of 15 Business Analysts, Developers and Testers in order to create and deliver services for the New Jersey DMV
  - Maintained a project schedule
  - Interacted with the client to gather requirements based upon existing business processes
- Worked with the Project Management team and the architects to confirm that all new interfaces were well documented, in accordance with existing technical implementations and that all delivered services were reusable, scalable and efficient.
- Developed services using both IBM WebSphere Message Broker and IBM Host Access Transformation Services (HATS).
- Based on performance, was promoted to development lead of the interfaces track.

Dan Chimes
Track Manager 5

Summary

With Dan's nearly three years of experience on the RAPIDS project and his experience in modernizing Client Notices using the Adobe software, as well as bringing Client Notices to inROADS (eNotices), Dan is an excellent choice for the role of Track Manager. Dan is excited to continue his work with the Agency and make further enhancements and improvements to the Client Notice subsystem on the RAPIDS Project.

NOTABLE QUOTABLE

"My goal is to make the jobs of the field staff easier and more efficient and ultimately improve the lives of West Virginia citizens. I'm excited to continue to pursue that goal with the team here at RAPIDS."

Dan Meets the Position Requirements

Position Description
Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.
Supervise the work of senior programmer analysts and programmer analysts.
Considered key personnel and will be housed on-site full-time.

Dan Meets Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Dan has more than two years of Track Management experience involving development and maintenance on the RAPIDS project for DHHR. Specifically, he has worked in the Client Notices, Security Maintenance, History Maintenance, Client Scheduling and Inquiry; subsystems.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Dan has more than two years of experience of analyzing and designing the RAPIDS application.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Dan has three years of experience in the full Systems Development Lifecycle.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Dan has more than two years of experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system, and producing outputs satisfying those needs in a pre-determined time frame.
A Bachelor's Degree	Dan has a bachelor's degree.

Education

Pennsylvania State University	Bachelor of Science in Information Sciences and Technology and Bachelor of Science in Economics

Work Experience

**State of West Virginia
DHHR – RAPIDS Project**

**Track Manager
April 2014-Current**

**Track Lead
April 2013-Current**

**Deputy Lead
February 2014-April 2014**

**Testing Lead
October 2012 – March 2013**

Dan is the Track Manager for multiple subsystems at RAPIDS including Client Notices, Client Scheduling, Inquiry, History Maintenance, and Security Maintenance.

- As the Client Notices Track Manager, Dan manages the conversion effort of legacy notices and letters to Adobe, modernizing this communication channel with the State's citizens.
- Dan led the Client Notices component of eNotices – bringing the paper notices into an electronic format for access by citizens in the inROADS portal.
- As the track lead for Client Scheduling, Dan manages the monthly PCRs through the SDLC process and confirms that each PCR is completed in time for testing and for release to Production.
- Dan served as the Deputy Lead on Release 6 Benefit Issuance (BI). By working with the track lead in determining PCR priority and managing the development team, he has established himself as a reliable backup for the BI Track Manager.
- Dan served as the Testing Lead for Release 5's Caseload Management subsystem, managing defect identification and resolution for the release from testing through deployment.

**PPG
IT Department**

**Technology Intern –
IT Finance
June 2011 – August 2011**

PPG's IT Departments is the in-house technology service utilized to innovate how they do business as well as how they market their business.

Responsibilities:

- Worked with customers to determine requirements for an IT Budgeting Application.
- Assisted project managers in gathering data and constructing powerful ways to present the data.
- Tested and raised defects for the IT Budgeting Application.

Keegan King
Track Manager 6

Summary

Keegan has two and a half years of experience working on the RAPIDS project in multiple subsystems and more than four years of experience working in the EDBC track. Keegan has more than two years of experience working with the Corticon Business Rules Engine and has worked on two successful implementations of the Affordable Care Act.

Keegan Meets the Position Requirements

Position Description
Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.
Supervise the work of senior programmer analysts and programmer analysts.
Considered key personnel and will be housed on-site full-time.

Keegan Meets Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Keegan has more than two years of Track Management experience involving development and maintenance on the RAPIDS project for DHHR, specifically in the EDBC and inROADS tracks.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Keegan has more than four years of analysis and design experience on the RAPIDS and ASPEN projects.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Keegan has more than four years of experience in the full Systems Development Lifecycle.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Keegan has more than two years of experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system, and producing outputs satisfying those needs in a pre-determined time frame.
A Bachelor's Degree	Keegan has a bachelor's degree.

Education

Duquesne University   Bachelor of Science in Information Systems Management

Work Experience

State of West Virginia DHHR – RAPIDS Project

EDBC MA Track Lead
June 2015 – Current

inROADS Track Member
February 2015 – Current

Medicaid Expansion Team
July 2013 – February 2015

Federal Data Hub Lead
July 2013 – February 2015

Keegan is the track lead for the Medicaid portion of the EDBC track and West Virginia's self-service portal inROADS. He has worked on the successful implementation of the Affordable Care Act.

- As the EDBC MA track lead, Keegan manages the completion and monthly release cycle for Medicaid-related defects. He also manages EDBC MA RAPIDS enhancements.
- As an inROADS track member, Keegan has worked on the completion and monthly release cycle for inROADS defects. He has also worked on inROADS enhancements.
- Keegan served as a team member during the Affordable Care Act implementation and was a co-lead during Release 2 for the transition of Medicaid rules from the legacy system into the Corticon Business Rules Engine.
- Keegan served as the Federal Data Hub lead to implement screens and functionality related to real-time demographic and income verifications.

State of New Mexico DHHR – ASPEN Project

EDBC Track Member
August 2011 – June 2013

Corticon Rules Specialist
December 2011 – June 2013

Reference Table Lead
August 2012 – June 2013

The ASPEN project is the state of New Mexico's integrated eligibility solution, serving 2.1 million residents.

Responsibilities:

- Keegan served as an EDBC Track member for his duration on the ASPEN project. He was involved with all phases of the SDLC by gathering requirements, translating those requirements to business rules, and working with the state on defect resolution.
- As a Corticon Rules Expert, Keegan developed business rules using the tool and transitioned knowledge among other team members and projects.
- As the Reference Table Lead, Keegan worked directly with the state to gather requirements, create new reference tables and make changes to existing reference tables.

State of Michigan DHS – Bridges Project

Technology Intern
June 2010 – August 2010

The Bridges project is an integrated eligibility project in the State of Michigan with a population of 9.8 million residents.

Responsibilities:

- Served as an intern working with the Corticon Business Rules Engine to begin transitioning SNAP rules from the legacy system to the rules engine.

Sheema Shireen
Track Manager 7

Summary

Sheema brings to the DHHR Modernization Program over 13 years of experience, including eight years in the EDBC track of the RAPIDS project. She is detail oriented and is often the go-to person to look into production issues, conduct defect analysis, and provide level of effort estimates.

Sheema Meets the Position Requirements

Position Description

Responsible for one or more RAPIDS subsystems or areas of assignment serving a customer base. Assignments will have the approval of the Agency.

Supervise the work of senior programmer analysts and programmer analysts.

Considered key personnel and will be housed on-site full-time.

Sheema Exceeds Your Qualifications

RFP Requirement	Additional Details
Management experience in one (1) or more projects involving the development or maintenance of an automated, integrated IV-A system for a government Agency	Sheema has performed in a management role involving the development and maintenance of RAPIDS, an automated, integrated IV-A system for DHHR.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Sheema has more than thirteen years of analysis and programming experience on complex business systems, including eight years of experience on the RAPIDS project
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Sheema has more than thirteen years of full system development life cycle experience.
Two (2) years of experience working with users to define their needs and product outputs to satisfy those needs in a pre-determined time frame	Sheema has more than thirteen years of experience working with users to define needs, and produce outputs satisfying those needs in a pre-determined time frame. The last eight years have been on the RAPIDS project.
A Bachelor's Degree	Sheema has a bachelor's degree.

Education

BTL Institute of Technology, Bangalore University   Bachelor of Science in Computer Science and Engineering

Professional Certifications

IBM	Mainframe Professional

Work Experience

State of West Virginia
DHHR – RAPIDS Project

Senior Programmer Analyst
December 2007 – Current

Sheema has eight years of experience on the RAPIDS project, primarily as senior developer in the Eligibility Determination and Benefit Calculation (EDBC) track. Her responsibilities include:

- Performed as a manager supporting the EDBC track.
- Developing new programs to support ACA.
- Performing analysis, design, development, unit, and integration testing.
- Working on EDBC and Confirmation Adhoc reports.
- Developing new programs using DB2, CICS, COBOL, TELON and JCL.
- Performing maintenance of online and batch programs in various subsystems.
- Monitoring the WebSphere MQ and WebSphere Application Server applications to identify/isolate problems.
- Creating the acceptance testing and software control management procedures.
- Participating in management and state staff meetings to determine needs of new functions, identify requirement changes, address and resolve production problems, and establish the prioritization of project work.
- Providing production support for all application programs.
- Providing technical support and database tuning for all application programs.
- Conducting training on EDBC subsystem for new programmer analysts.
- Conducting peer review and code walk through of programs.

Nationwide Insurance

Software Developer
January 2007 – July 2007

Nationwide is one of the largest insurance and financial services companies in the world. Their products and services range from insurance (auto, property, life, and health) to various investment, retirement and financing options including banking.

The Billing Advantage Integration initiative was identified to support Nationwide's organizational goal of sustained growth and profitability. Billing Advantage was chosen to be the single billing solution for Nationwide Property and Casualty Insurance.

Responsibilities:

- Analyzed requirements and preparation of HLD, LLD and unit test documents.
- Wrote and reviewed technical specifications and modified program specifications.
- Maintained, enhanced, and created COBOL, DB2 application programs utilizing TSO/ISPF, JCL, SPUFI, QMF and Platinum tools on COGEN platform.
- Conducted impact analysis.
- Created design documents for the impacted components.
- Expanded the copybooks to add the new functionality.
- Coded and modified JCL's for batch processes.
- Created the change management packages, auditing and freezing.
- Performed Unit Testing, System Testing and User Acceptance Testing.

United States
Automobile Association

Software Developer
May 2006 – December 2006

A member-owned Fortune 500 company, USAA owns and manages more than $96 billion assets. The association is headquartered in San Antonio, Texas, with offices throughout the United States and Europe

This system contains several applications like TDE, Common Work Flow, Input Transformer, Interim Merge, PMR, ODC and Print.

Responsibilities:

- Analyzed the programs to be modified according to the business requirements.
- Studied requirements and gathered clarifications for change requests and enhancements.
- Coded programs using COBOL, CICS, DB2, IMS.
- Performed impact analysis.
- Created design documents for the impacted components.
- Reviewed components modified by team members.
- Performed Unit Testing, System Testing and User Acceptance Testing.
- Monitored the production move components, batch jobs and online transactions.
- Wrote new programs according to business requirements.
- Assisted with Production moves and resolving any Production move issues.
- Generated various adhoc and critical reports as per requirements of the business.

Additional Experience

2002 – May 2006

- Metlife Insurance Company – Software Developer
- American Express – Programmer Analyst
- MindTree Consulting, USA – Programmer Analyst
- MindTree Consulting, India – Programmer Analyst

WV Department of Health and Human Resources
Management Informatioin Services RAPIDS Project
CRFP-0511-HHR1600000001

West Virginia
RAPIDS

Subsection 3.2.6: Database Administrators (two positions)

Subsection 3.2.6: Database Administrators (two positions)

The database administrator's responsibilities include the design, development and support of database structures; regular monitoring of production, training, and acceptance performance; and database performance tuning. Any additional non-DBA assignments should have the approval of the Agency. These persons are considered key personnel, should not serve in any other key personnel position for another client and should be housed on-site full-time. The database administrators should have the following qualifications:

1. Five (5) years of Z/OS DB2 database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS;

2. Four (4) years of experience using CA ERwin Data Modeler for development and maintenance of data models and PLATINUM DB2 products;

3. Five (5) years of Oracle database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS;

4. Five (5) years of experience with DB2 COBOL stored procedure development;

5. One (1) year of experience in DB2 Native SQL procedure development;

6. Two (2) years of data warehouse experience using ETL tool OWB; and

7. A Bachelor's Degree.

Vendor Response:

The Deloitte team provides a pair of strong DBA resources, each with a mix of DB2 and Oracle experience, and each possessing specific areas of specialization. Together with Chandra Appachiannan, a technical manager and also experienced DBA, and working closely with OMIS and OT DBAs, the Deloitte team provides a strong bench of database administration knowledge to maintain and administer the State's critical database assets.

Rafi Basha
Database Administrator 1

Summary

Rafi is an experienced database administrator with well over seven years of RAPIDS experience. He has operated as a developer giving him insights into multiple subsystems. He works well as part of the larger technical team where his proven track record and strong DBA skills make him a great choice for this position.

Rafi Meets the Position Requirements

Position Description

Responsibilities include:

- The design, development and support of database structures;
- Regular monitoring of production, training, and acceptance performance;
- Database performance tuning

Non-DBA assignments will have the approval of the Agency.

Considered key personnel and will be housed on-site full-time.

Rafi Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of Z/OS DB2 database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS	Rafi has five years of experience using the DB2 database under Z/OS, He has two years and six months of experience of application DBA for RAPIDS in Z/OS DB2 which includes setting up new database regions for the ACA initiatives and production maintenance and migrations.
Four (4) years of experience using CA ERwin Data Modeler for development and maintenance of data models and PLATINUM DB2 products	Rafi has two years and six months of experience in physical and logical database modeling using CA Erwin Data modeler that include ACA and QC initiatives (as a DBA). He also has four years of experience as a developer using CA ERwin Data Modeler for development and maintenance. He also has more than six years of experience with PLATINUM DB2 products.
Five (5) years of Oracle database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS	Rafi has three years, six months of experience as an Oracle application DBA that includes implementing inROADS initiative. He also has three years of experience as a developer using and helping administer Oracle database version 8 databases.

RFP Requirement	Additional Details
Five (5) years of experience with DB2 COBOL stored procedure development	Rafi has eight years of experience in DB2 COBOL programming that includes five years of stored procedure development.
One (1) year of experience in DB2 Native SQL procedure development	Rafi has more than three years of experience developing and maintaining DB2 Native SQL procedure for RAPIDS project.
Two (2) years of data warehouse experience using ETL tool OWB	Rafi has more than two years of experience in developing maps, process flows and stored procedures using ETL tool OWB for RAFT initiatives in RAPIDS.
A Bachelor's Degree	Rafi has a bachelor's and master's degree.

Education

Bharathiar University- India	Bachelor of Science in Computer Science
Madras University - India	Master of Computer Applications

Professional Certifications

Certifying Board	IBM Certified Database Administrator DB2 10 for z/OS
	IBM Certified Database Associate DB2 10 for z/OS

Work Experience

State of West Virginia DHHR – RAPIDS Project **Database Administrator** November 2011– Current **COBOL Developer** December 2007 – November 2010	During his time at RAPIDS, Rafi has acted as a COBOL developer and a DBA. Since transitioning to DBA in 2011, Rafi has exercised his valuable experience in creating and maintaining the RAPIDS Data Model and providing useful guidance to the team in designing Database changes. • Provides Database Administration support for the applications development team • Monitors the health of the database which includes space usage, resource deadlocks, and WLM environments • Deploys and setups the procedures for the stored procedure in WLM • Creates New Database objects in DB2/Oracle for project development • Authorizes and privileges DB2 and Oracle object access • Performs performance tuning using DB2 Explain and IBM Data Studio • Unloads and/or loads the databases and collects the system statistics for the same • Reorganizes the Table space and Collecting Statistics using Runstats • Runs the online and standalone utilities • Operates the backup and recovery of DB2 objects • Creates external tables in ORACLE to support the Data warehousing team
Zurich Insurance Germany **Senior Software Engineer** November 2006 - November 2007	The Contract Management System Life (VSL) is the primary Life Contract system for Zurich Germany has been in use at the Zurich Group. The VSL enables issuing policies (new acquisitions) of life insurance applications in all insurance branches (pension insurances, term life insurances, endowment policies, equity-linked insurances, state-aided pension schemes such as the so-called Riester and Rürup insurances and pension funds) with the usual supplementary insurances (occupational disability, accident, premium refund), and to administer them by the business processes

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(information desk, legal and technological changes, dynamic modification, value update, retirement) that are downstream to the new acquisitions.

Responsibilities:

- Studied and made analysis of requirements, development, modifications or enhancements of the application
- Performed knowledge transfer of the application from Germany to offshore team
- Created the technical design documents for the new developments and the enhancements carried out
- Created the Functional Design documents for the new programs, copybooks, and JCLs
- Coded new COBOL, COBOL + IMS DB and COBOL + IMS DB + DB2 programs
- Made modifications in existing COBOL, COBOL + IMS DB and COBOL + IMS DB + DB2

Additional Experience

November 2003 – November 2006

- Farmers Insurance Group – Senior Software Engineer
- Liberty Mutual Insurance – Software Engineer

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Rajulan Rathinavel Chidambararajan
Database Administrator 2

Summary

Rajulan is an IBM Certified DB2 DBA with more than nine years of success improving functionality, performance, and efficiency of DB2 Databases on z/OS environment. Rajulan has extensive experience in Design Reviews, Data Modeling, Migration Planning to DB2 z/OS Version 8/9/10, Data Migration and Onsite Coordination.

Rajulan Meets the Position Requirements

Position Description

Responsibilities include:

- The design, development and support of database structures;
- Regular monitoring of production, training, and acceptance performance;
- Database performance tuning

Non-DBA assignments will have the approval of the Agency.

Considered key personnel and will be housed on-site full-time.

Rajulan Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of Z/OS DB2 database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS	Rajulan has more than eight years of experience in Z/OS DB2 database Version 8 or above, and administration experience on a system comparable in size and complexity to RAPIDS.
Four (4) years of experience using CA ERwin Data Modeler for development and maintenance of data models and PLATINUM DB2 products	Rajulan has six years of experience in using CA ERwin Data Modeler for development and maintenance of data models and PLATINUM DB2 products.
Five (5) years of Oracle database version 8 or above administration experience on a system comparable in size and complexity to RAPIDS	Rajulan has two years of experience in Oracle database Version 8 administration on RAPIDS. He also worked at Capital One and Nissan N.A. for an additional three years as supporting DBA for Oracle databases with larger size and higher complexity to RAPIDS.
Five (5) years of experience with DB2 COBOL stored procedure development	Rajulan has more than nine years of experience with DB2 COBOL stored procedure development.
One (1) year of experience in DB2 Native SQL procedure development	Rajulan has more than three years of experience in DB2 Native SQL procedure development.

RFP Requirement	Additional Details
Two (2) years of data warehouse experience using ETL tool OWB	Rajulan has more than 2 years of experience as DBA supporting ETL (OWB) data warehouse activities.
A Bachelor's Degree	Rajulan has a bachelor's degree.

Education

Anna University   Bachelor of Engineering in Mechanical Engineering

Professional Certifications

IBM Certified Database Administrator - DB2 10 for z/OS

IBM Certified Database Associate - DB2 10.1 Fundamentals

IBM Certified Database Administrator - DB2 9 DBA for z/OS

IBM Certified Database Administrator - DB2 8 DBA for z/OS

IBM Certified Database Associate - DB2 UDB V8.1 Family Fundamentals

ITIL V3 Foundation Certified

Work Experience

State of West Virginia DHHR – RAPIDS Project

DB2 Database Administrator

May 2013 – Current

Rajulan has almost two years of experience on the RAPIDS project where he has performed the tasks of a Database Administrator in collaboration with the RAPIDS technical team and other DBAs. He is fully versed in the RAPIDS environment and procedures and has the skills to continue to be a trusted advisor for the technical team.

- Performs DBA support tasks such as: backup/recovery, performance monitoring and tuning, security and auditing, database object modeling, design, and development.
- Designs, develops, and deploys the Native SQL and external stored procedures, utilizing Global temporary tables – DTT utilizing IBM Data Studio, and mentors developers.
- Provides production support of stored procedures, ABEND diagnosis and WLM dump reading, SP code correction, testing, and code promotion.
- Performs physical database design, e.g. partition table space and partitioning indexes, referential constraints and unique constraints involving identity columns.
- Mentors the developers on DB2: static and dynamic SQL - prepare and execute, execute immediate, package/plan binds, utility usage and DCLGENs.
- Involved in development projects:
  - Interacts with analysts and developers
  - Understands the system requirements from conceptual models
  - Analyzes transactions and data volumes
  - Designs the physical database
- Works closely with the Systems Programmers to assign and modify DSNZPARM system parameters as needed.
- Works on capacity planning and reporting: Monitor storage space, database allocation, verify efficient use of disk storage, reclaim dead space, optimize space allocation and avoid out-of-space conditions.

Capital One

Application DB2 DBA

June 2012 – May 2013

Capital One Financial Corporation, incorporated on July 21, 1994, is a diversified banking company focused primarily on consumer and commercial lending and deposit origination. Its principal business segments are Local Banking and National Lending.

Responsibilities:

- Supported the Capital One account involving 7 Data sharing groups, 7 LPAR's, 14 subsystems and 245 databases.
- Provided Database Administration support for an applications development staff of over 100.
- Worked with the applications staff to perform logical and physical designs of databases and objects.
- Identified application performance issues, worked with the development staff to address the issues.
- Worked with the data modeler to develop new logical and physical data models.
- Provided the key design inputs on new de-normalized tables to improve user performance.
- Reviewed the logical model and physical model with data modeler, business users, and application team.
- Worked on the authorization and privileges for DB2 access.

Nissan North America

DB2 Database Administrator

February 2010 – June 2012

Satyam is the end to end service provider for Nissan North America, Europe and Asia. Satyam supports various applications in production as well as in development. The architecture spans multiple platforms including Z/OS mainframe. On mainframe, data is stored in DB2 on Z/OS. Satyam's DBA team provides 24X7 supports for these databases following offshore-onshore model.

Responsibilities:

- Acted as a team member who was responsible for working on DB2 Development requirements and Production Support Tickets on a daily basis.
- Worked on IBM tools on production issues fulfilling the needs of the DBA profile. Worked on IBM Tool TEB (Test Environment Build) for mass environment building with IBM team.
- Implemented performance checks and tuning on different mainframe database DB2 LPARS. Worked on BMC products such as Change Manager and Catalog Manager and DASD Manager.
- Worked on major enhancements in DB2 Database related requirements that cater the needs of the client.
- Participated in daily design sessions with data modeler and project team.
- Reviewed and approved the data model.

United Parcel Service

DB2 Database Administrator

July 2009 – January 2010

Global Internal Package Level Detail (GIPLD) is the mainframe repository that receives and stores package and Unit Load Device (ULD) level information from several different data sources. It records events like when a package is scanned into a ULD (e.g. container) and when the ULD is scanned into an aircraft.

Responsibilities:

- Planned and implemented the Production Release of the critical applications including DB2 object Creation/alter/Package bind/authorizations in the stipulated time window using IBM/BMC tools.
- Designed and scheduled the regular Production Housekeeping Jobs for DB2 tables.
- Troubleshot the Production Housekeeping Job failure within the SLA.
- Designed and created DB2 objects in Development, Test and Pre-production environments.
- Troubleshot the Utility Job failures in non-production environments.
- Resolved resource unavailability and contention of DB2 objects.
- Troubleshot the BIND failures of the plan and packages.
- Granted authorizations and resolved access issues.

Additional Experience

April 2006 – June 2009

- CSX Transportation – Jr. DB2 Database Administrator

Subsection 3.2.7: Web Application Server Administrator (one position)

Subsection 3.2.7: Web Application Server Administrator (one position)

The web application server administrator's responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment. This individual should support web application buildings and deployments on clustered environments. This person is considered key personnel and should be housed on-site full-time. The web application server administrator should the following qualifications:

1. Three (3) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Four (4) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patters & JSPs;

3. Four (4) years of programming experience in writing service and UI components;

4. Three (3) years of experience in writing automated build and deployment scripts using ANT;

5. Four (4) years of experience on WebLogic application environments;

6. Two (2) years of experience with Red Hat Linux environments;

7. One (1) year of experience with public assistance programs such as TANF, SNAP and Medicaid, experience developing stored procedures, and experience with Corticon and Oracle ESB; and

8. Two (2) years of post-secondary education in a related field.

Vendor Response:

Harish Kumar
Web Application Server Administrator

Summary

Harish has proven experience in clustered application server based environments and has handled installation maintenance and migration of Web servers, HTTP servers and Application servers. Harish is an accomplished Web Application Server administrator and is the right choice for the Agency. Harish is excited to continue his work with the State of West Virginia.

Harish Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment
Support web application buildings and deployments on clustered environments
Considered key personnel and should be housed on-site full-time.

Harish Meets Your Qualifications

RFP Requirement	Additional Details
Three (3) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;	Harish has worked on large scale systems for more than seven years with Boeing, FedEx, Cengage and RAPIDS, including directly interacting with the customers, acted as the SME of Boeing and FedEx to understand the business and functional requirements, converted those requirements into SRS design documents, designed and developed products meeting the requirements and delivered the products in a pre-determined time frame.
Four (4) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patters & JSPs	Harish has more than seven years of J2EE programming experience and has spent the last six months working on Core Java, MVC Architecture, Design Patterns and JSP.
Four (4) years of programming experience in writing service and UI components.	Harish has more than seven years of programming experience in creating services and reusable utility components in Java and three years of experience in developing UI components which could be reusable across presentation layers.
Three (3) years of experience in writing automated build and deployment scripts using ANT;	Harish has more than seven years of experience in writing and enhancing deployment scripts using ANT and automating the build scripts using Hudson and Jenkins.
Four (4) years of experience on WebLogic application environments	More than four years of experience in Application Servers like IBM WebSphere (6, 8), Jboss (4, 5, 6, and 7) and WebLogic. Harish has worked on clustering the Jboss application server for FedEx and worked on clustered WebSphere Application server in supporting the production server for Boeing as well as worked on the WebLogic clustered environment for nearly a year.

RFP Requirement	Additional Details
Two (2) years of experience with Red Hat Linux environments	Harish has more than five years of experience with Red Hat Linux environments using both 5.0 and 6.0 OS.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medicaid, experience developing stored procedures, and experience with Corticon and Oracle ESB	Harish has more than a year of experience with the public assistance programs like SNAP, TANF and Medicaid and a year experience with Oracle ESB and Corticon Rules Engine in deployment of Rules and ESB.
Two (2) years of post-secondary education in a related field	Harish has a bachelor's degree.

Education

Madurai Kamaraj University	Bachelors of Engineering Electronics and Communication

Work Experience

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Web Administrator
August 2014 – current

Harish is the current Web Application Server Administrator for RAPIDS. He works with the operations and DBA teams to perform builds for Java and Corticon as well as coordinates deployments for Java, Corticon and legacy components. Harish:

- Provides Web Server Administration support for the application development team.
- Manages the version management control and server integrity by managing the SVN server.
- Provides build support for the development team to deliver the releases for eRAPIDS and inROADS in lower environments.
- Supports the Oracle ESB team for code propagation.
- Deploys each release for inROADS, eRAPIDS and ESB.
- Creates and manages SSL certificates for the lower environments and uses the certificates provided by external system team in creating Keystore for eRAPIDS.
- Monitors the server performance and health state of all the Application servers.
- Validates the server performance and server state after every upgrade.

FedEx

Project Lead
November 2013 –July 2014

The Dossier Systems work as an interface to get inputs from other applications to create workflow queues to monitor customers for fraud. It also creates multiple queues for call center cases and customer cases which work on a specific workflow.

Responsibilities:
- Worked on migrating the Jboss server from version 5 to 7
- Worked on Jboss 7 Clustering and integrating with the Apache HTTP Server
- Worked on the Load Balancing
- Redesigned and developed the application from Struts 2 to Spring 3.1.4.
- Developed the JQuery client scripting removing all the Java Scripts
- Integrated the application with external systems using JMS
- Created new web services and integrated with Spring
- Handled demos to show the POC and deliverables to the client
- Improved the performance of the application by tuning queries and simplifying table structures
- Worked on staging the Server configuration on multiple Jboss servers.

The Boeing Company

Lead Engineer
November 2010 – November 2013

FTCS is a computing platform used to ensure that every airplane produced by the Boeing Company meets U.S. and foreign government certification standards.

Responsibilities:

- Prepared and presented functional/design specifications for the project
- Conducted design review meetings with the business and technical teams
- Prepared estimates for the project
- Created high performing Stored Procedures
- Responsible for the HDF5 Migration from 32 bit to 64 bit
- Used TestNG and JUnit for developing, integrating, and executing unit tests

HTC Global Services

Software Development Engineer
July 2007 – October 2010

Cengage e-learning is a leader in publishing educational content, through a Web application. The old newspaper and magazine contents of different publications are digitized and converted as XML content and a searchable algorithm is created to present the content as a search result.

Responsibilities:

- Involved in the design of the application architecture
- Implemented paging in table list
- Implemented internationalization in the application
- Designed and implemented the security privileges in user type level
- Implemented the Struts plug-in for the application
- Involved in creation of optimized SQL Queries in SQL server using Query Analyzer
- Responsible for maintaining database tables
- Used Log4J API to log the sever information
- Built the presentation layer to extract the Information Based on Struts Framework

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Subsection 3.2.8: Sr. Programmer Analysts – Mainframe (two positions)

RFP Reference: Attachment A, page 6

Subsection 3.2.8: Sr. Programmer Analysts – Mainframe (two positions)

The mainframe senior programmer analysts' responsibilities include the analysis, design, development and unit testing of COBOL, CICS, DB2 code in a mainframe environment. These persons are considered key personnel and should be housed on-site full-time. The mainframe senior programmer analysts should have the following qualifications:

1. Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;

2. Seven (7) years of COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS;

3. Seven (7) years of DB2 Version 8 or greater programming experience;

4. One (1) year of CICS programming experience (TELON development experience preferred);

5. Seven (7) years of TSO/ISPF experience;

6. Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

7. A Bachelor's Degree.

Vendor Response:

Venugopal Arumalla
Senior Programmer Analyst – Mainframe 1

Summary

Venu has 14 years of technical experience in development, maintenance, testing, customer interaction and production support on IBM Mainframe applications, including four years and ten months of experience on the RAPIDS project. He has worked on ACA Medicaid changes as well as on the SFU, EDBC, Benefit Issuance (BI) and Reporting subsystems.

Venu Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of COBOL, CICS, DB2 code in a mainframe environment
Considered key personnel and will be housed on-site full-time

Venu Exceeds Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;	Venu has worked on Mainframe technologies of large scale systems for more than fourteen years, including thirteen years directly interacting with the customers, understanding their needs and providing product outputs satisfying those needs in a pre-determined time frame.
Seven (7) years of COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS;	Venu has more than fourteen years of experience on JCL and COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS.
Seven (7) years of DB2 Version 8 or greater programming experience;	Venu has seven years of experience on DB2 Version 8.
One (1) year of CICS programming experience (TELON development experience preferred);	Venu has eight years of CICS programing and TELON development experience.
Seven (7) years of TSO/ISPF experience;	Venu has more than fourteen years of experience on TSO/ISPF.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Venu has more than four years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree.	Venu has a bachelor's and master's degree.

Education

Osmania University	Bachelor of Science in Computer Science
SK University	Master of Science in Computer Science

Work Experience

State of West Virginia DHHR – RAPIDS Project

Senior Programmer Analyst
August 2010 - Current

Venu has nearly five years of experience on the RAPIDS project, primarily in EDBC and SFU. He has also developed programs for reporting and BI.

- Developed the new programs to support ACA.
- Performs analysis, design, development, unit, and integration testing.
- Works on Standard Filing Unit (SFU) and creates benefits for the requested individuals.
- Works on Eligibility Determination and Benefit Calculation (EDBC), Confirmation and Adhoc reports.
- Uses the web services to connect Java applications from mainframe.
- Works on Benefit Issuance (BI) and Reporting subsystems.
- Develops the new programs using DB2, CICS, COBOL, TELON and JCL.
- Performs maintenance of online and batch programs in various subsystems.
- Performs the nightly batch cycles, runs and monitors the jobs using Control-M.
- Monitors the WebSphere MQ and WebSphere Application Server applications to identify/isolate problems.
- Creates the acceptance testing and software control management procedures.
- Participates in management and state staff meetings to determine new functions, identifies requirement changes, addresses and resolves the existing problems, and establishes the prioritization of the project work.
- Provides the production support for all the application programs.
- Provides technical support and database tuning for all application programs.
- Conducts training on SFU sub system for new programmer analysts.
- Conducts peer review and code walk through of programs.

First Data Corp

Senior Programmer Analyst
May 2009 – August 2010

First Data provides credit, debit, gift, payroll, prepaid cards and merchant transaction processing services. First Data provides payment, statement, and statement printing services to the world's largest financial Institutes, and to the merchants around the world.

Responsibilities:

- Analyzed the programs and prepared the technical specifications and documents for the enhancement projects.
- Interacted with the client and business solution design team for requirements, system test team, development team and members from various upstream and downstream IT application groups.
- Performed changes to existing batch DB2 programs.
- Performed changes to the existing COBOL programs.
- Involved in the complete Testing life cycle of the system.

Nationwide Insurance

Senior Programmer Analyst
October 2007 – March 2009

The Nationwide Insurance Company is the leading provider of Auto, Motorcycle, Boat, Homeowners, Renters, Mobile Home, Life, Personal Umbrella and Farm Insurance services to United State residents. The ANP application supports nationwide agents, the nationwide call center and customers.

Responsibilities:

- Analyzed the programs and prepared the technical specifications and documents for the enhancement projects.
- Provided the production support to the nightly updates batch cycle by resolving data related problems.
- Participate in Root Cause Analysis of defects in production environment.
- Involved in day-to-day production support of the application, including problem resolution.
- Wrote new complex batch COBOL, DB2 JCL programs for Interstate/Service account projects.
- Wrote COBOL/JCL programs for generating AdHoc reports and extracts for the business persons for important audits and also for other business improvements purposes.
- Performed data load to various test regions and reformatting data depending on the requirement using DB2 Load utilities.

Additional Experience

2001 – 2007

- CUNA Mutual Group – Sr. Programmer Analyst
- FARMERS Insurance Group – Programmer Analyst
- Thirvent Financials – Programmer Analyst

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Siva Babu
Senior Programmer Analyst – Mainframe 2

Siva
EXCEEDS

Summary

Given Siva's fourteen years on the RAPIDS project and nearly sixteen years of IT experience, Siva is an excellent choice for the role of Senior Programmer Analyst. Siva is experienced in application software development in Web-based environment, distributed n-tier architecture and Client/Server architecture using various technologies, functional and integration testing.

Siva Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of COBOL, CICS, DB2 code in a mainframe environment
Considered key personnel and will be housed on-site full-time

Siva Exceeds Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;	Siva has sixteen years of system analysis and programming experience and he has fourteen years of system experience on the RAPIDS project. Specifically, he has worked in the EDBC, Mass Change and Confirmation subsystems. His experience includes working with customers to define their needs, and providing outputs satisfying their needs in a pre-determined time frame.
Seven (7) years of COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS;	Siva has fifteen years of COBOL programming experience with last six months using COBOL OS/390 and VM or z/OS.
Seven (7) years of DB2 Version 8 or greater programming experience;	Siva has sixteen years of experience on DB2, with more than 7 years using DB2 Version 8.
One (1) year of CICS programming experience (TELON development experience preferred);	Siva has seven years of CICS programming experience and seven years of TELON development experience.
Seven (7) years of TSO/ISPF experience;	Siva has sixteen years of TSO/ISPF experience.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Siva has fourteen years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree.	Siva has a bachelor's degree.

Education

Thiagarajar College of Engineering	Bachelor of Engineering

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
September 2010 – Current
September 1997 – July 2007

Siva has spent his entire fourteen years on the RAPIDS project intimately involved with the EDBC and Confirmation modules. He is detail oriented and has tremendous knowledge of two of the most complex subsystems within the RAPIDS solution.

- Currently responsible for responding to PCRs for the EDBC subsystem and responsible for delivering projects for production rollover and production support.
- Worked on ACA Medicaid MAGI and CHIP Pilot project, and successfully delivered this project. Involved in design, development and testing activities for ACA.
- Implemented web-based Confirmation module and critical PCRs in EDBC and Confirmation. Involved in development and testing activities for various PCRs. Developed test plan, executed test cases in integration and system test environments and documented test results.

CGI Federal and Computer Sciences Corporation (CSC)

Senior Consultant
May 2009 – September 2010

CGI Federal/Computer Sciences Corporation (CSC) is an information technology (IT) service and consulting and business solutions company that delivers services to Centers for Medicare and Medicaid (CMS).

Responsibilities:

- Became a specialist on technical/development platforms in support of Centers for Medicare and Medicaid (CMS) Medicare Advantage Prescription Drug System (MARx).
- Created technical specifications; developed and modified code; conducted unit testing and documented and validated test results.
- Built software, interfaces and other components identified in the design.
- Conducted various testing of Unit, System, Integration, and Regression testing and developed test cases and scenarios.
- Participated in peer code and interim product reviews.
- Worked closely with business analysts, system testers, quality assurance, program management and CMS clients to deliver excellent quality applications and in a timely manner.

Northrop Grumman

Programmer Analyst 4
July 2007 – March 2009

Northrop Grumman Information Systems is a leading global provider of advanced solutions that deliver timely, enabling information to where it is needed most for our military, intelligence, civilian, state and local agencies, which also includes services to Centers for Medicare and Medicaid (CMS).

Responsibilities:

- Specialized on technical/development platforms in support of Centers for Medicare and Medicaid (CMS) Medicare Beneficiary Database Suite of Systems (MBDSS)
- Created technical specifications; developed and modified code; conducted unit testing and documented and validated test results.
- Identified data requirements and worked closely with Medicare Beneficiary Database (MBD) DBA to develop or modify the MBD Data Model and enhance performance.
- Built software, interfaces and other components identified in the design.
- Provided updates to Interface Control Document (ICD) and System Design Documentation (SDD).
- Participated in peer code and interim product reviews.
- Worked closely with business analysts, system testers, quality assurance, program management and CMS clients to deliver excellent quality applications in a timely manner.

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Subsection 3.2.9: Sr. Programmer Analysts – Java (three positions)

Subsection 3.2.9: Sr. Programmer Analysts – Java (three positions)

The Java senior programmer analysts' responsibilities include the analysis, design, coding and testing of J2EE code in an enterprise environment. These individuals are considered key personnel and should be housed on-site full-time. The Java senior programmer analysts should have the following qualifications:

1. Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;

2. Seven (7) years of J2EE programming experience with the last six (6) months using Java, EJB, MVC Architecture, Design Patterns & JSPs;

3. Four (4) years of programming experience in writing Services and UI components;

4. Three (3) years of experience on a WebLogic application server;

5. Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;

6. Three (3) years of experience developing stored procedures; and

7. A Bachelor's Degree.

Vendor Response:

Manasa Sesham
Senior Programmer Analyst - Java 1

Summary

Manasa is ideal for this position given her over seven years of experience in RAPIDS. She played an integral part of the RAPIDS Release 5 initiative, applying her strong Java programming skill in providing activity-based Caseload Management (CM). This includes dashboards to assist field workers and their supervisors to manage county workloads. Her intimate knowledge of the new functionality, along with her excellent communications skills and helpful nature, enabled her to directly support DHHR county offices to effectively configure their caseload profiles to fit county-specific needs. Her knowledge and hands-on experience with multiple subsystems make Manasa a versatile and effective team leader.

Manasa Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding and testing of J2EE code in an enterprise environment
Considered key personnel and will be housed on-site full-time

Manasa Meets Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;	Manasa has more than eight years of design/development and testing experience, with more than seven years of experience on the RAPIDS project. She has worked on the development of Client Registration, Application Entry, EDBC, and Caseload Management modules and is experienced in maintaining Client Scheduling as well. Her experience includes working directly with customers to define their needs and providing product outputs satisfying their needs in a pre-determined time frame.
Seven (7) years of J2EE programming experience with the last six (6) months using Java, EJB, MVC Architecture, Design Patterns and JSPs;	Manasa has more than seven years of design/development and testing experience. Over these seven years, she has extensively utilized J2EE, EJB, JSPs, JavaScript, JQuery, HTML and CSS.
Four (4) years of programming experience in writing Services and UI components;	Manasa has five years of experience in writing Services and seven years in UI components.
Three (3) years of experience on a WebLogic application server;	Manasa has five years of experience on a WebLogic application server.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Manasa has more than six years of experience in public assistance programs such as TANF, SNAP and Medical Assistance.

RFP Requirement	Additional Details
Three (3) years of experience developing stored procedures;	Manasa has three years of experience in developing native stored procedures.
A Bachelor's Degree	Manasa has a bachelor's degree.

Education

Osmania University	Bachelor of Engineering in Electronics and Communications Engineering

Work Experience

State of West Virginia DHHR – RAPIDS Project

Track Lead
May 2014-Current

Senior Programmer Analyst
July 2012 – May 2014

Senior Programmer Analyst
March 2010 – July 2012

Programmer Analyst
July 2008 – March 2010

Manasa is the Track Lead responsible for maintaining and delivering enhancements for the Caseload Management module. In this role she:

- Initiates communication calls with the county supervisors and workers to guide them in how caseload management can increase the productivity of their staff
  - Fully responsible for production support of Caseload Management.
  - Plays a major part as a senior analyst in design, development and unit testing of the caseload management module.
- Has developed numerous native stored procedures
  - Worked in design, development and maintenance of Client Registration, Application Entry and EDBC modules.
  - Actively participates in all phases of the SDLC for the Work Programs module for which she has had past experience.

State of Pennsylvania - PennDOT

Programmer Analyst
December 2007 – July 2008

The PennDOT Safety Administration Legacy Systems Replacement program is a complex effort that will transform how PennDOT delivers services to its constituents, both directly and through its business partners, and will cover all aspects of its Driver Licensing and Vehicle Titling/Registration functions.

This web based project called the .centric was built based on J2EE and Service Oriented Architecture and follows Rational Unified Process

Responsibilities:
- Worked as programmer analyst and mainly involved in designing and developing PennDOT application interface for the police department of Pennsylvania.
- Managed the inventory management system by using J2EE, EJB, JSP, WebLogic and other technologies.
- Involved in JUnit testing and production support as well.

Stryker Orthopedics

Programmer Analyst
July 2007 – November 2007

Laboratory Information Management System (LIMS) application is developed to provide a user friendly and efficient way for managing the laboratory data storage along with high data security.

Responsibilities:
- Worked as programmer analyst and involved in designing and developing user friendly interfaces for storing and managing inventory lab data.
- Managed the inventory management system by using J2EE, EJB, JSP, JavaScript, WebSphere and other technologies.

Muthukuru Gangireddy Krishna Reddy
Senior Programmer Analyst - Java 2

Krishna
EXCEEDS

Summary

Krishna has nearly 14 years of experience in Information Technology, with extensive experience in the design, development, testing and implementation of solutions and solution enhancements. With more than six years on the RAPIDS project, Krishna has experience in many subsystems, and enjoys the respect of peers and coworkers. He often leads design reviews and coding reviews, and is heavily involved in project technical decision making. He is also the point-person for mentoring developers, managing production support, and guiding the build team. Krishna is a strong Java asset for this position.

Krishna Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding and testing of J2EE code in an enterprise environment
Considered key personnel and will be housed on-site full-time

Krishna Exceeds Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;	Krishna has more than thirteen years of experience in system analysis and programming experience on large scale projects. Out of this experience, Krishna has seven years of experience in system analysis and programming experience on the RAPIDS project directly. He has experience working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame.
Seven (7) years of J2EE programming experience with last six (6) months using Java, EJB, MVC Architecture, Design Patterns and JSPs;	Krishna has fourteen years of J2EE programming experience. For the past seven years, he has been using Java, EJB, MVC Architecture, Design Patterns and JSPs to implement multiple eRAPIDS application subsystems.
Four (4) years of programming experience in writing Services and UI components;	For the past seven years, Krishna has been writing service and UI components to implement multiple subsystems of the eRapids application.
Three (3) years of experience on a WebLogic application server;	For the past seven years, Krishna has used a WebLogic application server to deploy, start, stop, and maintain the eRAPIDS application.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Krishna has six years of experience at the RAPIDS project with public assistance programs such as TANF, SNAP and Medical Assistance.
Three (3) years of experience developing stored procedures;	Krishna has five years of experience in developing stored procedures, including stored procedures for eRAPIDS implementation.

RFP Requirement	Additional Details
A Bachelor's Degree	Krishna has a bachelor's degree.

Education

Nagpur University   Bachelor of Engineering in Mining

Work Experience

State of West Virginia DHHR – RAPIDS

Senior Program Analyst
October 2008 – Current

Krishna works on the Technical Team at RAPIDS in a Senior Programmer/Analyst role responsible for the RAPIDS Framework along with:

- Handling production support and reducing the number of fatal errors.
- Resolving database connection pool issues and high CPU utilization issues when they occur, notably resolving these issues immediately following the initial MAGI EDBC release.
- Involvement in performance testing, analyzing thread dumps using Yourkit, Jvisualvm and IBM Thread analyzing tools.
- Working with the Progress team to resolve BRE high CPU utilization issues.
- Closely working with the CCM team to deploy re-packing, bean pooling, and software load balancer changes.
- Developing and maintaining IQ, WP, CS, CR, AE, CM, BI and EDBC eRAPIDS modules.
- Designing eRAPIDS screens, conducting design reviews, code reviews, helping the developers, and mentoring new resources.
- Developing Jasper reports for Work Programs and Client Registration modules.
- Guiding the build team in build scripts, maintaining DEV, INT, UAT and PRD servers, and implementing SCP (selective source propagation).

Centric Inventory Management system

Sr Program Analyst
October 2007 – August 2008

Application is a migration from legacy system to JAVA/J2EE Web Based application and to replace the transportation Order Processing and Inventory Control System (TOPICS) with .centric Inventory Management business component. The application includes the necessary foundational components to support the Inventory Management functionality, such as Entity Administration, Financial Administration (FA), and Electronic and Document Management System (EDMS).

Responsibilities:
- Designed the application using MVC design pattern.
- Designed the application using Struts, BSCOE4J Framework.
- Developed Action classes and Action Form, Business Object, Business Delegates, Helper Classes, Value Objects, and EJB.
- Developed Persistence classes and DAO by using BSCOE4J Framework.
- Involved in unit testing and load testing using Load Runner.
- Integrated the application with EDMS and BO server to generate Crystal reports.

Additional Experience

June 2001 – August 2007

- ModelN Revenue Management – Senior Software Engineer
- GE Money/Cross Sell – Senior J2EE Developer
- GE Plastic/NEXTGEN – Senior J2EE Developer
- Chin Hin Plastic Manufacturer – Junior J2EE Developer
- Virtual Consultants Network Limited – Junior J2EE Developer

Subbu Padharthi
Senior Programmer Analyst - Java 3

Subbu
EXCEEDS

Summary

Subbu Padharthi has more than 15 years of experience in design, development and implementation of large scale enterprise applications. Subbu has been a lead web developer for more than four years at eRAPIDS handling framework components, establishing standards, reviewing design and code. For the past two years, Subbu has been the technical lead for the enterprise service bus which integrates Agency applications through web services. Subbu's technical knowledge and his extensive experience at the RAPIDS Project makes him a right fit for the role.

NOTABLE QUOTABLE

"I am very good at teaching junior resources. It gives me great satisfaction that the code they write is serving the citizens of West Virginia."

Subbu Meets the Position Requirements

Position Description

Responsibilities include the analysis, design, coding and testing of J2EE code in an enterprise environment

Considered key personnel and will be housed on-site full-time

Subbu Exceeds Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame;	Subbu has fifteen years of experience working directly with customers in designing and developing large scale applications and delivering on a pre-determined time frame. Subbu was part of a team which developed a core banking system for multi-national bank.
Seven (7) years of J2EE programming experience with the last six (6) months using Java, EJB, MVC Architecture, Design Patterns and JSPs;	Subbu has over fourteen years of J2EE programming experience including technologies such as Java, EJB, JSPs and designed solutions using GOF and enterprise design patterns.
Four (4) years of programming experience in writing Services and UI components;	Subbu has fourteen years of experience developing UI components using technologies and has been developing service oriented web services for the last six years.
Three (3) years of experience on a WebLogic application server;	Subbu has five years of experience in WebLogic Application Servers.

RFP Requirement	Additional Details
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Subbu has more than six years of experience at the WV RAPIDS Project which supports TANF, SNAP, and Medical Assistance.
Three (3) years of experience developing stored procedures;	Subbu has more than six years of experience in developing stored procedures.
A Bachelor's Degree	Subbu has a bachelor's degree and a master's degree.

Education

University of Madra	Bachelor of Science in Computer Science
Manipal University	Master of Science in Computer Applications

Professional Certifications

Sun Microsystems(Oracle)	Sun Microsystems Certified Java 1.2 Programmer

Work Experience

State of West Virginia

DHHR – RAPIDS Project

ESB Technical Lead
January 2013 – Current

Lead Developer
November 2008 – December 2012

Subbu started in eRAPIDS as a lead developer, and then joined the technical team due to his technical prowess. Currently he is the technical lead for WV DHHR ESB solution. Subbu's responsibilities include:

- Architecting the service-oriented solutions, defining the common service patterns and building the reference implementations.
- Assisting the technology manager in defining standards, reviewing detailed designs, troubleshooting issues and handling other technical matters.
- Overseeing all production related ESB tasks, including certificate installations with State and Federal partners, production monitoring/reporting, and PCR resolution.
- Helping define architecture for new and improved solution components. For example, Subbu was involved in defining the technical architecture for the ESB, inROADS, MDM, and Business Rules Engine initiatives.
- Overseeing and personally performing code reviews of software components to help with conformance to coding standards and maintaining a high quality solution code base.
- Assisting with coding of the framework components, defining coding standards, conducting code reviews and coordinating builds and deployments.

Standard Chartered Bank

Core Banking Project

Technical Architect
May 2007 – May 2008

Technical Lead
January 2004 – April 2007

Standard Chartered Bank is a large bank in over 40 countries in the Middle East and south Asia. The Core Banking Project, called eBBS, handles various banking functions including various types of accounts, loans, clearing functions, teller functions, back office functions, ATM, IVR, and Internet banking.

Responsibilities:

- Acted as part of the core team of 25 that originally implemented eBBS for Standard Chartered Bank in India.
  - Involved in high level design, reviewing detailed design and conducting code audits for design compliance.
  - Led the performance testing and tuned application based test results.
- Implemented the offline branch banking for Standard Chartered Bank in Nigeria.

Senior Programmer Analyst
June 2002 - December 2003

Onsite Technical Coordinator
July 2001 – May 2002

- Developed a core banking product for Standard Chartered Bank.
- Developed the security module in the product as the lead conversion analyst for many implementations across countries.
- Implemented the investment banking solution for Standard Chartered Bank in UAE.
- Interfaced between clients and offsite delivery team
- Set up the server environments.

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Subsection 3.2.10: Sr. Programmer Analyst – Corticon (one position)

Subsection 3.2.10: Sr. Programmer Analyst – Corticon (one position)

This senior programmer analyst's responsibilities include configuring/implementing the business rules in the enterprise software package known as Corticon. This individual is considered key personnel and should be housed on-site full-time. The Corticon senior programmer analyst should have the following qualifications:

1. Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Seven (7) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns & JSPs;

3. Four (4) years of programming experience in writing Services and UI components;

4. Two (2) years of experience configuring/ implementing business rules in the enterprise software package known as Corticon;

5. Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;

6. Three (3) years of experience developing stored procedures; and

7. A Bachelor's Degree.

Vendor Response:

Anjan Bhattacharjee
Senior Programmer Analyst- Corticon

Summary

Anjan has more than 13 years of hands-on experience in analyzing, designing, coding and testing complex Java and J2EE based multi-tier application. He has two years, six months of experience in Corticon Rules Engine Development and has been working in this field since its inception on the RAPIDS project in December 2012.

Anjan Meets the Position Requirements

Position Description

Responsibilities include configuring/implementing the business rules in the enterprise software package known as Corticon.

Considered key personnel and will be housed on-site full-time

Anjan Meets Your Qualifications

RFP Requirement	Additional Details
Seven (7) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;	Anjan has more than thirteen years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame.
Seven (7) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Anjan has more than thirteen years of J2EE programming experience with the last six months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs.
Four (4) years of programming experience in writing Services and UI components	Anjan has four years of programming experience in writing Services and UI components.
Two (2) years of experience configuring/ implementing business rules in the enterprise software package known as Corticon	Anjan has two and a half years of experience configuring/ implementing business rules in the enterprise software package known as Corticon.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Anjan has more than seven years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
Three (3) years of experience developing stored procedures	Anjan has five years of experience developing stored procedures.
A Bachelor's Degree	Anjan has a bachelor's degree.

Education

University of Calcutta(Kolkata), Kolkata India	Bachelor of Science in Physics
Birla Institute of Management Technology, New Delhi India	Post Graduate Diploma in Business Management
University of Pondicherry, Puducherry, India	Post Graduate Diploma in Computer Applications

Professional Certifications

Progress Software	Professional Corticon Business Analyst

Work Experience

State of West Virginia DHHR – RA

PIDS Project

**Senior Programmer Analyst
Deloitte
July 2008 – Current**

Anjan is a crucial resource on the RAPIDS project in implementing complex, technical solutions. As a member of the framework team, he develops multifaceted enhancements and has spent the past two and a half years with the Business Rules Engine team integrating the new Corticon solution into the RAPIDS architecture.

- Developed, maintains, and enhances the Java driver logic for the Business Rules Engine eligibility initiative.
- Developed and helps maintain and extend the Corticon rules that underlie the Business Rules engine eligibility initiative. This includes writing Rule Sheets, Rule Flows and Rule Tests.
- Maintains, customizes and enhances the eRAPIDS framework.
- Develops the Work Programs and Client Registration Driver.
- Works on the design and development of the new Navigation Driver (AE), the Record Navigator framework, the JQGrid based new DynaList, RAFT Report Integration with eRAPIDS, FDH Web services.

Office of Temporary Disability Assistance (OTDA)

Albany, New York

**Programmer Analyst
March 2008 – June 2008**

My Benefits Application (MBA) is a portal for the state of New York for SNAP benefits.

Responsibilities:
- Involved in designing, writing test cases, coding and unit testing.
- Implemented the LDSS Inbox Search and its associated functionalities.

**Sprint
Home Convergence (MMM)**

**Senior Software Engineer - Rebaca Technologies
November 2006 – November 2007**

This is a product being designed so that a user can access the multimedia files (photos, audio and video) stored in his/her home PC through his/her cell phone. The product consists of 3 parts; the client (J2ME application running in a mobile), Media Application Server (MAS) running in the Home PC which is connected to the internet through a modem and Application Gateway running behind MAS.

Responsibilities:
- Involved in designing, writing test cases, writing the high level Design Document.
- Coded the JSPs, Servlets, and POJOs for implementing Business Logic and Web Services (Apache Axis).

United Airlines

ERS - 2

The project involves logging all events related to aircraft safety and security and generating reports based on them. Events and OPB Logs are categorized into different sub groups like mechanical, medical and security. There are also a set of administration modules like User, Role (including role tree) etc.

Responsibilities:

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Software Engineer - Skytech Solutions
November 2005 – November 2006

- Designed (using UML/Rational Rose).
- Wrote test cases and the high level Design Document.
- Coded JSPs and Struts Action Classes.
- Led a small team of Developers.

Additional Experience

2001-2005

- Dropshop, Germany - Software Engineer, Mercatus system
- General Motors – Software Engineer, Global Parts Depository System
- Southern Bell Corporation –Software Engineer, Enterprise Integration Architecture
- Ispat Group – Software Engineer, Human Resources Information System
- Reside.net – Software Engineer

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Subsection 3.2.11: Programmer Analysts – Mainframe (five positions)

RFP Reference: Attachment A, page 8

Subsection 3.2.11: Programmer Analysts – Mainframe (five positions)

The programmer analysts' responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software. These persons are considered key personnel but do not have to be housed on-site full-time. The mainframe programmer analysts should have the following qualifications:

1. Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 & VM or z/OS;

3. One (1) year of CICS programming experience (TELON development experience preferred);

4. Five (5) years of DB2 Version 8 or greater programming experience;

5. Five (5) years of TSO/IS PF experience;

6. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

7. A Bachelor's Degree.

Vendor Response:

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Srinivas Rao Basavanbail
Programmer Analyst – Mainframe 1

Srini

Summary

Srini has 11 years of technical experience in development, maintenance, testing, and production support on IBM Mainframe applications, including two years and seven months of experience on the RAPIDS project. Srini worked on the ACA Medicaid changes through August of 2014, and he has since been supporting legacy EDBC/SFU and other subsystems.

Srini Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software.
Considered key personnel but does not have to be housed on-site full-time.

Srini Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Srini has eleven years of work experience in requirement gathering, design, development, maintenance and production support of large scale mainframe systems. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or z/OS;	Srini has eleven years of COBOL programming experience with OS/390 and VM or z/OS.
One (1) year of CICS programming experience (TELON development experience preferred);	Srini has seven years of CICS programming experience.
Five (5) years of DB2 Version 8 or greater programming experience	Srini has eleven years of DB2 programming experience which includes writing SQL queries, stored procedures, and Native Stored procedures. More than 5 of these years are in Version 8 or higher.
Five (5) years of TSO/ISPF experience	Srini has eleven Years of TSO/ISPF experience.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Srini has more than two years of experience at the RAPIDS project with a good understanding of public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Srini has a bachelor's degree.

Education

Mangalore University, India	Bachelor of Science in Computer Science
Visvesvaraya Technological University, India	Master of Computer Application

Professional Certifications

IBM	DB2 Specialist

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst - Mainframe
December 2012 – Current

Srini has experience on various aspects of the RAPIDS system, including detailed knowledge of the Eligibility and SFU subsystems as well as Caseload Management.

- Works on production support and enhancement of Eligibility subsystems and Caseload management sub systems.
- Designs and codes new COBOL programs.
- Modifies the existing COBOL programs, stored procedures for performance enhancements, business requirements and production defects.
- Interacts with customers and leads to design and code the new functionalities.
- Writes DB2 SQL Queries to generate reports based on the requirements.
- Provides batch production support.
- Worked on MAGI Medicaid Expansion.
- Integrated Corticon Business Rule engine with the EDBC Mainframe subsystem. This was the first initiative at RAPIDS to establish web service calls from the Mainframe to the Corticon Business Rules component.

Credit Suisse AG

Lead and Sr Programmer Analyst
January 2011 – November 2012

Supported trade date area processing mortgage backed securities (MBS). It is an online system developed in CICS, HPS and Power Builder with the backend DB2 as a database. The application receives the mortgage backed securities booked from the front office and performs the booking and sends the details to downstream applications for clearance and settlements.

Responsibilities:
- Worked as an onshore support person to the system.
- Worked with Line of Business, SME's for functional requirement gathering and design of the application.
- Coordinated with offshore development and testing.
- Provided production support to resolve any technical and functional issue with system

Key Bank

Lead and Senior programmer Analyst
May 2007 –December 2010

Worked on Collection Suite Applications (SPY, TRIAD) of this Retail Bank. SPY is an online payment system. It accepts payment towards delinquency or current loan payment. TRIAD is a FICO product. It is a decision engine used to score accounts for risk-based collections. These applications were developed in COBOL, CICS with DB2 and VSAM as the database.

Responsibilities:

- Provided 24x7 Primary Production Support that involves analysis and resolution of severity issues within SLA
- Worked with LOB to understand the functional requirements for the ongoing enhancement of the application projects.
- Worked on TRIAD Upgrade Development project being responsible for design, development, testing of this upgrade project.

Charles Schwab and Co

Programmer Analyst
May 2004 – April 2007

Charles Schwab is a brokerage firm. Supported Cash Management Technology applications such as a Schwab Managed Portfolio (SMB) and Omni Bus Management system.

Responsibilities:

- Understood the sub systems and identified new requirements of any enhancement or production fixes,
- Involved in coding and unit testing
- Managed AdHoc requests, break fix and production fixes.
- Debugged online and batch programs and supported front end testing.

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Smita Rani Sahoo
Programmer Analyst – Mainframe 2

Summary

Smita has nearly fifteen years of IT experience and nine years on the RAPIDS project. Smita worked on Reporting, AdHoc reports, Data Warehousing, Benefit Recovery and History Maintenance subsystems. Smita has extensive experience in all stages of Software Development Life Cycle and also has maintained software on IBM Mainframe large-scale systems utilizing COBOL, CICS, DB2, Native SQL Stored Procedures, JCL, MVS, ISPF, NDM and TELON. Smita is an excellent choice for the role of Programmer Analyst.

Smita Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software.
Considered key personnel but does not have to be housed on-site full-time.

Smita Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Smita has fifteen years of system analysis and programming experience on large scale systems and nine years of system experience on the RAPIDS project. Specifically, she has worked on the Reporting, Data Warehousing, Benefit Recovery and History Maintenance subsystems. This experience includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or z/OS;	Smita has fifteen years of COBOL programming experience in OS/390 and VM or z/OS.
One (1) year of CICS programming experience (TELON development experience preferred);	Smita has seven years of CICS programming experience and five years of TELON development experience.
Five (5) years of DB2 Version 8 or greater programming experience	Smita has 15 years of DB2 programming experience
Five (5) years of TSO/ISPF experience	Smita has 15 years of TSO/ISPF experience.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Smita has nine years of experience with public assistance programs such as TANF, SNAP and Medical Assistance
A Bachelor's Degree	Smita has a bachelor's degree.

Education

Utkal university	Bachelor's degree in Economics

Professional Certifications

Bureau of Data Processing Systems	PGDSTC
IBM	S/390 Course

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
July 2006 – Current

Primary analyst for Reporting, AdHoc Reports, and Data Warehouse subsystems within RAPIDS and backup analyst for Benefit Recovery and History Maintenance.

Responsibilities:

- Maintenance and enhancement of Reporting, Benefit Recovery, and History Maintenance subsystems
- ETL developer on OWB
- Provide program specifications at the technical level and business documentation at the functional level.
- Have ongoing meetings with the state users to prioritize issues and determine their validity.
- Run AdHoc reports, and on-demand jobs daily, weekly, monthly and quarterly basis.
- Provide on-call after hours support.
- Analyze, code and test programs

Safeco Insurance - Software Support

System Analyst
March 2006 – May 2006

Maintain both JSS (Job Scheduling Subsystems) and ALM (Automated Library Management) systems. ALM is a SAFECO developed system that provides controls for the integrity of our software libraries. All mainframe applications in SAFECO are registered and maintained through ALM. If vendor source code is modified and/or customized for use at SAFECO, it must also be registered and managed by ALM.

Responsibilities:

- Responsible for answering all the user's queries regarding ALM.
- Resolve all ALM issues immediately.
- Support all maintenance and enhancement work of ALM like add new department, new application, new library, new type, migrate application and delete existing department, application and library as per user's request.
- Monitor everyday system JOB LOG's in JSS for system stability, reliability and performance.

St. Paul Travelers Insurance - STARTDB System

Project Analyst
Jan' 2006 – Feb' 2006

Travelers offers a wide variety of insurance and surety products, as well as risk management services, to numerous types of businesses, organizations and individuals. Travelers is organized business insurance, financial, professional & international insurance and personal insurance business.

Responsibilities:

- Design, implement and maintain STARTDB system; gathering requirements, analysis the problem, preparing the specification, modify and test programs.

Daimler Chrysler - Warranty System

System Analyst
August2002 – January 2006

Daimler Chrysler is one of the largest Automobile manufacturing firms in the world with brands like Mercedes-Benz, Dodge, and Jeep. The project involves resolution of service requests associated with Warranty systems. This includes various subsystems like V12, Vehicle history, Dial GCS, Warranty decision support and Warranty miscellaneous reports. Warranty systems maintain an archive of all claims processed by vehicles for all model years. Many different subsets of data are provided for reporting and analysis purposes. The V12 History system is used to maintain vehicle information details and details of Warranty claims submitted for the same.

It also includes Legacy systems to provide various reports on a cycle, monthly or annual basis. Examples include Dealer Self Authorization (DSA) reports and tax reports. Reports are gradually being phased out (and sun downed) as new systems replace them.

Responsibilities:

- Gathering information on the existing system from the documentation provided an understanding the data model and requirements for the new system to be implemented.
- Preparing specifications for Assigned Service requests by customers and sending to offshore for developing/modifying programs/jobs/procedures as per requirements.
- Review of code developed and modified by team members to make sure that it adheres to programming standards and also review the unit test plan to ensure all the test cases has been tested.
- Developed/modified programs in COBOL, DB2, CICS, and IMS-DB as per customer's request and have created new reports.
- Moving all the deliverable elements (i.e. jobs, procedures, programs, reports, PSB) from test into production. Monitors in next cycle runs of jobs to make sure the changes are correct and send the results to the customer for final acceptance and close the service request.
- Responsible for scheduling AdHoc jobs
- Responsible for impact analysis
- Responsible for Production elevation
- Responsible for Production support of the Vehicle Warranty System and respond to any issues within the defined SLA

Humana - MTV Data Integration

Mainframe Developer
July 2001 – August 2002

Humana Inc. is one of the largest insurance companies in country. Humana is a leading provider of health insurance plans at affordable rates to companies, government sponsored plans and individuals. This project was part of the integration of Humana & Emphasis. The module involved providing the billing functionality of the premium billing system to MTV data (from Emphasis). This mainly involved modifying the reports and the data extractor programs to accommodate data from MTV.

Responsibilities:

- Coding & development of COBOL Batch, DB2, Focus, and Eazytrieve programs that the user requires for enhancement of any part of the system.
- Review of code developed by team members to make sure that it adheres to programming standards.
- Unit testing of programs and batch testing of system programs. Intensive tests are conducted to make sure that the programs are error free and ready to move to Production.

Daimler-Chrysler – US-Canada integration System

Mainframe Developer

This projects aimed to integrate Chrysler's Canadian business system into US business systems. Canadian dealers will be serviced by US systems. This decision of integration affects systems in both Canada and the US. US systems need to be changed to incorporate Canadian specific functionality and Canadian dealers should be disconnected from Canadian systems and should be served by US systems. This

June 2000 – June 2001

integration affects five major areas business wise: Canada systems, Global Purchase Order Processing (GLOP), Marketing/Finance, Materials and Warehousing Management systems (WMS). A team onsite along with offshore does this job.

Responsibilities:

- Analysis of programs, JCLs and procedures affected for integration process as per client requirements and preparation of specifications from the raw requirements.
- Unit testing of some of the programs and integration testing of some of the interface programs. Intensive tests are conducted to make sure that the programs are error free and ready to move to user acceptance region.
- Review of documents and programs developed by team members to make sure that it adheres to programming standards and meet requirements.
- The flow of all programs designed and developed for this purpose were documented and tracked for all versions of design changes.

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RAPIDS

Wasim Bargir
Programmer Analyst- Mainframe 3

Wasim
EXCEEDS

Summary

Wasim has eight years of experience in IBM Mainframe, software development and technical support. He has strong programming and analysis skills and is proficient in end-to-end development of software products from requirement analysis to system study, designing, testing, de-bugging, documentation and implementation. He has worked with multiple subsystems including MMIS, Data Exchange, Periodic Review, inROADS, and CHIP.

Wasim Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software.
Considered key personnel but does not have to be housed on-site full-time.

Wasim Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Wasim has eight years of work experience in development of software products from requirement analysis to system study, designing, testing, de-bugging, documentation and implementation. Wasim has strong analytic, problem solving skills and organizational ability. This experience includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or z/OS;	Wasim has eight years of COBOL programming experience in OS/390 and VM or z/OS.
One (1) year of CICS programming experience (TELON development experience preferred);	Wasim has eight years of CICS programming experience besides two years and seven months of development experience in TELON.
Five (5) years of DB2 Version 8 or greater programming experience	Wasim has eight years of DB2 Version 8 or higher programming experience.
Five (5) years of TSO/ISPF experience	Wasim has eight years of TSO/ISPF experience.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Wasim has three years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Wasim has a bachelor's degree.

Education

University Institute Of Mechanical Engineer   Bachelor of Engineering in Mechanical Engineer.

Professional Certifications

IBM   DB2 Specialist

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst - Mainframe
November 2012 – Current

During his time on the RAPIDS project, Wasim has used his considerable skill in effectively managing functional requirements and working with business analysts to implement MMIS Interface changes, report and various other program changes and enhancements.

- Works with business analysts in gathering business requirements, obtaining clarifications and approvals during functional analysis, data validations and integration testing.
- Creates weekly status report and participates in team meetings.
- Designs and develops new batch programs using COBOL, DB2, JCL and VSAM.
- Codes batch programs to access read/write MQ messages on to queues.
- Modifies the batch programs as per the requirements and makes schedule changes.
- Is involved in unit testing, system testing and UAT.
- Participates in test data and test case preparation and unit testing, test results documentation, review and UAT support.
- Is involved in development of stored procedures for inROADS.
- Provides support for the daily batch production cycle which includes JCL changes, restart and recovery procedures and notification of the appropriate application programmer to resolve batch abends.

Humana Inc.

Programmer Analyst - Mainframe
June 2010 – October 2012

Humana Inc. is one of the largest Health Insurance companies in USA. Humana is a leading provider of Health Insurance plans at affordable rates to companies, government sponsored plans and individuals.

Smart summary is a report generated each month for a Health Insurance member giving him/her an overview of his/her account. It contains details of his/her personal health record, health savings account, claims he/she had last month, amount he/she has spent by Humana and prescription details. This would also provide him/her with ways of saving money. Smart summary is generated by Dialogue Application (IX)

Responsibilities:
- Provided 24x7 production support.
- Provided resolution to production job abends.
- Attended conference calls with business operations and system managers if any issues arose in batch stream.
- Gathered the requirements via discussions/meetings with business users and IT management.
- Involved in batch cycle monitoring and abend fixing which is part of production support and creating abend logs for future reference.
- Provided the permanent fix the frequently getting abends.
- Participated in client/team meetings and sent regular status updates and task assignments to the team members.

- Provided full time first level production support for mainframe applications and always given high priority for the production issues.
- Analyzed production problems and took action immediately.
- Performed code changes or data patching if necessary
- Updated all the QMS documents to be updated accordingly.
- Coordinated with other teams to follow up to solve issues immediately and informed management on up-to-date status when issues were due to other teams.

HSBC

Programmer Analyst - Mainframe
June 2007 – June 2010

The objective of this project is to integrate a process that would allow HSBC Card Services to accept Debit Card payments through a desktop application. Collection and customer care receive numerous requests on a daily basis from customers requesting the option to make a payment via their debit card. Care and Collection can only process Check-By-Phone or savings account payments from customers through the desktop application.

The purpose of this project was to upgrade the current system to a common base code layer so that there is uniformity of code and processing across all the BU's of HSBC. The project involved analyzing the gap and then proposing, designing, and implementing the approach to fill the gap.

Responsibilities:
- Designed and developed new batch programs using COBOL, DB2, JCL and VSAM.
- Modified the batch programs as per the requirements and made schedule changes.
- Performed code review and review of deliverables.
- Involved in unit testing, system testing and UAT.
- Participated in test data and test case preparation and unit testing, test results documentation, review and UAT support.
- Involved in resolving the job abends or any kind of problems that are faced by the client in the production environment.
- Involved in running the entire batch cycle in the test region with new modifications that are going to be turned into production with test data provided by the tester.

Abhishek Shrivastava
Programmer Analyst – Mainframe 4

Summary

Given Abhishek's eight-plus years of experience involving programming on large systems, coupled with his work for the last two-plus years on the RAPIDS project, Abhishek is a perfect fit for the role of programmer analyst. He was instrumental in the implementation of the Business Rules Engine during eRAPIDS Release 2, working directly with the Corticon tool. During his tenure on the RAPIDS project, Abhishek has worked primarily in one of the most complicated modules, EDBC.

Abhishek Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software.
Considered key personnel but does not have to be housed on-site full-time.

Abhishek Meets Your Requirements

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Abhishek has more than eight years of experience involving system analysis and programming experience, including more than two years on the RAPIDS project. He has primarily been involved in the EDBC and Mass Change subsystems. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 & VM or z/OS;	Abhishek has more than seven years of COBOL programming experience involving different kinds of Mainframe applications. In addition to COBOL OS/390 & VM or z/OS, he also worked in various Mainframe tools such as ISPF, FILE-AID, QMF, Eazytrieve, Sort, Expeditor, NDM, Platinum Tools, Mainframe Express, and Data Studio.
One (1) year of CICS programming experience (TELON development experience preferred);	Abhishek has two years of CICS programming experience and has used TELON during development on the RAPIDS project.
Five (5) years of DB2 Version 8 or greater programming experience	Abhishek has seven years of DB2 programming experience.
Five (5) years of TSO/ISPF experience	Abhishek has eight years of TSO/ISPF experience that he uses day-to-day on the RAPIDS project.

RFP Requirement	Additional Details
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Abhishek has more than two years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Abhishek has a bachelor's degree.

Education

RGPV University	Bachelor of Engineering

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
November 2012 – Current

RAPIDS is a state of the art, large scale solution to the administration of public assistance services. It is an automated system which supports WV Works, SNAP (Supplemental Nutrition Assistant Program), Medicaid along with other program like SCA, LIEAP, and Emergency Assistance provided by West Virginia.

- Involved in analysis, design, development, unit and integration testing including file transfers.
- Responsible for extracting the existing logic from the Legacy application to implement the same logic in the Corticon Business Rules Engine.
- Provided technical support and database tuning for all application programs.
- Lead analyst in the implementation of various client change orders and change list requests for the EDBC module.
- Responsible for executing the Mass Change processes.
- Responsible for demonstration, documentation and implementation of various change order works.
- Conducted and participated in management and state staff meetings to determine new functionality, identify requirement changes, address and resolve existing problems, and establish prioritization of project work.
- Responsible for delivery of maintenance requests, enhancements and new application development.
- Conducted peer review and code walk through of programs and day-to-day Production support activities.
- Prepare for Production move and implement changes.
- Post-implementation support, analysis and incorporation of any requirement changes.
- Responsible for performing end-to-end system testing and Production release.

Travelers

Senior Software Engineer
June 2010 – November 2012

The project dealt with extracting the data from premium pipeline database and processing this extract to create output files.

Responsibilities:
- Participated in requirements gathering, design, development, integration testing, user acceptance testing and regressing testing activities.
- Prepared the test plan for unit testing.
- Coordinated client code reviews and identified any applicable change requirements.
- Responsible for delivery of maintenance requests, enhancements, and new application development.
- Monitored daily batch jobs and day-to-day Production support activities.
- Coordinated with the onsite team.
- Prepared for Production move and implemented changes.

- Post-implementation support, analysis, and incorporation of any requirement changes.
- Responsible for performing end-to-end system testing and product release.

Bank of New York Mellon

Programmer Analyst
February 2008 – June 2010

The Bank of New York Mellon (BNYM) has a documentary credit system which is in Mainframe. They used it to provide international trade facility to their clients, but are not able to provide more flexibility to their clients due to the inability of DCS system. In order to provide more features & flexibility to its clients, they had decided to migrate it to DotNet system.

Responsibilities:

- Involved in high-level system design and detailed design of the system.
- Performed code changes, unit testing, performance testing and integration testing.
- Directly coordinated with the client for maintenance and enhancement tasks.
- Coordinated client code reviews and identified any applicable change requirements.
- Prepared the business logic documentation.
- Coordinated testing with the DotNet team.
- Prepared the business validation documentation.
- Coordinated with the client/on-site team.
- Prepared for Production moves and implemented changes.
- Responsible for performing end-to-end system testing and production release.

Schneider National, Inc.

Programmer Analyst
December 2006 – February 2008

Schneider National has a regulatory system which verifies the supporting documents (fuel, tolls, inspections, accidents, citations, observations) against the logs and doing falsification checks.

Responsibilities:

- Analysis of the requirements and preparation of high-level design.
- Performed code changes, unit testing, performance testing and integration testing.
- Prepared unit and system test cases and performed system testing.
- Coordinated with the client/on-site team.
- Performed impact analysis and identified software modifications required.
- Prepared test plans and performed code changes using macros, unit testing and load testing.
- Responsible for performing end-to-end system testing.

Mohammed Arshad Abdul Salam
Programmer Analyst – Mainframe 5

Summary

Arshad has 12 years of experience working with new, enhancement and maintenance projects in the IBM mainframe environment, including one year and seven months of experience on the RAPIDS project and six years of experience on the CARES project (Department of Health Services, State of Wisconsin). In addition to supporting the regular maintenance and fixing of production issues under SFU/EDBC and Confirmation systems, Arshad worked on multiple past dates changes, ex-parte review changes, newborn changes, and PEIA to CHIP conversion projects.

Arshad Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, coding, and documentation of modifications to RAPIDS software.
Considered key personnel but does not have to be housed on-site full-time.

Arshad Meets Your Requirements

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Arshad has twelve years of work experience in system analysis and programming on large scale mainframe systems. In addition, he has spent that time working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or z/OS;	Arshad has twelve years of COBOL programming experience.
One (1) year of CICS programming experience (TELON development experience preferred);	Arshad has twelve years of CICS programming experience.
Five (5) years of DB2 Version 8 or greater programming experience	Arshad has twelve years of DB2 programming experience which includes writing SQL queries, stored procedures, and Native Stored procedures. Five of these years are in Version 9 or higher.
Five (5) years of TSO/ISPF experience	Arshad has twelve years of TSO/ISPF experience.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Arshad has more than seven years of experience on the RAPIDS and CARES projects with a good understanding of public assistance programs such as TANF, SNAP and Medical Assistance.

RFP Requirement	Additional Details
A Bachelor's Degree	Arshad has a bachelor's degree.

Education

Dharwad University, India	Bachelor of Engineering in Computer Science

Professional Certifications

IBM	IBM Mainframe certification from CDAC

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst - Mainframe
March 2014 – Current

Arshad has experience on various aspects of the RAPIDS system, including detailed knowledge of the Eligibility, SFU and Confirmation subsystems.

- Analyze production issues under SFU/EDBC and Confirmation subsystems and propose/come-up with program fixes and solutions.
- Completed major enhancements and testing to SFU, EDBC and Confirmation systems as part of multiple past date initiative.
- Design, develop and tested the Ex-parte review batch process.
- Completed rules extraction for various subroutines under SFU/EDBC subsystems.
- Developed and tested new COBOL batch programs for PEIA to CHIP conversion process.
- Created business flow diagrams for PEIA to CHIP conversion and Ex-parte review processes.
- Developed COBOL batch processes to support the testing of Corticon rules conversion for EDBC system.
- Modified the existing COBOL programs, stored procedures for performance enhancements, business requirements and production defects.

State of Wisconsin DHS – CARES Project

Lead Analyst
September 2008 – December 2013

Client Assistance for Re-employment and Economic Support (CARES) is an automated computer system used to determine eligibility for Wisconsin's public assistance programs and provide case management for work program participants. CARES integrate many public assistance programs under one client based online system called CWW (Cares Worker Web). CARES also determine client eligibility, issues benefits, and manage support for the programs like FS (Food Stamps), W-2 (Wisconsin Works), Medicaid and Child Care.

Responsiblilties:

- Led various initiatives under Data Exchange, Client Notices, Benefit Issuance and Confirmation subsystems (Ex: Prisoner data match, un-employment insurance auto update, MOE client notices, WHEAP benefit issuance, FS disaster benefit issuance, Citizenship auto update, Online confirmation migration)
- Worked as a lead for MAGI rules conversion project for client notices and confirmation subsystems.
- Completed the migration of online confirmation process from legacy IMS mainframe systems to Java based application.
- Completed the POC to initiate the web service call from legacy mainframe process to Corticon rules system as part of legacy modernization project.
- Completed major enhancement to the client correspondence programs for the E&B automation process
- Completed major enhancement and testing of the online confirmation process (IMS application)
- As part of Renew My Benefit (RMB) project, major changes (CARES Worker Web changes) were made to more than 100 components that includes JSP's, EJB's, BO's, Web services, XML's, and SQL's
- Developed the Java process to view the real-time verification checklist online.

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- Developed new COBOL batch programs for the Core Plan letters such as case summary, application full fee, application partial fee, application phone summary, case phone summary, and the corresponding duplicate letters for all the above-mentioned letters.
- Created high-level design document and detailed user view documents for the CWW client correspondence changes as part of the verification checklist project
- Created high level document and business flow diagram for the EBT process
- Responsible for the support, maintenance and enhancement of the BI (Benefit issuance) subsystem
- 24X7 production support for the subsystems like CR, AE, CM, CN, BI, and DX

State of Delaware DHS

Programmer Analyst March 2008 – September 2008

DHSS is the largest state agency, which provides services in the areas of public health, social services, Substance abuse, mental health, child support, developmental disabilities, long-term care, visual impairment, and adults with physical disabilities. The DCIS II (Delaware client information System) is a Welfare management system utilizing distributed (Power Builder as front-end) and mainframe (back-end) technologies. The DCIS system allows registering an applicant, determining the eligibility, and issues the benefit for the eligible individuals.

Responsibilities:
- Coded around 10 medium to very complex programs using COBOL, CICS, DB2 and other tools like CHANGEMAN, File Aid, IBM debugger.
- Made major changes to the Eligibility and Benefit Calculation (EDBC) driver program as part of FoodShare sanction changes
- Prepared test scenarios (Around 10 COBOL programs) and completed the testing of programs
- Responsible for impact analysis and creation of program flow diagrams
- Responsible for fixing the EDBC open PCR's.

Morgan Stanley, NY

Data Services

Consultant July 2007 – December 2007

Data Services is a custodian for a wide range of enterprise data (both operational and historical). Data Services is also responsible for the subscriber and provider interfaces that control access to the enterprise data, making the data available to a diverse set of applications and end-users.

Responsibilities:
- Coded around 15 medium to very complex programs using COBOL, DB2 stored procedure, VSAM, JCL and other tools like CHANGEMAN, File Aid and stored procedure builder.
- Developed and modified COBOL batch programs, JCL's, JCL Procedures and Control cards for e-Prospectus project
- Created and maintained systems documentation such as design specifications, technical manuals, technical specifications, description of application operations, and methodology documentation
- Involved in the system integration and regression testing.

Additional Experience

September 2003 – May 2007

HSBC, Tampa FL Mortgage Origination – Consultant/Onsite Coordinator
HSBC, Buffalo NY Mortgage Origination – Team Lead/Consultant
HSBC, Buffalo NY Internet Banking – Associate Consultant
Deutsche Leasing – Programmer Analyst

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Subsection 3.2.12: (Programmer Analysts – Java (eight positions)

RFP Reference: Attachment A, page 9

Subsection 3.2.12: (Programmer Analysts – Java (eight positions)

The programmer analysts' responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment. These persons are considered key personnel but does not have to be housed on-site fulltime. The Java programmer analysts should have the following qualifications:

1. Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns & JSPs;

3. Two (2) years of programming experience in writing Services and UI components;

4. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

5. A Bachelor's Degree.

Vendor Response:

Dhamodharan Venkatesan
Programmer Analyst – Java 1

Summary

Dhamo has nearly nine years of IT experience and two years on the RAPIDS project and experience implementing the Quality Control Phase I and II from inception through completion, Dhamo is an excellent choice for the role of Programmer Analyst. Dhamo is experienced in application software development in web-based environments, distributed n-tier architecture and Client/Server architecture using various technologies, functional and integration testing. Dhamo also has experience in the development and implementation of database design, OOPS, program coding, enhancements, software support, quality testing and production support. Dhamo is excited to continue his work with the Agency and make further enhancements and improvements to the Quality Control, Client Scheduling and other subsystems on the RAPIDS Project.

Dhamo Meets the Position Requirements

Position Description

Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.

Considered key personnel but does not have to be housed on-site full-time

Dhamo Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Dhamo has nine years of system analysis and programming experience and he has two years of system experience on the RAPIDS project. Specifically, he has worked in the QC and CS subsystems. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Dhamo has more than three years of Java/J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs.
Two (2) years of programming experience in writing Services and UI components	Dhamo has more than two years of programming experience writing Services and UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Dhamo has two years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Dhamo has a bachelor's degree.

Education

Anna University	Bachelor of Technology in Information Technology

Work Experience

State of West Virginia DHHR – RAPIDS Project

**Programmer Analyst
March 2013 – Current**

Dhamo is the mainframe-side lead developer for Quality Control (QC) and Client Scheduling (CS). Part of the QC modernization initiative involved extensive and innovative data retrieval from the mainframe database, delivered via XML to the Java front-end, and Dhamo was at the fore of this effort. He continues to be responsible for and involved in:

- Delivering PCRs for eRAPIDS QC and Client Scheduling subsystems and managing production rollover and production support.
- Development and testing activities for Quality Control Phases I and II.
- Supporting the ACA Medicaid MAGI and CHIP Pilot project.
- Developing test plans, executing test cases in integration and system test environments, and documenting test results.

Tata Consultancy Services

**IT Analyst
April 2010 – March 2013**

Tata Consultancy Services Limited (TCS) is an information technology (IT) service, consulting and business solutions company.
Responsibilities:

- Involved in design, development, testing, implementation and documentation of assigned modules
- Successfully delivered various key critical projects with high quality, zero incident report after post implementation.
- Involved in the quality check and standards of the program.
- Acted as a Project SPOC for Idea Generation Activity and Agile/SCRUM Activity.
- Involved in testing and ensuring all the applications are working properly.
- Involved in system test and user acceptance test.
- Developed production rollover and back-out plan documents.

Fidelity Information System

**Mainframe Developer
August 2006 – April 2010**

Fidelity National Information Services centers on banking and payments technologies and provides payment processing and banking solutions, software, services and outsourcing of the technology.

Responsibilities:

- Created various COBOL/CICS/DB2/VSAM programs for batch processing of IBM Connex System.
- Worked closely with business users to gather requirements and coordinate testing efforts.
- Implemented various key and critical projects and change requests in IBM Connex System.
- Converted the business requirements into detailed design document.
- Involved in database design, analysis and fine tuning.
- Involved in testing and ensuring all the applications are working properly.
- Involved in system test and user acceptance test.
- Developed production rollover and back-out plan documents.

Ravindranath Chenna
Programmer Analyst - Java 2

Summary

Ravi has seven years of enterprise level experience using Java/J2EE. Ravi delivers quality end-products, adding to the strength of the interfaces team where he specializes in the web services that connect systems such as eRAPIDS with the Federal systems, and eRAPIDS with the Master Data Management system.

Ravi Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Ravi Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Ravi has seven years of experience in system analysis including two years, seven months at RAPIDS and has played a crucial role in developing Account Transfer and APTC modules as part of ACA initiative. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Ravi has more than six years of J2EE programming experience and has been working on Core Java, EJB, MVC Architecture, and Design Patterns and JSPs and Ajax for the last five years.
Two (2) years of programming experience in writing Services and UI components	Ravi has six years of experience in writing Services and UI components including JavaScript, JSP, and Ajax.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Ravi has more than two years of experience in RAPIDS project with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Ravi has a bachelor's and a master's degree.

Education

SNIST – JNTU University, India.	Bachelor of Science in Computer Science and Engineering.
Western Kentucky University, Bowling Green KY - USA	Master of Science in Computer Science

Professional Certifications

Sun MicroSystems	Sun Certified Java Programmer (SCJP 1.4)

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
November 2012 – Current

Responsibilities:

Ravi has experience in developing numerous web-services to enable functions for the eRAPIDS application. Currently, he is responsible for numerous services run for the MDM, Account Transfer and APTC functionality.

- Supports and maintains MDM services, framework and AE modules.
- Implements Mass Change solution in migrating from Legacy to Java architecture.

Previously, Ravi has:

- Been involved in development of Account Transfer and APTC modules.
- Assisted team in developing MDM web services on e-RAPIDS as part of ACA initiatives.
- Provided production support for the current eRAPIDS modules like Application Entry, Client Scheduling, Web Inquiry, Record Navigator, Framework and Reporting.

Chase – Mortgage Banking Service Integration (MBSI)

Programmer Analyst
September 2011 – November 2012

JPMorgan Chase is one of the leading financial and banking institutions in the financial sector providing wide variety of mortgage products within and outside the firm. Mortgage banking service integration is a major initiative taken by the firm to provide web services to mortgage units such as origination, default and servicing units. The motive of this project is to isolate the mortgage division and provide enterprise level centralized web services using advanced enterprise technologies.

Responsibilities:

- Discussed and finalized the requirements with Business Analysts and functional team for creating new web services.
- Used various design patterns like Session Facade, Business Delegate, Service Locator, Singleton.
- Designed and developed the web services for the end clients within the firm such as customer care work bench (CCW) using Apache axis, Castor frame works.
- Deployed the code on different application servers for various environments such as Development, Integration testing and User acceptance testing
- Deployed the code and data builds periodically in all the environments.

Administrative Office Of Courts(AOC) CA– Court Case Management System/Data Migration(CCMS)

Java/J2EE Developer
January 2009 – August 2010

CCMS-V4 is a comprehensive Court Case management system intended to unify the management of cases across all courts in California. This version of project is built on V3. During the judgment process the clerk enters the minute codes which are unit of work components will be processed as a back end processes.

Responsibilities:

- Involved in Data Migration utility product.
- Identified, triaged and fixed the application related issues maintaining the various application servers in various environments to make sure all the testing and development teams are in synch with the core application builds during migration of earlier versions of data (V3 and V2).
- Discussed and finalized the requirements with Business Analysts and functional team for developing MOCS module and migrating the data
- Used various design patterns like DAO, Session Facade, Business Delegate, Service Locator, Singleton, Value Objects.

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- Developed the GUI for Launch MOCS screens used by Court Clerks using Struts MVC, Validators, Tiles, JSP, JSTL, JavaScript and Ajax.
- Implemented POJO's to process the minutes (Function Actions) entered by clerks during hearing in the court Room.
- Used XmlBeans framework to parse XML files which contains queries to process the logic.
- Developed MDB's and standard events in order to receive requests asynchronously within the application to do database updates and cache updates.

PUTNAM - Collateral Management

Java/J2EE Developer
January 2008 – December 2008

Putnam is a Global money management firm, asset manager for various investors. The primary objective of this application is to manage the collaterals for futures, options between Putnam and different counter parties. These collaterals are managed in the form of cash, funds and securities.

Responsibilities:

- Involved in analysis, design and development of the application
- Discussed and finalized the requirements with Business Analysts.
- Developed business logic using the Editor My Eclipse 3.2.
- Implemented user roles and groups specific to this application using SUN LDAP client.
- Developed SQL DML queries and stored procedures and triggers for data retrieval and updates.
- Developed PL/SQL code for computing Collateral movements using cursors, procedures and functions.
- Developed DAO layer using Hibernate to execute SQL Queries.
- Involved in Developing ANT scripts for building and deploying application on DEV and UAT boxes.
- Developed shell scripts for running the java wrappers as daily processes to generate the reports in various environments.
- Ran the Autosys jobs in Local and Dev Environments

Venu Khyri
Programmer Analyst - Java 3

Venu
EXCEEDS

Summary

Venu has a total of 11 years and three months of experience in analysis, design, development and maintenance of enterprise applications using Java technologies. Venu is proficient in working with various technologies like Core Java, Java Beans, JDBC, J2EE (JSPs, Servlets, EJB), Ajax and JavaScript Programming. Venu has been working on the RAPIDS project for four years and ten months and plays a crucial role in the Application Entry, Caseload Management, and Benefit Issuance modules.

Venu Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Venu Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Venu has eleven years of experience in analysis and programming experience. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Venu has eleven years of J2EE programming experience. He has been working on core Java, EJB, MVC Architecture, Design Patterns and JSPs for the last 11 years.
Two (2) years of programming experience in writing Services and UI components	Venu has 11 years of experience in developing Services and UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Venu has more than four years of experience at the RAPIDS project with public assistance program such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Venu has a bachelor's and a master's degree.

Education

Osmania University, India	Bachelor of Science in Computer Science
Osmania University, India	Master of Science in Computer Science

Work Experience

State of West Virginia
DHHR – RAPIDS Project

Programmer Analyst
August 2010 – Current

Venu is involved in the full SDLC of various defects and enhancements on the RAPIDS project. His enhancements have provided functionality for eRAPIDS workers and reduced work-time.

- Completes analysis, design and development for all EDBC Budget screens and many of the screens for Application Entry, Caseload Management, Benefit Issuance modules, and was also involved in Affordable Care Act changes.
- Develops framework components for Record Navigator User interface.
- Implements Shortcut Keys for RAPIDS project.
- Develops web service calls and FTP programs for Adobe Client Notices.
- Implements Native Stored Procedures for PIN load maintenance.
- Implements Spellcheck functionality for client notice module.

MTV Networks

Sr Java Developer
April 2010 – August 2010

T2SM is an enterprise solution that enables MTVN to semi-automate the moderation of viewer SMS messages sent in to be displayed on network channels. T2SM automatically filters received messages and cues acceptable ones for manual moderation and selection for screening. T2SM has two levels of access: T2SM Moderators and T2SM Administrators. T2SM Administrators may define new channels and add users to the channels. T2SM Moderators can edit received messages according to the time and channels for which they will be displayed in order to comply with MTVN and FCC programming standards. The application was designed, built and deployed into production for MTVN, notably in VH1's Pickup Artist, MTV Live, and the Pepsi New Year's Eve special.

Responsibilities:
- Involved in the development of the components of the applications.
- Conducted front end development using Java web based technologies: HTML, JSP, Struts.
- Developed Front End Pages such as editing messages and words blacklisting.
- Developed Flex interactive applications with data binding, custom and CSS-styled components.

O2 UK

Sr Java Developer
Janury 2009 – December 2009

Amdocs CRM is Clarify12.5 based application; it is an enhancement of existing O2 Service Management System, which is currently based on PeopleSoft's Vantive. This system provides Customer Services and is used to manage all incidents, problems and system changes. This system supports the Fault Management Process through trouble ticket mechanism.

Responsibilities:
- Gave resolutions to the cases.
- Analyzed the problem cases.
- Configured the UDPLs and Business Rules.
- Imported data into the database using scripts.

IDEA CELLULAR LTD

Sr Java Developer
April 2008 – December 2008

IRIS is a product designed for Inter Connect Billing for Idea Cellular Ltd. IRIS incorporates rules-based rating capability and allows analyzing the call data, billing more accurately and to verify interconnect traffic between the client and network partners. The IRIS architecture is highly robust and scalable and intended to meet the complexities of future products and services, which the Telecom Industry is presently looking for.

Responsibilities:
- Involved in the front end development using Java web based technologies: HTML, AJAX, JSP, Struts.
- Extensively involved in developing the business logic.

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- Used Java Script for client side validations.
- Developed JavaBeans that are used by various modules of the application.
- Prepared Defect Templates.
- Used Use-Case analysis to analyze and clarify requirements

Bharat Sanchar Nigam Limited (BSNL)

Sr Java Developer
April 2007 – April 2008

The project encompasses collection of interconnected CDRs and provides the operator specific invoices and accounting as per the TRAI guidelines for specific call scenarios. This web portal development involves 5 levels plus one additional level called MBT that are all end users. Those levels are POI, SSA, CRL, DCM and CRP. They have the facility to add, modify and view user details, POI details, TGP (Trunk Group) details, and operator details, working level details, MCU details.

Responsibilities:

- Designed JSP Screens with Java script validations using HTML, JSP, Struts, and taglib.
- Involved in development and support of portal, where BSNL users can configure data required for interconnect billing operations, which includes POIs, Operators and Rate plans and also in modules like fault management and configuration.
- Developed JavaBeans that are used by various modules of the application.
- Used use case analysis to analyze and clarify requirements.
- Modeled designs using Rational Rose to create UML class and sequence diagrams.

Additional Experience

2003-2007

BillDesk – Java Developer

IGlobal – Java Developer

Complete Object Solutions – Java Developer

West Virginia
RAPIDS

Rajneesh Ranjan
Programmer Analyst - Java 4

Summary

Rajneesh has eight years, four months of valuable experience in server side application development with Java, J2EE, Oracle and Data Warehouse, and specializes in Enterprise Application Integration. He has hands on experience in Integrated Eligibility, Telecom, Banking and Retail and Supply Chain Domain based application development.

Rajineesh Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Rajneesh Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Rajneesh has more than eight years of experience in large scale system analysis and programming, and working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Rajneesh has more than eight years of J2EE programming experience using Core Java, EJB, MVC Architecture, Design Patterns and JSPs.
Two (2) years of programming experience in writing Services and UI components	Rajneesh has more than five years of experience in writing services using SOAP, REST and WebLogic and UI components using J2EE.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Rajneesh has more than one year of experience with public assistance program such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Rajneesh has a bachelor's degree.

Education

VTU, Belgaum University, India	Bachelor of Engineering in Computer Science and Engineering

Professional Certifications

CDAC-ACTS Pune, India	Post Graduate Diploma in Advanced Computing (PGDAC)
Sun Microsystem	Sun Certified java programmer (scjp 1.4)

Work Experience

State of West Virginia DHHR – RAPIDS Project

Java Programmer Analyst
October 2014 – Current

Serves the RAPIDS project by owning several, crucial web-services connecting the eRAPIDS application with the FFM.

- Interacts with the business users and analysts in understanding the requirements.
- Develops XSD, XML and WSDL using Oracle WebLogic web service.
- Designs and modifies outbound web service to handle eligibility request from WV to FFM.
- Designs and modifies inbound web service to handle eligibility request from FFM to WV.
- Develops Restful Web service using Jersey as middleware to handle the email request coming from inROADS user for electronic notices verification.
- Creates Different Model objects layer for Database and presentation.
- Works on data access layer for insertions, updating and retrieval operations of data from Oracle database.
- Designs and develops many Java batch jobs and performs configuration and scheduling through UNIX.

Florida Department of Children and Families

Java Programmer Analyst
June 2014- September 2014

Integrated Benefit Recovery System (IBRS) is an application in use by the State of Florida Benefit Recovery department for recovering the overpaid benefits and effective reporting to the federal government. IBRS is a fully functional and consolidated Benefit Recovery System that maintains all Client, Budget, Claims and Payment data on a single, web-enabled platform. This simplifies the Claims, Collections, Accounting and Reporting activities of the Benefit Recovery management and staff. In addition, IBRS performs all of the current functions of FLORIDA BV, Automated Budget Calculations (ABC) and Benefits Recovery Accounts Receivable System (BRS) as a single, integrated business system.

Responsibilities:

- Designed and developed the data access layer using JPA with Hibernate to map the domain objects to MS SQL 2012 database and written JPQL queries to retrieve business data.
- Defined business service layer using EJB3.0 and defined remote and local services using JNDI names.
- Accessed remote EJB services from controller using Service Locator pattern and injected local EJB using Annotations.
- Migrated the application framework from JDK 1.3 to JDK1.7 and updated all the dependent libraries.
- Used Entity Manager in data access layer for insertions, updating and retrieval operations of data from MS SQL Server database and managed Transaction by Application server's JTA implementation.
- Migrated the application server from WebLogic 7 to WebLogic 12C and deployed updated Application on Upgraded Server.

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- Used IBM Rational Clear Case to maintain current and historical versions of codebases.
- Developed Automated Build Script using ANT to generate binary files.
- Interacted with the Quality team about the issues, bugs found and fixing them in the testing phase of the application.

CVS Caremark

Senior Java Developer
January 2013 – May 2014

EPMS is an online transactional software system, enabling a pharmacy to fulfill the needs of prescription filling and drug dispensing activities. This system permits distribution of the prescription filling activities, enabling the pharmacy to complete the process in a shorter period of time. The system scales, supporting a single retail pharmacy up through an enterprise organization consisting of multiple pharmacies dispersed across a large geographically area.

Responsibilities:

- Interacted with the business users, analysts and understanding the requirements.
- Developed XSD, XML and WSDL using apache CXF frame work.
- Developed SOAP Webservice using apache CXF framework for handling FAX response.
- Developed Restful Webservice using Jersey as middleware to handle the request coming from CVS.com portal.

Additional Experience

2007 – 2013

- One World Sync – Senior Java Programmer
- SUPERVALU Inc. – Senior Java Programmer
- Yodlee Inc. – Java Programmer
- Convergys Inc. – Java Programmer

Suresh Kumar Veluchamy
Programmer Analyst - Java 5

Summary

Suresh has eight years of enterprise level experience using Java/J2EE, and has been working at RAPIDS for more than one year and ten months playing a crucial role in achieving the Agency's goal of incremental modernization. Suresh specializes in delivering a quality end-product, adding strength to the team. Suresh is a perfect choice for the role of a Java Programmer Analyst with his current functional and technical capabilities and his contributions to the eRAPIDS framework and Application Entry, Benefit Issuance, and Quality Control modules. Suresh is enthusiastic to continue providing client services to the Agency and looks forward to contributing his experience in upcoming enhancements.

Suresh Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Suresh Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Suresh has eight years of experience in system analysis including one year and ten months at RAPIDS and played a crucial role in developing AE, QC and BI modules. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Suresh has eight years of J2EE programming experience and has been working on Core Java, EJB, MVC Architecture, and Design Patterns & JSPs for the last eight years.
Two (2) years of programming experience in writing Services and UI components	Suresh has eight years of experience in writing Services and UI components including JavaScript and JSP.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Suresh has more than one year of experience at the RAPIDS project with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Suresh has a bachelor's and a master's degree.

Education

| Bharathidasan, University -India | Bachelor of Science in Computer Science. |
| Bharathidasan, University -India | Master of Science in Computer Science |

Work Experience

**State of West Virginia
DHHR – RAPIDS Project**

**Programmer Analyst
August 2013 - Current**

Suresh currently supports and maintains the framework and the Application Entry, Benefit Issuance, and Quality Control modules. In this capacity he:

- Designs, develops, and unit tests changes.
- Supports the track managers in integration testing.
- Works with the technical team to enhance the eRAPIDS framework.
- Implements the Mass change solution in migrating from legacy to java architecture.
- Develops and maintains Quality Control module screens.

FedEx-Tracking System

**Project Lead
April 2013 –July 2013**

FedEx Corporation is an American global courier delivery services company. FedEx - Tracking System is a web based project which is developed by using Java, J2ee technologies. FedEx - Tracking System is used to user to track their shipments.

Responsibilities:

- Involved in Analysis, Design and Development of the Application.
- Discussed and finalized the requirements with Business Analysts.
- Developed business logic using the Editor My Eclipse 3.2.
- Developed DAO layer using Hibernate to execute SQL Queries.
- Involved in the development of ANT scripts for building and deploying application on DEV and UAT boxes.

FTCS-Boeing

**Lead Engineer
May 2010 –March 2013**

Flight Test computing system (FTCS) is the core module used by Boeing for conducting flight tests. Flight Test computing system is used to validate the flight parameters for commercial Boeing aircrafts like 737, 747, 777 and upcoming 787. The existing legacy system has been ported to J2EE technology. The Flight Test Computing System (FTCS) is a computing platform used to confirm that every airplane produced by the Boeing Company meets U.S. and foreign government certification standards.

Responsibilities:

- Developed the screen using Java, Java Swing, Servlet and EJB.
- Used various design patterns such as Adapter, Singleton, Factory, Delegate, Session Facade, MVC, Session Facade, DAO, Value Object and mediator patterns.
- Developed Joins, Function, Procedures, and triggers in Oracle.
- Supported and maintained the production issues.
- Designed the UI layer using Swing component.
- Performed Unit testing is using TestNG framework.

MFX-Claims Assure

**System Analyst
January 2009 – January 2010**

Claims Assure is a web-based claim handling system developed and refined by insurance claims adjusters and administrators to speed the claim handling process, minimize mistakes and guide through multiple steps required. Claims Assure allows receipt of First Notice of Loss as a fax that can be easily sorted to key destinations and further identified through an option menu for automatic coverage verification and assignment. Emails, images and other file attachments are managed for effortless retrieval by this claim handling system. Completion of designated tasks triggers automatic diary updates. File Notes also manages faxes, word documents and mailings to attorneys and other vendors.

Responsibilities:

- Prepared the technical specification document based on business requirement.
- Developed the Action and Form Bean Classes.
- Used the Validator framework for server side validation.
- Developed service classes for business logic.
- Used DAO access to interact with the database.
- Developed the Adapter classes to interact with the mainframe data.
- Developed the procedures and triggers.
- Migrated the existing logging framework.
- Migrated the UI layer to EXTJS from java script.
- Analyzed and resolved the production issues.

Chrysler

Software Engineer
April 2008 –December 2008

Chrysler LLC is an American automobile manufacturer and is now the largest private automaker in North America. The applications were divided into 5 functional areas: Sales and Marketing, Procurement and Supply, After Sales, Business Systems and Shared Services.

Responsibilities:

- Understood the requirements from the client.
- Performed design or impact analysis based on the requirements.
- Performed construction and unit testing based on design document/Impact analysis document.
- Prepared unit test plan
- Completed the assigned tasks in the given time frame.
- Deployed the changes when authorized by the client.

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Haymanot Ayele
Programmer Analyst - Java 6

Summary

Haymanot has more than five years of professional experience in Java web development, primarily in Core Java, Java EE and major Java web technologies including Spring Hibernate. Since joining the RAPIDS Project she has become familiar with the system promptly and has focused on fixes for numerous PCRs. She has outstanding communication skills; expressing herself effectively with upper management, peers and clients.

Haymonot Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Haymanot Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Haymanot has five years of experience on large scale projects that provide service for a large number of customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame. She has used state of the art technologies and satisfies client requirements. In addition, she has one year of experience at RAPIDS which adds to her value.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Haymanot has four years of experience using Java EE specs in large scale projects. Currently she is applying her EJB, JSP, and Design pattern experience at the RAPIDS project.
Two (2) years of programming experience in writing Services and UI components	Haymanot has three years of experience in services and four-plus years of experience in design and development of UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Haymanot has one year of experience in TANF, SNAP and Medical Assistance Programs from the RAPIDS project.
A Bachelor's Degree	Haymanot has a bachelor's degree and a master's degree.

Education

Addis Ababa University (Ethiopia)	Bachelor of Electrical and Computer Engineering
Addis Ababa Insltitute of Technology (Etholpa)	Master of Science in Computer Engineering
Maharishi University of Management ,Fairfield, IA	Master of Science in Computer Science (In Progress)

Professional Certifications

Massachusetts Institute of Technology (MIT) -With Addis Ababa University	Java Programming Completion

Work Experience

State of West Virginia DHHR – RAPIDS Project **Programmer Analyst** **October 2014 – Current**	Haymanot has responsibility for understanding and making defect fixes and enhancements for the Application Entry module in eRAPIDS. • Fixes Application Entry module PCRs for production. • Assists with other module's PCRs. • Contributes to the RAPIDS project monthly release process starting from Release 14.10 to present.
InfinEth Solutions Plc Addis Ababa, Ethiopia **Senior Software Engineer** **November 2012 - February 2014**	This company provides Electrical, Mechanical and Information and Communication Technology (ICT) services. The system is developed for a governmental office, ministry of transportation. **Responsibilities:** • Played a key role in the design and development of National Logistic System.
Information Network Security Agency Addis Ababa, Ethiopia **Software Engineer** **February 2011 – October 2012**	The company is a governmental organization. The company provides all IT solutions such as software development, hardware, networking, and security having more than 1,000 full time employees. **Responsiblitles:** • Participated in the design and development of a Statewide Project NIJIS (National Integrated Information System) for integrating all justice governmental offices in the state using Java web technologies; JSP and SERVLETS.
Cybersoft PLC, Addis Ababa, Ethiopia **Software Developer/part Timer** **December 2008 – January 2011**	The company has a business on ERP systems including finance, supply, human resource and product management. **Responsiblitles:** • Worked on human resource management system • Added Ajax based responsive pages. • Improved dynamicity of the web pages. • Improved performance and speed of the whole system.
Menschen fur Menschen Agro Technical Technology College Harrar, Ethiopia **Junior Java Developer** **March 2007 – October 2008**	**Responsibilities:** • Worked as a key member of a team of four developers to build a student management system for a non-profit agricultural and technical institute. • Created a system that was eventually adopted by the institute's library, cafeteria, registrar, and entertainment centers, enabling the entire organization to automate dozens of tasks that had previously been accomplished manually.

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Kapileshwar Mittapelly
Programmer Analyst - Java 7

Kapil is the RIGHT FIT

Summary

Kapil brings nearly four years of Java/J2EE experience to the RAPIDS project where he is now working in the inROADS and Client Notices modules. Since joining RAPIDS, Kapil has been instrumental in PCR fixes for the inROADS track and has helped to develop a major inROADS enhancement. Kapil is hard working and brings enthusiasm to the team. He is excited to continue working towards developing his knowledge and enhancing the RAPIDS and inROADS systems.

Kapil Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Kapil Meets Your Requirements

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Kapil has over five years of system analysis and programming experience including six months on the RAPIDS project. He has worked on large scale projects such as Met Life that satisfy a large number of customers to produce outputs satisfying their needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Kapil has more than three years of J2EE programming experience using Core Java, EJB, Design Patters and JSPs.
Two (2) years of programming experience in writing Services and UI components	Kapil has more than three years of programming experience writing services and working with UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Kapil has one year of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Kapil has a bachelor's and a master's degree.

Education

| **Jawaharlal Nehru University** | Bachelors in Computer Science Engineering |
| **Bradley University** | Masters in Computer Science |

Work Experience

State of West Virginia DHHR – RAPIDS Project

**Programmer Analyst
May 2015 – Current**

Kapil has responsibility for understanding and making defect fixes and enhancements for the self-service portal inROADS.

- Fixes inROADS PCRs for production.
- Assists with other module's PCRs.
- Contributes to the inROADS monthly release process starting from Release 15.05 to present.
- Assists on inROADS enhancements including development for Change Reporting.

Met Life, Inc.

**Java Developer
December 2012 –
November 2013**

MetLife, Inc. is a leading global provider of insurance, annuities and employee benefit programs, serving 90 million customers in over 60 countries. This project is enhancing the brokers and consultants portal to reflect the new tools and information developed for them for the retirement, annuities, and employee benefits.

Responsibilities:

- Designed GUI screens for Insurance Quote to get user information with JSP, Struts tag library.
- Developed WebObjects project with GUI written in Java.
- Developed Action Classes, Service Classes for Resident Insurance premium payment module.
- Involved in coding JavaScript code for GUI validation and worked on Struts validation frameworks.
- Involved in the development of both the backend and the front-end of the application using Struts, Hibernate and Web Services.
- Wrote PL/SQL Queries to get Schedule of policy payment and defaults.
- Developed Session and Entity beans for Insurance Quotes.
- Developed Web services using Apache Axis web service engine. Used SOAP request response exchange pattern to exchange business XMLs.
- Used Web Services for interacting with a remote client to access data.
- Developed CMP read only Entity beans to get Insurance Quotes.
- Fixed the bugs identified in test phase.
- Documented CR impact analysis and prepared implementation documents.

HSBC Bank

**Java Developer
August 2010 –
December 2012**

HSBC Bank uses an online banking system with an application client used by administrators to manage customer accounts and a web client used by customers to access account history and perform transactions.

Responsibilities:

- Developed Stateless Session Beans in the model layer to implement business logic for the application.
- Developed Action Classes for workflow control and Data Access Object for getting database connections from connection pool.
- Extensively used the Struts Framework.
- Implemented user session management using HTTP Sessions.
- Used JDBC to access Oracle Database and used Stored Procedures.
- Developed JSP Pages and made them accessible to the Client using Web Logic Application Server.
- Extensively used complex SQL statements including joins and nested queries
- Developed Stored Procedures
- Coded JSP pages and used JavaScript for client side validations and to achieve other client-side functionality.
- Developed Java Helper classes for updating Customer Accounts and Customer information.
- Adopted Sun's coding and documentation standards.

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Shobhit Jaiswal
Programmer Analyst - Java 8

Summary

Shobhit's four and a half years of large scale system analysis including comparable experience on the State of Connecticut's Health and Human Services project enable him to be a valuable programmer analyst for the State of West Virginia. He has experience working with a public assistance account and has provided valuable benefit interacting with Agency personnel to provide a timely and effective solution in the State of Connecticut.

Shobhit Meets the Position Requirements

Position Description
Responsibilities include the analysis, design, development and unit testing of J2EE code in an enterprise environment.
Considered key personnel but does not have to be housed on-site full-time

Shobhit Meets Your Requirements

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Shobhit has more than five years and three months of system analysis and programming experience on large scale systems, including working with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Shobhit has over three years of J2EE programming experience and has spent the last one year using Core Java, EJB, and JSPs.
Two (2) years of programming experience in writing Services and UI components	Shobhit has more than two years of experience writing Services and UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Shobhit has one year of experience with public assistance programs such as TANF, SNAP and Medical Assistance working on RAPIDS and with the DHHR on a community-based long-term service and support project.
A Bachelor's Degree	Shobhit has a bachelor's and a master's degree.

Education

Institute of Engineering and Technology	Bachelors of Technology in Computer Science
Stevens Institute of Technology	Masters in Computer Science

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
September 2015 – Current

Shobhit has begun working on the eRAPIDS system:

- Fixes PCRs for production.

State of Connecticut DHHR – Balancing Incentive Program (BIP)

Java Developer
November 2014 – September 2015

Connecticut's Department of Social Services has been working with its partners towards rebalancing and expanding community long-term services and supports (LTSS) and developing the infrastructure necessary to support uniform access and a streamlined process for persons seeking LTSS. Ultimately, the goal of Connecticut's Balancing Incentive Program (BIP) is to remove barriers that prevent persons from receiving community-based LTSS and lead to unnecessary institutionalization.

Responsibilities:

- Involved in all phases of the SDLC for the application.
- Involved in System Analysis and Design methodology as well as Object Oriented Design and developing using the OOAD methodology to capture and model business requirements and prepare module specification documents.
- Used the OOPS concepts, exception handling and multi-threading.
- Involved in developing front-end GUI using HTML and JSP components.
- Used JavaScript and jQuery for client side validation.
- Implemented BRIDGES/NextGen framework for controller and view components.
- Used Cargo, Collection, DAO components for persisting Java objects to relate with the database.
- Configured data source using JDBC API.
- Used SQL, triggers and cursors in DB2 RDBMS.
- Involved in design review, code review, unit testing, bug fixing and deploying the application using IBM WebSphere application server.
- Implemented Apache log4j for logging and debugging errors/exceptions.
- Used SVN repository system for Version Control and Source Code Management.

Lincoln Financial Group

Java Developer
August 2014 – October 2014

Responsibilities:

- Involved in creation of Content Presenter Display Templates and their importation.
- Configured the project environment using Oracle UCM and WebLogic Server.
- Involved in management of Maven repository and configured Oracle WebCenter for automation required in the configuration.

Trading Screen

Java Developer
February 2014 – May 2014

Responsibilities:

- Developed global chat system using JAVA to make trade chat interactive and implementing XMPP protocol for chat system by which anyone may implement an XMPP service and interoperate with other organizations' implementations.
- Conducted stress testing on communication window by analyzing through YourKit profiler to test browser (JxBrowser) loading beyond the limits of normal execution.

Additional Experience

July 2010 – September 2013

ACTUS, Stevens Hanlon Financial Lab – Java Developer

Dream Orbit – Java/J2EE Developer

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Subsection 3.2.13: Programmer Analyst – Adobe (one position)

Subsection 3.2.13: Programmer Analyst – Adobe (one position)

The Adobe programmer analyst's responsibilities include configuring/designing forms, writing processes for life cycle and production print, maintaining templates, generating statistics, and supporting the development of correspondences for RAPIDS. This person is considered key personnel but does not have to be housed on-site full-time. The Adobe programmer analyst should have the following qualifications:

1. Two (2) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Two (2) years of experience with Adobe LiveCycle Enterprise Suite focusing on LiveCycle Designer, LiveCycle Workbench, LiveCycle Forms, and LiveCycle Production Print;

3. Two (2) years of experience with Adobe Acrobat Professional;

4. Two (2) years of experience of JavaScript Programming;

5. Two (2) years of experience with XML design and programming;

6. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

7. A Bachelor's Degree.

Vendor Response:

Bhaskara Mutyala
Programmer Analyst - ADOBE

Summary

Bhaskara brings over 16 years of IT Industry experience in analysis, design, development and unit testing of large systems. Bhaskara has participated in many enhancement projects in RAPIDS and looks forward to continuing to work with the Agency.

Bhaskar Will Meet the Position Requirements

Position Description

Responsibilities include:

- Configuring/designing forms,
- Writing processes for life cycle and production print,
- Maintaining templates,
- Generating statistics, and
- Supporting the development of correspondences for RAPIDS

Considered key personnel but does not have to be housed on-site full-time

Bhaskara Meets Your Qualifications

RFP Requirement	Additional Details
Two (2) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Bhaskar has 16 years of progressive experience in programming , requirements gathering and has worked closely with the RAPDIS team for four years and delivered the artifacts in a timely and efficient manner.
Two (2) years of experience with Adobe LiveCycle Enterprise Suite focusing on LiveCycle Designer, LiveCycle Workbench, LiveCycle Forms, and LiveCycle Production Print;	Bhaskar has more than 2 years of experience with LiveCycle suite.
Two (2) years of experience with Adobe Acrobat Professional	Bhaskar has more than 2 years of experience with Adobe Acrobat Professional.
Two (2) years of experience of JavaScript Programming	Bhaskar has more than 2 years of experience with Java Script programming.
Two (2) years of experience with XML design and programming	Bhaskar has four years of experience with XML design and programming.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Bhaskar has 4 years of experience with SNAP, Medical and public assistance programs.

RFP Requirement	Additional Details
A Bachelor's Degree.	Bhaskara has a bachelor's and master's degree.

Education

J.N.T.U. College of Engineering, Kakinada, AP, India	Bachelor of Technology in Mechanical Engineering.
Univeristy of Mysore, Mysore, India	Master of Engineering in Maintenance Engineering.

Professional Certifications

Ashok Leyland Information Technology (ALIT)	Mainframe technologies including JCL, DB2, CICS, TSO and VSAM
IBM India	CMM and PCMM Models

Work Experience

State of West Virginia DHHR – RAPIDS Project

**Senior Programmer Analyst
December 2011 – Current**

Bhaskara has spent the last four years working on various aspects and modules of the RAPIDS system including Client Notices. He is a critical resource working on the modernization of legacy notices, his contributions include generating mass mailing to customers who applied for Medicaid through federal market place and did not have sufficient information to process in RAPIDS.

- Formulates the business requirements into system requirements and completes design, development and unit testing.
- Worked with Adobe LiveCycle for designing forms and integrated it with Stream Serve control center, industrial printers and configured batch jobs and FTP scripts to automate the client notices printing process.
- Enhanced processes in Adobe Live Cycle which now acts as a back bone for Worker requested letters in RAPIDS application.
- Developed new web services in java which were crucial for implementation of e-Notices initiative.
- Fixes the errors in the existing programs.
- Converted the legacy notices/letters to Adobe format by creating XMLs and creating Adobe templates using Java script. Significant notices include the approval / denial notices, which consolidated 10 individual notices to one notice

Prudential Retirement Services

**Senior Programmer/Onsite co-ordinator
August 2007 – November 2011**

Prudential is one of the largest life insurance and financial services institutions in the United States of America. It has a history of 125 years in the financial services and offers a broad range of financial products and services for people in the United States and abroad. Prudential retirement provides both Defined Benefits (DB) and Defined Contribution Retirement plans.

Responsibilities:

- Worked on Defined Benefits retirement plans.
- Provided analysis and estimation for development projects - QMS methodologies for pricing and software solutions for the new projects.

- Involved in installation and provided support for major project releases and change management methodologies such as Manage Now.
- Worked on OPAL methodologies for compliance of quality engineering standards and client requirements.
- Involved in development (Analysis, Design, Coding and Testing) of Mainframe technologies (COBOL/JCL/CICS/DB2) to make required changes to the programs and other components.
- Involved in 24x7 Production support to fix the errors in the programs and other components.
- Served as a Subject Matter Specialist on core applications and Point of Contact for external teams including Quality Assurance and Business Analyst teams.
- Prepared Essential Application Document with the system flow, high level picture of all the interfaces and the applications.

New York Life Insurance

Senior Analyst/Programmer
October 2004 – July 2007

New York Life Insurance is a major life insurance company in the USA. There are several Mainframe applications that support the day-to-day activities of the company.

Household Leads System (HLS) is a Mainframe application that provides leads information to agents for different campaigns. Agency Department of New York Life Insurance consists of around 11,000 Agents and 200 Managers in the field; managers include managing partners, partners and zone officers. There are around 50 applications in the Agency Department that support agent's Commissions, Benefits, Agents Medical Insurance coverage, managing partners compensation, agent's awards, Commission adjustments, retirement benefits, agent's licenses, Sponsored Marketers, Agents Anniversary etc., The various technologies used were COBOL, DB2, IDMS/ADSO, IMS and JCL.

Responsibilities:

- Supported Household Leads system and Agency systems.
- Prepared the design document, coding and unit testing.
- Prepared Application Information Document (AID).
- Analyzed job abends and fixed the abends.
- Ran the HLS Cycles for different Campaigns and processing responses received.
- Performed installation and provided support for major project releases - ENDEAVOR and NYLAMS.
- Coordinated problem tickets assigned to offshore team members.

American Telephones and Telegraphs (AT&T)

Technical Analyst/Developer
December 1999 – September 2004

AT&T has various software applications for ordering, account maintenance, billing, and inquires. The systems are developed in both mainframe and open system technologies.

VTNS-AM receives outbound service orders from the OCS-SS (Order Control System – Special Services) System and inbound orders from WATS/SOP (Wide Area Telecommunication System/ Service Order Processing) system, validates the order data and updates guide and inventory databases.

Responsibilities:

Supported an account maintenance system for Virtual Telecommunication Network which is called VTNS-AM.

- Involved in the migration of the application.
- Involved in Application Information Document (AID) creation.
- Involved in preparing High-level Technical design docs (HLD) for changes being made to the system shown at system level based on functional specifications by the business.
- Involved in coding and testing using COBOL, DB2, IMS, VSAM, Eazytrieve and JCL in the coding phase.
- Provided solutions for Production abends.

- Created all the quality documents in accordance with the CMM requirements.
- Helped the users to correct the rejected orders.

Hindustan Aeronautics Limited (HAL)

Program /Developer
October 1998 – November 1999

Hindustan Aeronautics Limited has developed systems like material, payroll, incentives, and capital assets for its regular use. All these applications are in COBOL, C, Pro *C, Pro * COBOL, Oracle under UNIX platform. While migrating the programs from HP3000 to HP 9000, there were many compilation errors, and all these errors were rectified to make the software new compiler compatible. This project involved migration from HP 3000 to HP 9000, Year 2000 Compliance, Oracle 7.0 to Oracle 7.1, and Forms 3.0 to Forms 4.5.

Responsibilities:

- Participated in analysis, design, coding and implementation activities.
- Prepared test plans with the execution results from unit testing to User Acceptance Testing (UAT).
- Performed QA reviews to the deliverables in compliance to the standards.
- Prepared reports covering the status of components and matrices for the components delivered and in pipeline.

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Subsection 3.2.14: Programmer Analyst – Corticon (one position)

RFP Reference: Attachment A, page 10

Subsection 3.2.14: Programmer Analyst – Corticon (one position)

The Corticon programmer analyst's responsibilities include configuring/implementing the business rules in the enterprise software package known as Corticon. This person is considered key personnel but does not have to be housed on-site full-time. The Corticon programmer analyst should have the following qualifications:

1. Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns & JSPs;

3. Two (2) years of programming experience in writing Services and UI components;

4. Two (2) years of experience configuring I implementing business rules in the enterprise software package known as Corticon;

5. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

6. A Bachelor's Degree.

Vendor Response:

Santhosh Vodela
Programmer Analyst – Corticon

PRODUCTION PROVEN

Summary

Santhosh has more than eight years of experience with systems analysis and programming and almost two years on the RAPIDS project. He has been instrumental in one of the largest releases for the EDBC track, helping to analyze and extract Legacy eligibility rules and transfer them to the Business Rules Engine. Santhosh delivers quality code and his experience with the Corticon Business Rules Engine makes him a perfect candidate for the Programmer Analyst position. Santhosh is a strong and versatile developer with a strong mix of Corticon, mainframe, and JAVA development skills.

Santosh Meets the Position Requirements

Position Description

Responsibilities include configuring/implementing the business rules in the enterprise software package Corticon.

Considered key personnel but does not have to be housed on-site full-time.

Santhosh Has Production Proven Experience in this Role

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Santhosh has eight years of experience in system analysis and programming. For the last four years, he has been working directly with clients at various onsite locations. This includes working directly with customers to define their needs and produce outputs satisfying those needs in a pre-determined time frame.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs;	Santhosh has more than two years of J2EE/Java programming experience.
Two (2) years of programming experience in writing Services and UI components	Santhosh has two years of programming experience writing Services and UI components.
Two (2) years of experience configuring I implementing business rules in the enterprise software package known as Corticon	Santhosh has more than two years of experience configuring and implementing business rules using the enterprise software package Corticon.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Santhosh has nearly two years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Santhosh has a bachelor's and a master's degree.

Education

| Kakatiya Institute of Technology | Bachelors of Technology in Electrical Engineering |
| National Institute of Technology | Masters of Technology in Power Systems |

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
January 2014 – Current

WV DHHR RAPIDS is an integrated eligibility system that delivers public assistance programs, WV WORKS (TANF), Medicaid, Children's Health Insurance Program (CHIP), Supplemental Nutrition Assistance Program (SNAP) formerly food stamps, Emergency Assistance and seasonal programs; Low Income Energy Assistance (LIEAP) and School Clothing Allowance (SCA).

- Analyzed the Legacy modules, extracted the business rules and documented them accordingly.
- Coded extracted rules into the Corticon Business Rules Engine. Implemented and updated Java components which are responsible for handling the data between mainframe and Corticon.
- Tested Corticon changes thoroughly and supported promoting these changes to Production

The Chubb Corporation

Tech Lead, Senior Programmer
January 2013 – December 2013

The project objective is to support the EMIR Profitability Reporting to the Asia Pacific Zone project by extracting data from PROFIT and take advantage of the effort around this PROFIT extract to also position EUZ with Latin America Zone data in the feed.

Responsibilities:

- Made the required code changes to the FOCUS programs which produce the profit extracts.
- Made the necessary changes to the SORT cards and JCLs.
- Produce the test versions of PROFIT extracts and send them to users for review.
- Followed the steps involved in moving the changes from test/model/production correctly.
- Ensured the changes are deployed in production correctly.
- Handled relevant technical communication with client.

Genworth Financials, Inc.

Tech Lead, Senior Programmer
April 2011 – December 2012

Senior Programmer
July 2007 – April 2011

Santhosh implemented new products for Genworth within the targeted time period under the New Product Implementation (NPI) project. The scope of this project includes development tasks, based on the specifications/requirements received from the client. Additionally, Santhosh made enhancements to CyberlifeTM system, to implement changes in business processes, report creations, developing interfaces for various other subsystems and 24x7 production support monitoring & activities

Responsibilities:

- Constructed programs based on program specifications, as per applicable language standards
- Implemented and tested fixes (for bug reports) and changes (for Change Requests) to programs
- Worked with various interface teams and business teams for requirement gathering.
- Created and executed unit test plans
- Moved the changes in to changeman package, audit and freeze the package
- Gathered, developed, and maintained various business requirements from the initial phase to final implementation

- Collaborate and maintain peer relationship with cross functional technology, solutions and business users to support effective implementations.
- Demonstrate knowledge in programming techniques, estimation, system analysis, unit testing and documentation standards.
- Ability to work from technical and functional specifications to develop system enhancements, conversions and interfaces with multiple application/systems.
- Provide 24x7 Production Support monitoring activities involving cycle monitoring, performance monitoring and improvements, resolution to fatal errors, tickets and incidents, handling business concerns and communications and handling cross-dependency concerns and communications.

Subsection 3.2.15: Programmer Analyst – Enterprise Service Bus (one position)

RFP Reference: Attachment A, page 10

Subsection 3.2.15: Programmer Analyst – Enterprise Service Bus (one position)

The Enterprise Service Bus (ESB) programmer analyst's responsibilities include the analysis, design, development and unit testing of ESB software components in an enterprise environment. This person is considered key personnel and should be housed on-site full-time. The ESB programmer analyst should have the following qualifications:

1. Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Five (5) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns & JSPs;

3. Two (2) years of programming experience in writing Services and UI components;

4. Two (2) years of experience in Oracle SOA suite, must include configuration, building and maintaining interfaces on Oracle SOA suite;

5. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and

6. A Bachelor's Degree.

Vendor Response:

West Virginia
RAPIDS

Suchandan Kasula
Programmer Analyst-
Enterprise Service Bus

Summary

Suchandan is a highly skilled ESB and Java Developer. He has been working with the WV DHHR ESB for two years providing knowledge on the Oracle SOA suite, Oracle BPEL, Oracle Enterprise Service Bus and Web Services. Suchandan has excellent analytical and troubleshooting skills and a strong ability to work independently as well as on a team.

Suchandan Meets the Position Requirements

Position Description

Responsibilities include the analysis, design, development and unit testing of ESB software components in an enterprise environment.

Considered key personnel and will be housed on-site full-time.

Suchandan Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;	Suchandan has six years of experience in system analysis including two years at RAPIDS and playing a crucial role in developing the FDH, MDM, and eDRS enterprise ESB services as part of ACA initiative. This experience includes working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame.
Five (5) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs;	Suchandan has more than six years of J2EE programming experience and has been working on Core Java, EJB, MVC Architecture, and Design Patterns and JSPs for the last five years.
Two (2) years of programming experience in writing Services and UI components	Suchandan has three years of experience in writing Services and UI components including JavaScript, JSP, and AJAX.
Two (2) years of experience in Oracle SOA suite, must include configuration, building and maintaining interfaces on Oracle SOA suite;	Suchandan has two years of experience in the Oracle SOA suite, including configuration, building and maintaining interfaces on the Oracle SOA suite.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Suchandan has two years of experience in RAPIDS project with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Suchandan has a bachelor's and a master's degree.

Education

JNTU University, India.	Bachelor's Degree in Computer Science and Engineering.
Gannon University, ERIE PA, USA	Masters in Computer Science

Professional Certifications

Oracle	Oracle Certified Java Programmer (OCJP 1.6)

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
June 2013 –Current

- Dec 2014 – Current: Responsible for supporting and maintaining eRAPIDS, MDM, FACTS, OASIS, FDH, INROADS, MMIS, CHIP, eDRS enterprise services.
- June 2013 – Nov 2014: Suchandan was involved in the design and development of enterprise services for MDM, OASIS, eDRS, ENotices, workforce systems as part of ACA initiatives.

State Farm, IL

Programmer Analyst
Oct 2012 –May 2013

State Farm Insurance is a group of insurance and financial services companies in the United States. The DC-5 project deals with common services, making things easier for the customers by enhancing their self-service capabilities.

Responsibilities:

- Interacted with Business Technical Analysts for gathering and validating the requirements.
- Developed and deployed the application in Tomcat Application Server.
- Worked on developing the back end part of the application involving spring Web services.
- Involved in coding and developing web services and writing unit test cases using JUnit.
- Involved in component design for a particular requirement using class and sequence diagrams.
- Wrote queries using postgres for retrieving data from several tables according to the user requirements.
- Developed web services corresponding to AssciateBookOfBusinessInquiry w.r.t agent, bookofbusiness, and associate.
- Generated WSDL and also TO classes from WSDL files for consuming the other services.
- Executed test scripts available in test link for the services developed.
- Used Tortoise SVN as the version control system.
- Worked as onsite lead for offshore team, navigating team with towards the development according the deadlines of the project.
- Developed test cases for business layer and Data Access layer classes using JUnit.

QuadraMed, VA

Programmer Analyst
Feb 2011 – Jul 2012

Quantim is a Health Information Management product from Quadramed. This product secures a second place in the industry in terms of market share. The product has every quarterly release that contains the enhancements, new features and fix for program errors.

Responsibilities:

- Interacted with Business Technical Analysts for gathering and validating the requirements.
- Involved in all phases of the SDLC.
- Maintained and updated technical documentation.
- Extensively worked on developing the backend tier of the application involving Spring 2, JPA, Hibernate 3.2 and Web Services.
- Implemented the presentation layer to coordinate invocations of Controller classes Spring MVC framework.
- Worked with Quality Assurance team in tracking and fixing bugs.

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Subsection 3.2.16: Programmer Analyst – Master Data Management (one position)

RFP Reference: Attachment A, page 11

Subsection 3.2.16: Programmer Analyst – Master Data Management (one position)

The Master Data Management (MDM) programmer analyst's responsibilities include the analysis, design, development and unit testing of MDM code in an enterprise environment. Responsibilities also include the configuring Siperian SIF web services for real time data integration. This person is considered key personnel and should be housed on-site full-time. The MDM programmer analyst should have the following qualifications:

1. Five (5) years of experience in Informatica (Siperian) MDM and Informatica ETL or comparable software;
2. Five (5) years of experience in Oracle Database, procedures, and SQL;
3. Five (5) years of Java development experience;
4. Two (2) years of experience with integrating Informatica MDM or comparable software with Oracle SOA Suite;
5. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and
6. A Bachelor's Degree.

Vendor Response:

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Manvendra Tiwari
Programmer Analyst
Master Data Management

Summary

Manvendra has over eight years of experience on the RAPIDS project. As a key team member for MDM Solution project, Manvendra supported the implementation of MDM solution from inception, including data integration with multiple external systems. He now leads the M&O activities for the MDM Solution. Manvendra is excited to continue his work with the Agency to support and enhance the Master Data Management solution for future needs.

NOTABLE QUOTABLE

I have a passion for data so the MDM is a perfect fit for me. My favorite quote is, "If you torture the data long enough, it will confess."

Manvendra Meets the Position Requirements

Position Description

Responsibilities include:

- Analysis, design, development and unit testing of MDM code in an enterprise environment
- Configuring Siperian SIF web services for real time data integration

Considered key personnel and will be housed on-site full-time

Manvendra Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of experience in Informatica (Siperian) MDM and Informatica ETL or comparable software	Manvendra has a total of five years of experience to meet this requirement.
	Manvendra has three years of experience in Informatica (Siperian) MDM and Informatica ETL. Manvendra is trained on:
	• Informatica Siperian SIF framework used for MDM integration with applications and
	• Informatica Power Center for ETL
	• Informatica IDD configuration
	Additionally, Manvendra has twelve years of experience in designing data extraction and conversion procedures for diverse technical platforms and data-stores.
	In addition, Manvendra had two years of experience working at Norwich, in which he helped build a consolidated customer data solution similar to an MDM, using a toolset made for financial institutions.

RFP Requirement	Additional Details
	Manvendra also has been involved with the DW for more than two years, utilizing the OWA ETL tool.
Five (5) years of experience in Oracle Database, procedures, and SQL	Manvendra has more than five years of experience in Oracle Database. Additionally, Manvendra has twelve years of experience with SQL, procedures and a variety of databases including DB2.
Five (5) years of Java development experience	Manvendra has more than six years of Java development experience.
Two (2) years of experience with integrating Informatica MDM or comparable software with Oracle SOA Suite	Manvendra has more than three years of experience in integrating Informatica MDM software with Oracle SOA suite.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Manvendra has eight years of experience with public assistance programs such as TANF, SNAP and Medical Assistance while working with RAPIDS team.
A Bachelor's Degree	Manvendra has a bachelor's degree.

Education

University of Burdwan	Bachelor of Engineering in Electronics and Communications Engineering for Regional Engineering College (REC) Durgapur

Professional Certifications

Informatica	MDM Services Integration Framework (SIF)
Informatica	Informatica Data Director (IDD) Configuration
Informatica	Power Center Developer
Oracle	Oracle certified Java Associate (OCJA)
British Computer Society	Foundation Certificate in Software Testing

Work Experience

State of West Virginia DHHR – RAPIDS Project	As MDM lead, Manvendra is responsible for design and implementation of the Master Data Management solution based on Informatica suite of products. Manvendra' s primary responsibilities include:
MDM Lead **August 2012 – current** **Java Development Lead** **July 2007 – August 2012**	• MDM Hub Design and configuration. • ETL design for integration of data from external applications. • MDM Web Service design and development using Informatica SIF Framework. • Match Rules Configuration and Fine Tuning. • System Testing, UAT and Performance Testing of MDM components including Web Services. • Data Profiling. • MDM Hub integration with Oracle SOA using SIF based Java web services. • MDM Hub implementation, Production Data Load and post go live support. As Java lead for eRAPIDS team, Manvendra was responsible for web development of multiple eRAPIDS subsystems including Web Inquiry (IQ), Application Entry (AE), Eligibility Determination and Benefit Calculation (EDBC), Caseload Management (CM)

and Benefit Issuance (BI) subsystems. Manvendra played a key role in design and development of more than forty (40) web pages for eRAPIDS application.

As Reporting subsystem lead for RAPIDS project, Manvendra supported the management and enhancement to TANF programs within RAPIDS. His primary responsibilities included:

- Maintenance of TANF related application programs and periodic data transmissions.
- Identification and design of report Mock-ups for public assistance programs.
- Implementation of DB2 based application procedures.
- Design and executions of ad-hoc SQL reports.

AVIS Group

Technical Lead
June 2006 – July 2007

Avis Group and its subsidiaries operate the world's second largest general-use car rental business at more than 1,700 locations worldwide. At AVIS, a DB2 conversion project was aimed at converting AVIS Location Database (LDB) designed in 1980 to support changing business needs across US and European markets.

Responsibilities:
As technical lead, Manvendra played key role in the design of new DB2 Location database. His primary responsibilities included:

- Requirement analysis for Database Conversion.
- Technical Specifications and SRS Documentation.
- System Test plans, UAT and Quality assurance support.
- Implementation of converted database and application programs.
- Quality Assurance per the CMM Level 5 standards.

Additional Experience

June 2002 – June 2006

- Norwich Union, UK – Technical Lead
- AEGON N.V. Bank, the Netherlands – Technical Lead
- ABN AMRO Bank, the Netherlands – Database Engineer

Subsection 3.2.17: Programmer Analyst – Cognos (two positions)

RFP Reference: Attachment A, page 11

Subsection 3.2.17: Programmer Analyst – Cognos (one position)

The Cognos programmer analyst's responsibilities include configuration, design, development, testing business intelligence reports at the enterprise level and support Cognos BI content including reports, cubes, packages, dashboards, presentation portals. The Cognos programmer analyst should coordinate/assist/develop Cognos framework manager model adjustments to accommodate new and existing business requirements. This person is considered key personnel and should be housed on-site full-time. The Cognos programmer analyst should have the following qualifications:

1. Two (2) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Two (2) years of Cognos experience developing reports and dashboards, as well as knowledge of data warehousing concepts including dimensional data modeling;

3. Two (2) years of combined or separate experience with J2EE, COBOL, and/or DB2 programming; and,

4. A Bachelor's Degree.

Vendor Response:

WV Department of Health and Human Resources
Management Informatioin Services RAPIDS Project
CRFP-0511-HHR1600000001

West Virginia
RAPIDS

Klayton Shannon
Programmer Analyst 1 - Cognos

Summary

Accuracy, utility, speed – these are some of the foundational tenets of reporting that Klay has strived to uphold in his time with the RAPIDS project. Having a tenure of just over two years with RAPIDS, Klay has quickly adapted to several different roles, ranging from web design and development, to desktop application programming, to his current role as a Cognos developer. Klay is a proven choice as a Cognos Programmer Analyst because of his fast learning, formal Cognos training, experience with RAFT, and an ever-increasing knowledge of West Virginia state benefits.

STAFF HIGHLIGHT

Klay Shannon is a local West Virginian and graduate of Marshall University who is honored to work for the citizens of his home state. He is eager to continue and complete his work on the RAFT dashboard and Cognos.

Klay Meets the Position Requirements

Position Description

Responsibilities include:

- Configuration, design, development, testing business intelligence reports at the enterprise level
- Supporting Cognos BI content including reports, cubes, packages, dashboards, presentation portals
- Coordinating/ assisting/ developing Cognos framework manager model adjustments to accommodate new and existing business requirements.

Considered key personnel and will be housed on-site full-time

Klay Meets Your Qualifications

RFP Requirement	Additional Details
Two (2) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Klay has more than two years of large scale system analysis and programming, which included working with customers to translate business needs into functional products in a pre-determined time frame. Klay has achieved this through his work with RAPIDS, as well as past employment in a .NET programmer role.
Two (2) years of Cognos experience developing reports and dashboards, as well as knowledge of data warehousing concepts including dimensional data modeling	Klay has two years of Cognos experience working with RAFT on the RAPIDS project. He has completed two formal training sessions: • IBM Cognos Framework Manager Training • IBM Cognos Report Studio Training He has successfully delivered reports such as the Application Aging Report, the Presumptive Eligibility Report, and the Integrated Eligibility Analytics Dashboard.

RFP Requirement	Additional Details
Two (2) years of combined or separate experience with J2EE, COBOL, and/or DB2 programming;	Klay has two years of Java SE programming experience on RAPIDS code migration tool eRASU.
A Bachelor's Degree	Klay has a bachelor's degree.

Education

Marshall University	Bachelor of Science in Computer Science

Professional Certifications

Global Knowledge/IBM	IBM Cognos Framework Manager Training
Global Knowledge/IBM	IBM Cognos Report Studio Training

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst January 2013 – Current

Currently Klay is supporting RAFT (Reporting and Formatting Tool) which is the Cognos-based reporting portal allowing RAPIDS user and management to obtain useful information to manage the eligibility system.

- Cognos developer for Reporting Analysis and Formatting Tool (RAFT), which includes gathering requirements, designing and maintaining reports and dashboards, creating framework models, and working with Oracle Warehouse Builder.
- Programmer for eRASU, a RAPIDS tool that uses Windows batch scripts and Java Standard Edition to control the versioning (Subversion) and migration of legacy (COBOL) programs to the different software environments (Integration, Acceptance, Production).
- Programmer for Automated Tracking System (ATS), another RAPIDS tool that leverages .NET, an Oracle database, and web technologies (Javascript, HTML, and CSS) to provide defect tracking and program migration for RAPIDS releases.

West Virginia Division of Highways

.NET Programmer May 2012 – January 2013

The WV Division of Highways inspects, maintains, and regulates advertisement billboards alongside roads all across the state of West Virginia.

Responsibilities:

Programmer for a .NET application that used SQL Server and IIS to deliver a web application to be used by DOH inspectors across the state. Also had to meet with the client and make appropriate changes to the application in response to their requests. The system also interfaced with a desktop application through XML, which was defined and implemented with other members in the team.

Madhavi Nade
Programmer Analyst 2 - Cognos

Summary

Madhavi's three years of Cognos experience, combined with more than four years of experience on large scale systems proves that she is a perfect fit for the role of Cognos programmer analysis. She has more than ten years of experience on COBOL-based projects and has Product-proven experience with systems on scale with RAPIDS.

Madhavi Meets the Position Requirements

Position Description

Responsibilities include:

- Configuration, design, development, testing business intelligence reports at the enterprise level
- Supporting Cognos BI content including reports, cubes, packages, dashboards, presentation portals
- Coordinating/ assisting/ developing Cognos framework manager model adjustments to accommodate new and existing business requirements.

Considered key personnel and will be housed on-site full-time

Madhavi Meets Your Qualifications

RFP Requirement	Additional Details
Two (2) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame	Madhavi has more than four years of large scale system analysis and programming, which included working with customers to translate business needs into functional products. This experience includes working directly with customers to define their needs and providing product outputs satisfying those needs in a pre-determined time frame.
Two (2) years of Cognos experience developing reports and dashboards, as well as knowledge of data warehousing concepts including dimensional data modeling	Madhavi has three years of Cognos experience working on the state of Washington's Health Benefit Exchange.
Two (2) years of combined or separate experience with J2EE, COBOL, and/or DB2 programming;	Madhavi has more than ten years of experience on a variety of projects working with J2EE/Java, COBOL and DB2 programming languages.
A Bachelor's Degree	Madhavi has a bachelor's and a master's degree.

Education

University of Pune	Bachelor of Science in Mathematics
	Master's in Computer Management

Work Experience

State of Washington Health Benefit Exchange

PMO Reporting Lead/Zendesk – JIRA Support

January 2013 – Current

The Washington Health Benefit Exchange was created in state statute in 2011 as a "public-private partnership" separate and distinct from the state. The Exchange is responsible for the creation of Washington Healthplanfinder, an easily accessible, online marketplace for individuals.

Responsibilities:

- Constructing reporting framework for internal/external reports
- Automation of periodic reporting using MS-Excel/VBA
- Zendesk and JIRA ticket tracking and issue analysis
- Ongoing process improvements suggestion and implementation
- CMMI support for the project
- Streamlined reporting activities and established reporting activities for monthly SLA tracking

State of Texas and Texas Access Aliance

April 2009 – Jan 2013

Texas' replacement automated welfare system, known as TIERS (Texas Integrated Eligibility and Reporting System) is a comprehensive welfare program management application providing eligibility determination and reporting functionality for the Temporary Assistance to Needy Families (TANF) program, Food Stamps, and Medicaid, including Texas' Long-Term Care and Community Care programs.

Responsibilities:

- Creating and documenting project processes for 13 management deliverables such as PMP, QMP, ChgMP, etc.
- Creating and maintaining projects for entire lifecycle of a three 40,000 hours Enhancement releases from planning, requirements, etc. till implementation, including use acceptance test and quality reviews
- Creating and maintaining work breakdown structure, MS- Project schedules including resource allocation for multiple projects
- Monitoring and escalation of project risks and issues to Deloitte senior management for each project
- Monitoring project effort for project resources using HP-PPM and providing various time metrics report to management
- Coordinating project deliverables submission and their acceptance from project planning to the implementation phase of multiple projects
- Providing consolidated weekly and monthly status reports deliverables for the multiple projects to Deloitte and HHSC senior management
- Providing defect and production service requests tracking reports to management and the client
- Monitoring and reporting monthly SLA data to management and the client
- Conducting process conformance activities for SEI_CMM level 3 processes established on the project
- Maintaining and updating Project Management Plan deliverable including risks and issues management plan

State of California Child Welfare Services/Child Management System (CWS/CMS)

October 2006 – March 2009
December 2005 – March 2006

The CWS/CMS is a system used to automate the functions of county child welfare offices. Operating in all 58 counties of California, since 1997, the system handles a total of 1 million cases and 4 million referrals.

Responsibilities:

- Establishing requirement traceability for Deloitte Consulting's statement of work through **an integrated MS-Project schedule** for resource allocation, milestones, tasks tracking for each phase of Release and other maintenance activities
- Projecting look ahead and resource forecast reports for monthly as well as annual activities for successful resource management
- Deliverables and schedule tracking and reporting
- Providing "Status at Glance" for each release
- Creating and delivering Monthly Status Report deliverable
- Gathering and analyzing QA metrics to measure QA performance
- Monitoring and tracking risks and issues, review of root cause analysis for project issues and mitigation strategies for the risks
- Conducting Quality Survey for improving the overall quality
- Conducting Lessons Learned feedback for each phase of the project
- Quality review of following project deliverables/work products for enhancement release and maintenance activities

Additional Experience

April 1998 – December 2005

- Department of Research and Innovation for Cambria Solutions – Requirements Lead
- CalWin – Quality Assurance Lead
- Scoot Technology – Technical Lead
- Hitachi Software Development Center – Project Leader/Onsite Programmer
- Ernst & Young – Web Programmer
- General Electric Supply – Programmer
- D.G. Son – Analyst/Programmer

Subsection 3.2.18: Programmer Analyst – Extract Transform and Load (one position)

RFP Reference: Attachment A, page 12

Subsection 3.2.18: Programmer Analyst – Extract Transform and Load (one position)

The ETL programmer analyst's responsibilities include data validation, data cleansing, data transformation and calculations using OWB maps, as well as writing and scheduling the load jobs and transferring data from the source DB2 database to Oracle database efficiently. This person is considered key personnel and should be housed on-site full-time. The ETL programmer analyst should have the following qualifications:

1. Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;

2. Two (2) years of Oracle Warehouse Builder and PL/SQL experience to create ETL scripts and mappings for an Integrated Eligibility Data Warehouse, as well as knowledge of Data Warehousing concepts including dimensional data modeling; and

3. A Bachelor's Degree

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Janardhana Dhage, PMP
Programmer Analyst – Extract Transform and Load

Jani
EXCEEDS

Summary

Jani has experience in all phases of data warehousing applications, including the critical Extract, Transform, and Load (ETL) functions. He is an Oracle certified professional with strong SQL skills necessary to support WV DHHR requirements for the ETL Programmer Analyst position. Prior to joining RAPIDS, he worked for more than 16 years on the DHHR FACTS solution in a variety of roles. Jani is a strong and versatile asset with a mix of functional and technical knowledge.

NOTABLE QUOTABLE

"I'm looking forward to using my RAPIDS and FACTS knowledge to serve West Virginia DHHR."

Jani Will Meet the Position Requirements

Position Description

Responsibilities include:

- data validation, data cleansing, data transformation and calculations using OWB maps
- writing and scheduling the load jobs and transferring data from the source DB2 database to Oracle database efficiently

Considered key personnel and will be housed on-site full-time

Jani Exceeds Your Qualifications

RFP Requirement	Additional Details
Five (5) years of system analysis and programming experience on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;	Jani exceeds the requirement, he has more than 10 years of experience working on large scale systems, including working directly with customers to define their needs and product outputs satisfying those needs in a pre-determined time frame;
Two (2) years of Oracle Warehouse Builder and PL/SQL experience to create ETL scripts and mappings for an Integrated Eligibility Data Warehouse, as well as knowledge of Data Warehousing concepts including dimensional data modeling	Jani exceeds the requirement, he has more than five years of experience with Oracle Warehouse Builder and PL/SQL experience to create ETL scripts and mappings for an Integrated Eligibility Data Warehouse, as well as knowledge of Data Warehousing concepts including dimensional data modeling.
A Bachelor's Degree	Jani has a bachelor's and a master's degree.

Education

Bangalore University	Bachelor of Science in Mechanical Engineering
Marshall University	Master of Science in Technology Management; Concentration in Information Systems

Professional Certifications

PMI	Project Management Professional (PMP)
ORACLE	Oracle Certified Professional
Brain Bench	COBOL II Certification

Work Experience

State of West Virginia DHHR – RAPIDS Project

Track Manager
July 2014-Current

Informatica Admin and Oracle DBA for MDM
January 2014 – June 2014

The WV RAFT (Reporting and Formatting Tool) is a COGNOS based data warehouse reporting solution that meets the reporting needs of RAPIDS management and users. Jani is the RAFT Reporting Track Manager who is responsible for enhancement of the RAPIDS reporting system and managing the SDLC process for RAFT releases. In addition he:

- Monitors the reporting solution
- Manages the Ad Hoc report requests
- Performs software upgrades
- Performs QA after each major data load
- Defines requirements for new report requests
- Responds to questions and issues concerning reports
- Focused on the design, development (including SQL) and delivery using the Oracle Warehouse Builder ETL tool.

State of West Virginia DHHR – FACTS Project

Senior Application DBA / ETL Developer
June 2011 – May 2013

Families and Children Tracking System (FACTS) is a statewide automated case management system for all Child Protective Service (IV-E), Child Care, Youth Services, and Adult Protective Service. It was initially implemented as a Client/Server technology using Power Builder client application and Oracle Database server as data repository. More recently, it is being migrated to ASP.NET.

Responsibilities as Oracle DBA:

- Acted as data warehouse architect, involved in estimating, gathering requirements, and creating the data model
- Developed SQL procedures for FACT Data Warehouse solutions
- Designed / developed (including SQL) and deployed FACTS Business Intelligence solution using the Oracle Warehouse Builder ETL tool.
- Oversaw design, development and maintenance of large statewide child welfare system; including managing the Oracle schemas, PL/SQL procedures, database triggers, views, materialized views, and tablespaces.
- Performed Oracle 11g Database Administration; which included database security, RMAN backup, capacity monitoring, space management, user management, and database cloning using RMAN.
- Led design, develop and deployment of Oracle data warehouse system for business intelligence reports using COGNOS.
- Support the administration of the Java platform on Oracle SOA installed on the WebLogic Server
- Implemented fine grained access using Virtual Private Database rules on some of the main tables to restricted access to sensitive data to authorized users.

**Senior Consultant
November 2007 – April
2011**

Responsibilities As Software Developer (in ASP.NET, COBOL, Oracle PL/SQL, Oracle OWB)

- Co-developed the IV-E Case Plan changes as per Federal Government guidance.
- Co-developed the Business Intelligence Reporting method using COGNOS and Oracle Warehouse builder (CFSR Permanency Report, CFSR Safety Report, Placement Report, Removal Petition, and ASO Payment).
- Collaborated on ASP.NET Web applications designs, including Case Plan Report (CPR), enabling workers to view/edit case-related data; and National Youth in Transition Database (NYTD) application, which is a web application to enter outcome survey and generate a federal NYTD report in XML format for Youth and Transition Services.
- Created data model, tables, indexes, views, triggers, procedures, packages, types, and constraints for CPR, NYTD, and DATA Mart project and assisted development team in debugging triggers, procedures, functions, and packages.
- Provided tuning suggestion to improve execution times for SQL, procedures, functions, packages, and triggers in database.

**Senior Consultant
March 1997 – October
2007**

Responsibilities as Software Developer (PowerBuilder, Oracle PL/SQL, and COBOL, Unix Scripting):

- Oversaw development and maintenance of key state applications and evaluated tools and technologies, making recommendations to the FACTS management team.
- Maintained the Families and Child Tracking System, the state automated child welfare information system.
- Analyzed, designed and implemented enhancements to the existing system with a team of developers. For example, he helped implement a daycare and provider re-imbursement module using RAD/JAD methodology.
- Created data models, tables, indexes, views, triggers, procedures, packages, types, and constraints for Child Care, Adult Protective Services (APS), and the IV-E project and assisted the development team in troubleshooting complex issues.

NIIT Technologies, New Delhi, India

Jani worked for the large consulting organization NIT Technologies on two projects. The first was supporting a transportation company with a system to manage its fleet of vehicles. The second was supporting a sports company with a membership management system.

**Senior System Analyst
January 1995 – February
1997**

Responsibilities:

- Acted as liaison between clients and developers, gathering system requirements, prepared process lifecycle for coding and modifications; co-created technical documentation.
- Designed database tables and prepared ER diagrams. Documented program requirements.
- Utilized PowerBuilder, ORACLE, and an ER modeling tool.

Aeronautical Development Agency, Bangalore, India

Aeronautical Development Agency is the Department of Defense R&D agency for LCA, the world's smallest lightweight multi-role combat aircraft.

**System Analyst
January 1992 – January
1995**

Responsibilities:

- Developed applications and tested unit using COBOL, DB2, CICS and JCL on MVS 3090 IBM mainframe.
  - Performed system maintenance programming and prepared technical documentation.
- Designed and deployed the Drawing Management System, to track departments' activities.
  - Database stores data regarding Light Combat Aircraft drawings
  - Co-developed batch and report programs using MF COBOL and online programs using Power Builder 3.0/4.0
- Co-built Production Planning Control System (using VS COBOL II, CICS, and DB2) to manage inventory system for continuous movement of raw materials from stores to production.

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Subsection 3.2.19: Batch Monitor (one position)

RFP Reference: Attachment A, page 12

Subsection 3.2.19: Batch Monitor (one position)

The batch monitor's responsibilities include monitoring and managing batch jobs using Control-M, analyzing and supporting batch operations by monitoring system resources and response time, and providing first line support for operational problems. This individual executes escalation procedures and maintains an accurate log of events during the shift. This person is considered key personnel but does not have to be housed on-site full-time. The batch monitor should have the following qualifications:

1. Five (5) years of IBM mainframe TSO/ISPF/JCL experience;
2. Three (3) years of experience monitoring nightly batch operations using Control-M or similar job scheduling tools; and
3. Two (2) years of post-secondary education in a related field.

Vendor Response:

Noor Amlani
Batch Monitor

Summary

Noor has more than five years of IBM mainframe TSO/ISPF/JCL experience, two years of which has been monitoring nightly batch operations using Control-M on RAPIDS. He has more than five years supporting mainframe batch testing. Noor also has two years of post-secondary education in Computing.

Noor Meets the Position Requirements

Position Description

Responsibilities include:

- Monitoring and managing batch jobs using Control-M
- Analyzing and supporting batch operations by monitoring system resources and response time
- Providing first line support for operational problems.

Executes escalation procedures and maintains an accurate log of events during the shift

This person is considered key personnel but does not have to be housed on-site full-time

Noor Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of IBM mainframe TSO I ISPF I JCL experience;	Noor has more than five years of experience working in IBM Mainframe with TSO, ISPF, and JCL.
Three (3) years of experience monitoring nightly batch operations using Control-M or similar job scheduling tools;	Noor has been operating the RAPIDS batch operations for three years using Control-M.
Two (2) years of post-secondary education in a related field.	Noor has completed a bachelor's degree in addition to a two-year diploma in Computing.

Education

The City University London	Bachelor of Science in Actuarial Science
The University N London	Diploma in Computing

Professional Certifications

IBM Canada	IMS/DC Application Programming

Work Experience

State of West Virginia DHHR – RAPIDS Project

Batch Monitor
July 2013 – June 2015

Noor is the current, primary batch monitor for the RAPIDS project. He monitors the nightly batch runs and contacts track leads and programmer analysts in case of issues.

- Monitors and manages nightly batch jobs using Control-M.
- Analyzes and supports batch operations by monitoring system resources and response time and providing first line support for operational problems.
- Executes escalation procedures and maintains an accurate log of events during the shift.
- Work overnight and weekend shifts. Has effective verbal and written communication.

Dept. HEALTH, New Hampshire

Programmer /Analyst
April 2012 – June 2013

Worked on Human Services and Eligibility System – provides inquiry on family cases and members eligibility. This system was developed using Cobol OS/390, DB2, CICS, JCL, File Manager, Endevor and Intertest.

Responsibilities:

- Analyzed, tested, implemented, maintained and supported customized software applications in a client/server, mainframe or e-commerce environment to meet user requirements and procedures.

BLUE CROSS SHIELD, Michigan

Programmer /Analyst
July 2009 – Jan 2012

Worked on Eligibility Verification / Claim Status System – that supports X12 270/271, 276/277, 278; 5010 Upgrade X12 837 Claims, 834, 835. This system was developed using Cobol OS/390, DB2, CICS, BMS screen handling, JCL, File Aid, Endevor and Xpediter.

Responsibilities:

- Attended meetings to review and enhance design, identify new or old components to change, create program specification, develop code, validate unit test and participate in structured walk-through.

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Subsection 3.2.20: Data Custodian – Master Data Management (one position)

Subsection 3.2.20: Data Custodian – Master Data Management (one position)

The MDM data custodian's responsibilities include resolving issue/tickets related to Informatica MDM (or comparable) software, resolving any data issue related to Informatica (or comparable) software, Oracle database procedure development, and migration of Informatica (or comparable) code across environment to support deployment. This person is considered key personnel but does not have to be housed on-site full-time. The MDM data custodian should have the following qualifications:

1. Five (5) years of experience with Informatica MDM/Siperian software administration or a comparable software;
2. Three (5) years of experience with Informatica ETL Development administration or a comparable software;
3. Three (3) years of Oracle development/DBA experience;
4. Two (2) years of Java programming experience;
5. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and
6. A Bachelor's Degree.

Vendor Response:

Brian Pierce
Data Custodian - Master Data Management

Summary

Brian has more than 25 years in the management, design, development, and maintenance of mission critical systems, most of that with state government. He recently managed the Affordable Care Act changes to RAPIDS, including implementation of the Master Data Management solution, Enterprise Service Bus, transfer of a new inROADS self-service portal solution, and implementation of Medicaid rules in a Business Rules Engine. Brian has a technical background in a variety of programming languages (C, C++, C#, VB.NET, COBOL and JAVA); and database technologies (Oracle, DB2, and SQL Server).

In addition to project management duties, Brian has an extensive hands-on role in the MDM solution implementation and subsequent M&O activities. Brian was actively involved in all phases of delivery, and has a strong knowledge of the WV MDM solution and key business and technical decisions made throughout. In assessing multiple options to fill this position, the Deloitte team felt that Brian was the best choice as data custodian. He understands the solution extremely well. Has strong technical skills. Is committed to maintaining MDM data integrity. Is able to provide insightful ideas for using the MDM to support the agency needs (such as the recent use of the MDM to support HBPE reporting and reconciliation with hospitals). Brian will work closely with the MDM programmer analyst to maintain the MDM solution and manage its data to high quality standards.

Brian Meets the Position Requirements

Position Description

Responsibilities include:

- Resolving issue/tickets related to Informatica MDM (or comparable) software
- Resolving any data issue related to Informatica Id (or comparable) software
- Oracle database procedure development, and migration of Informatica (or comparable) code across environment to support deployment

This person is considered key personnel but does not have to be housed on-site full-time

Brian Meets Your Qualifications

RFP Requirement	Additional Details
Five (5) years of experience with Informatica MDM/Siperian software administration or a comparable software;	Brian has a combination of experience to meet this requirements. Brian has over three years of experience with the Informatica MDM (previously Siperian) software product in a variety of roles, including data modeling, match rule definition, and configuration of the Informatica Data Director. He also has over two years of comparable experience while working on the "Master Client Index" software for the PA and VA solutions, comparable to the MDM in WV.
Five (5) years of experience with Informatica ETL Development administration or a comparable software;	Brian has five years of experience using ETL tools to solve various business problems in State government. Three years of experience are with the Informatica ETL toolset (PowerCenter), used to migrate data into the MDM. Two years of experience was with Oracle PL/SQL, SQL Server's Data Transformation Services (DTS), and T-SQL to successfully extract, transform and load data into an Operational Data Store.
Three (3) years of Oracle development/DBA experience;	Brian has more than three years of hand-on experience with Oracle development/DBA experience including data modeling, PL/SQL development, and SQL development/tuning.
Two (2) years of Java programming experience;	Brian has five years of experience with Java while on RAPIDS and the VA VaCMS projects. He has more than fifteen years of programming experience in a variety of languages/
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Brian has over three years of experience with public assistance programs such as TANF, SNAP, and Medical Assistance including experience in WV and PA.
A Bachelor's Degree	Brian has a bachelor's degree.

Education

University of Virginia   Bachelor of Arts in Mathematics (specialization in Computer Science)

Professional Certifications

Project Management Institute   Project Management Professional (PMP)

Work Experience

State of West Virginia, Department and Health and Human Resources

Project Manager / Affordable Care Act

July 2012 – Current

Brian has worked on the RAPIDS project for nearly four years, including as project manager for the Affordable Care Act change order. This approximately three year project focused on the following:

- Implementation of a Master Data Management (MDM). The MDM matches and merges clients from a variety of systems including RAPIDS, FACTS, and MMIS. It also matches providers from OSCAR, RAPIDS, FACTS, and MMIS. The MMIS allows definitive matching of clients across systems, and drives the client consolidation ("pin

QA Manager
Feb 2012 – June 2012

smashes") in the contributing systems. Together the RAFT data warehouse, it provides a platform for analytics not previously possible for DHHR.

- Implementation of the Corticon Business Rules Engine and configuration of Medicaid rules into Corticon. These enhancements necessitated significant changes to the RAPIDS solution to remove the COBOL based rules and integrate the Corticon rules for Medicaid (EDBC) and SFU.
- Implementation of a new inROADS self-service portal solution. Although the name didn't change, the new inROADS is a full replacement of the prior solution utilizing a production proven portal taken from GA. In addition to considerable self-service functionality across multiple programs, the inROADS solution effectively implemented the CMS "single streamlined application" and was one of three portals that CMS recommended to other states. In a later enhancement, inROADS was customized to take child care applications.
- Implementation of an Enterprise Service Bus (ESB). The ESB facilitates inter-system communication, with services that connect eRAPIDS with a variety of systems including inROADS, MDM, FACTS, OSCAR, CHIP, Federal Data Hub, and MMIS. Since implementation the MDM is also communicating with WorkForce WV, wvOasis, and eDRS. Carrying about 50,000 transactions per business day, the ESB has been a highly reliable, high performance data exchange solution.

Responsibilities:

- Brian managed the delivery of the listed solution enhancements with a team of approximately 60 participants at peak.
- Brian hosted CMS status meetings, helping prepare and present at CMS "Gatepost" reviews, managing risks and issues, and served as the management and review of all deliverables.
- He worked closely with several DHHR teams on the MDM and ESB initiatives, including those supporting FACTS, OSCAR, MMIS, and Child Care and developed familiarity with these systems.
- Since the change order completed on 12/31/2014, Brian continues management responsibility of the ESB, MDM, Data Exchange (including Account Transfer), also the RAFT Data Warehouse. Under his leadership, the Data Warehouse processes have been updated and a well-received "application aging report" has been made available. The MDM has also been leveraged to support Presumptive Eligibility Reporting and automate Account Transfer processing.

Commonwealth of Virginia – Dept of Social Services

Appication Manager
February 2010 – January 2012

Commonwealth of Virginia's state-wide Child Care solution, known as VaCMS, is a comprehensive Child Care solution based on Java technology implemented for the VA Department of Social Services. The solution features a Child Care Eligibility system, integrated citizen portal, integration with legacy systems, integration with card swipe solution for attendance tracking, and data conversion, in addition to core case management, eligibility, financial management, and vendor management business functions.

Responsibilities:

- Brian acted as the application manager, responsible for oversight of the solution requirements and design processes, PMO, and oversight of the technical infrastructure tasks.

Commonwealth of Pennsylvania – Dept of Public Welfare

Senior Test Manager
August 2009 – January 2010

ICIS (Integrated Client Information System) is the Commonwealth of Pennsylvania's (Department of Public Welfare) Integrated eligibility system. Deloitte has been serving DPW on ICIS over 15 years. ICIS, a Java-based solution, supports multiple programs including Medicaid, SNAP, TANF, and LIHEAP.

Responsibilities:

- Brian acted as a Senior Manager to oversee the critical testing function on a very large release in their incremental modernization process. The scope included testing a new Citizen Portal called COMPASS as well as a large set of changes to the ICIS system.

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Additional Experience

1990 – 2009

- Virginia Dept. of Environmental Quality – Project Manager of FileNet Document Management Implementation
- Virginia Dept. of Social Services – Project Manager of Licensing and Tablet Inspection solution for VA adult and child care centers
- Virginia Dept. of Corrections – Implementation of Operational Data Store
- Various Agencies / Systems – Performed as IV&V for 6 large projects
- Virginia Dept. of Transportation – Solution lead transitioning to Project Manager for 12 years on Right of Way and Utilities Management System (RUMS). VDOT was awarded a ComputerWorld award for RUMS. It was transferred to three other states to form the basis of their solutions. During initial development stage, Brian performed Oracle Data Modeling using ERwin and Oracle SQL and PL/SQL Development / Tuning / DBA functions. He also did performance testing with Mercury LoadRunner.
- Virginia Dept. of Alcohol Beverage Control – "Performance Series" accounting solution – SQL Modeling and Tuning
- IBM – Solution lead on Internet Home Banking Help Desk (Design and C Development. Solution included MQSeries and DB2)
- IBM – Solution lead for seven years on Work Flow Automation System for large Japanese Bank – (Design, C Development and DB2 SQL Modeling / Development)

Subsection 3.2.21 Additional Staffing For DHHR-Wide Initiatives

RFP Reference: Attachment A, Page 13

Section 4, Subsection 3.2.21

The vendor should propose a staffing plan for the additional staffing potentially needed for the twenty thousand (20,000) hours for the DHHR-wide initiatives to modernize the existing Child Support, Child Welfare, and Child Care systems. This should include at a minimum the following:

1. Project Roles and Responsibilities - summarizes the responsibilities for each role required to conduct the project work
2. Project Staffing Estimates - identifies estimated staffing requirements
3. Acquisition Strategy - describes when, how, and from what sources staffing will be acquired
4. Training Plan - identifies skills gaps and details specific training requirements for each Project Team member
5. Organizational Chart - displays project reporting relationships

Vendor Response:

There are a wide variety of initiatives that can be accomplished with twenty thousand (20,000) hours from the Software Modification Pool (SMP) for staff-augmentation of DHHR-wide initiatives, from small needs (just a few hundred hours) to large initiatives (several thousand hours) to all-encompassing (all 20,000 hours). The business and technical resources staffed through Deloitte are agile and experienced in ramping up promptly to complete projects of all sizes.

As you have seen in our section about our corporate qualifications and experience, for larger initiatives that require domain knowledge, we have technical staff that have experience working on Child Support, Child Welfare, and Child Care systems, through working in these systems for other States.

Similarly, for initiatives where there is a technical focus, we seek and engage staff that have qualifications and experience in the technologies that are used throughout WV DHHR:

- Many programming languages, including: html, Java, Java Script, asp.net, Ajax, JQuery, Natural Language Programming (NLP), COBOL, C, Powerbuilder, PL/SQL, among others
- Database experience including: IBM DB2 version 10, Oracle, SQL Server, etc.
- Data management technologies such as: Cognos, Oracle SOA suite, etc.
- Operating systems including: Windows, Unix, IBM z/OS, etc.

At Deloitte we pride ourselves on being technology agnostic; that is, not being tied to specific technology companies and their products. This has led to Deloitte practitioners having hands-on experience with virtually all major hardware and software tools and products, including helping our clients navigate the new frontiers of cloud computing and managed services.

For technical initiatives where the State's need is for developers, we have access to experienced programmers who can be supplied on-site for larger/longer initiatives (multi-month efforts), or off-site for shorter initiatives or when specific skills are needed. In both cases we would include a senior developer/analyst who can coordinate between the State and the resources for requisite management oversight such as understanding the level and type of technical knowledge needed, tracking and reporting the utilization of resources, performing billing, and facilitating the communication between the resources and DHHR project management (particularly if off-site resources are utilized).

Deloitte has dedicated teams of developers at our U.S. Delivery Centers in Orlando, FL and Camp Hill, PA who have experience in various technologies, including those currently used by the State in FACTS, OSCAR, and Child Care systems. Many of our delivery center staff are also familiar with the business to technology translation of Child

Support, Child Welfare, and Child Care having worked on similar systems for other State clients. The Delivery Center draws from a wide range of technology capabilities from Deloitte's services portfolio:

- Business process management
- Platform integration
- Solution integration

- Customer analytics
- Supply chain analytics
- Financial analytics
- Workforce analytics
- Risk analytics

- Web development
- Legacy transformation
- Custom design
- Custom information and security design, development, and implementation
- Application architecture
- User experience design
- Detailed design
- Performance design

- Core database support
- Custom application database support
- ERP database support
- Database support
- Database monitoring
- Performance tuning
- Disaster recovery and high availability

- Functional and package testing
- Performance testing
- Automation testing
- Test data management services
- ERP testing and validation
- Regression testing services

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Figure 4.3.2-2. Technology Capabilities of Deloitte's Delivery Center.
Our U.S. Delivery Center draws from a wide range of Technology capabilities from Deloitte's services portfolio--a breadth and depth that is virtually unmatched in our industry.

Where we need to supplement our Development Center staff with subcontractors, Deloitte has an organization, Contingent Workforce Services (CWS), dedicated to finding, vetting, and contracting technical resources from an extensive list of pre-qualified vendors. These vendors have proven themselves as suppliers of talented developers for deployment on most of Deloitte's State public sector projects, as well as on many of our private sector clients. When viewed across all of the industries served by Deloitte, the CWS contribution speaks for itself:

- 1,600+ client service projects served

- 15,000+ contractors staffed

- Sourced 1,150 distinct primary skills and 81 distinct roles

- 125+ vetted suppliers who represent some the biggest names in supplemental technology staff provision

- The high-quality of the contractors staffed is attested by Deloitte hiring more than 400 into our firm

Because CWS has pre-vetted suppliers, resources can be brought onboard promptly with just the selection process and background checks to complete, and in some cases even these are abbreviated and eliminated respectively, when a known contractor becomes available upon the conclusion of work on another Deloitte project.

And Deloitte recognizes the advantages of local staff: most of the Deloitte RAPIDS team have chosen to make Charleston, WV their permanent home, with some already being West Virginians before joining the RAPIDS team. Such staff bring reliability and stability to projects, as well as local knowledge and passion for contributing to the services provided by the project.

While acknowledging the array of possible projects and skill sets that could plausibly be required in consuming 20,000 hours of SMP, and being capable of meeting many of the permutations, Deloitte proposes a team of ten (10) versatile practitioners, as described in the Staffing Plan below. We will not plan to staff any individuals for the DHHR-wide SMP work until such work is planned for and requested by the Agency.

Proposed Staffing Plan

Deloitte proposes the following representative staffing plan needed to deliver the twenty thousand (20,000) hours for the DHHR-wide initiatives. Our plan includes the following:

1. Project Roles and Responsibilities – a summary of the responsibilities for each role required to conduct the project work

- SMP Team Leader.

  Responsibilities: A development team leader with experience working on Public Sector technology projects with an Integrated Eligibility, Child Care, Child Welfare, and/or Child support system, who would work with DHHR to refine the needs of each selected initiative to determine the level and type of technical knowledge needed, assist in on-boarding tasks, defining scope, task planning and assignment, monitoring and controlling of hours utilized, and administrative duties such as time tracking, status reporting, billing support, and communications coordination

- Senior Analyst/Developers x 2

  Responsibilities: Analyst/Developers who would be hands-on in system design, programming, and testing, and have experience with business to technology translation in the Public Sector, and also capable of directing junior developers

- Analyst/Developers x 6

  Responsibilities: Developers with experience in one or more of the technologies used by DHHR for the initiative to be staffed, who would supplement the State development staff if applicable, or independently provide development services under the direction of the State project manager.

2. Project Staffing Estimates – identifies estimated staffing requirements

- As each initiative is scoped by a State project manager, the scope of work to be performed under the initiative will determine the number of hours and the corresponding skill set to be staffed by Deloitte.

- The initiative time-line for staffing is jointly determined by State management, the Deloitte SMP Team Leader, regulatory or other deadlines, availability of resources depending on the level of specialization needed, and SMP available for allocation

- Specific resources are identified based on technical knowledge/skills needed, and if appropriate, the business domain knowledge requirements.

- A team such as proposed above, if utilized with a steady provision of initiatives spread throughout each year of the contract, would have the advantage of being immediately ready and able to execute a large initiative over a suitable multi-month period, or execute multiple concurrent smaller initiatives on a month-to-month basis

- Without a "ready" team of ten, as defined above, or if such a team has to be reduced or expanded for a period, then a lead-time of 30-days would be required to make the necessary staffing adjustments before beginning an initiative; Deloitte recognizes that team contraction and expansion may bring advantages to the State, but we also require that 30-day advanced planning is necessary and represents good practices that would assist in making sure the State gets quality resources.

3. Acquisition Strategy – when, how, and from what sources staffing are acquired

- When: during a proposed 30-day lead-time from when the State approves a Statement of Work (SOW) for an initiative, to when that work begins. Should the State decide to staff the proposed ten-person "ready" team for the duration of the contract, then the work could begin the day of SOW approval

- How:
  - The proposed Deloitte SMP Team Leader and/or one or more senior analyst/developer(s), determine the business and technical skills needed by the team by reviewing initiative documentation provided by the State, such as a project charter or Delivery Order

  - Conducting interviews and data gathering sessions with applicable State systems and business specialists to confirm the requirements stated in the charter or delivery order, and document the resource needs in the Statement of Work (SOW)

  - The Deloitte SMP Team Leader and/or one or more senior analyst/developer(s) then conducts interviews, conducts background checks (through Deloitte's administrative apparatus), and finally acquires the staff

- From what sources: The staff will be assigned from the proposed "ready" team; or through Deloitte's U.S. Delivery Center; or acquiring subcontractors through Deloitte's Contingent Workforce Services (CWS), as applicable.

4. Training Plan – identifies skills gaps and details specific training requirements for each Project Team member

- The Deloitte SMP Team Leader will identify skill gaps based on the requirements described in the charter/Delivery Order, and the staff availability through the acquisition sources, and collaborate with State management to accommodate gaps using jointly agreed training sessions, or deferred staffing strategies (e.g. if the State is utilizing Deloitte's proposed "ready" team, but we jointly find a need for a skill-set outside of that team, we would agree to a timeframe to replace a member of the "ready" team or supplement that team to properly meet the needs of the initiative)

- The proposed "ready" team of ten practitioners has the advantage of building WV and system specific skills over time and reducing training needs as they build experience and synergies with the individual system State personnel

- For training we will leverage multiple sources:

  - State training sources (e.g. the State's PII training);

  - Deloitte training (e.g. PII training that is mandatory for all Deloitte employees);

  - State documentation on the applicable system;

  - Standards documentation for the applicable system;

  - Review sessions to bring developers up to speed with our standards;

  - Code-walkthroughs to familiarize staff with existing functionality;

  - Code-walkthroughs of initially developed programs to check that resources are on target with development expectations;

  - Quality reviews also to check that resources are on target with development expectations.

5. Organizational Chart – displays project reporting relationships

- The following is the organization chart for the proposed ten-member "ready" team and the proposed relationships to Deloitte and State leadership and management; this organization chart would be adjusted and provided with each initiative SOW if resource contraction or expansion was necessary:

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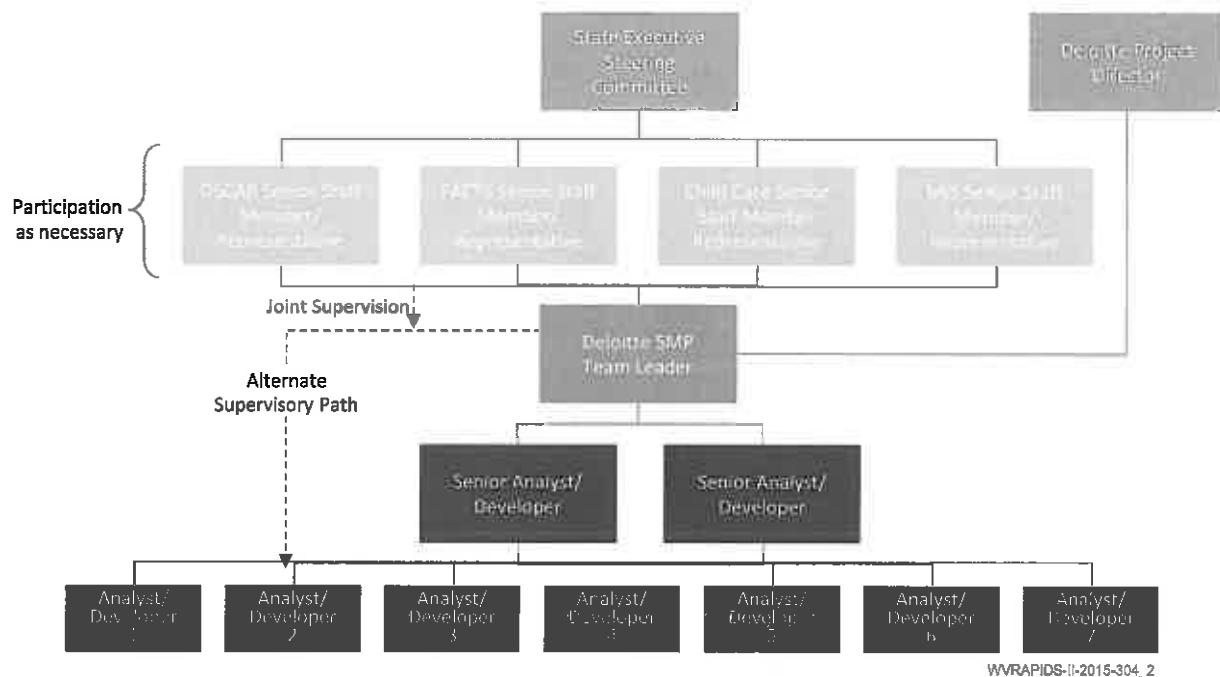
Figure 4.3.2-3. Organization Chart for our Proposed DHHR-wide SMP Team.
We propose a ten (10) person team for DHHR-wide SMP initiatives, which will provide an excellent combination of flexibility, experience, consistency and synergies with DHHR department staff.

- The Deloitte SMP Team Leader would report to a senior staff member of the State subsystem(s) undertaking the SMP initiative, who in turn it is expected would report to the State's Executive Steering Committee (the Deloitte SMP Team Leader also reports to the Deloitte Project Director)

- The Deloitte Senior Analyst Developers and Analyst/Developers all report to the Deloitte SMP Team Leader either directly or indirectly (for the latter)

- Alternatively the Analyst/Developers may report jointly to the senior staff member of the State subsystem(s) undertaking the SMP initiative and the Deloitte SMP Team Leader.

Deloitte meets your requirements:

☑ Staffing plan for the additional staffing potentially needed for the twenty thousand (20,000) hours for the DHHR-wide initiatives to modernize the existing Child Support, Child Welfare, and Child Care systems. This should include at a minimum the following:

☑ 1 Project Roles and Responsibilities - summarizes the responsibilities for each role required to conduct the project work

☑ 2 Project Staffing Estimates - identifies estimated staffing requirements

☑ 3 Acquisition Strategy - describes when, how, and from what sources staffing will be acquired

☑ 4 Training Plan - identifies skills gaps and details specific training requirements for each Project Team member

☑ 5 Organizational Chart - displays project reporting relationships

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Section 4, Subsection 4.0: (Project and Goals)

Deloitte's approach to both project management and maintaining the Agency's systems has improved over years of collaboration with DHHR and the Office of Technology. Artifacts such as Enterprise Value Delivery for Systems Integration (EVD for SI) have provided a sound foundation, which we've customized over the years of partnership to meet your specific staff needs and integrate West Virginia specific business processes into IT solutions. Throughout our collaborative partnership with the Agency, we have successfully driven many major enhancements from concept to implementation.

SECTION HIGHLIGHT

The Project Management Plan and Technical Approach are built on the backbone of established standards and previous experience:

- EVD for SI
- PMI and the PMBOK
- CMMI Level 3 Certification
- Public Sector Book of Knowledge
- 10+ years of successfully partnering with DHHR

Deloitte's experienced staff, proven methodology and focus on serving State Health and Human Services agencies, uniquely positions us to partner with the Agency in managing your enterprise programs and solving complex business issues. Whether it is implementing new technology, refining business processes, maintaining the system, or supporting system operations, the approach to managing technical projects is guided by various time-tested methodologies.

EVD for SI (Enterprise Value Delivery for Systems Integration), which is CMMI level-3 compliant, guides the overall software development methodology including our project management plan and our technical approach. The methodology incorporates principles from PMI's Project Management Body of Knowledge (PMBOK) and provides a full set of processes, templates, and accelerators to meet the Agency's enterprise needs. The RAPIDS Project benefits from a broad system development life cycle (SDLC) that combines flexible, reusable service-oriented capabilities, technical frameworks, tools, accelerators, and Deloitte's extensive experience developing solutions. In addition, our approach draws inspiration from our Public Sector Book of Knowledge, which benefits the Agency by embedding leading practices in integrated eligibility, child welfare, child care, and child support, as needed, from our collective experiences. Our experience working together uniquely positions us to maintain and support both the current and future systems' frameworks. Having a single vendor, with a known, demonstrated, and common approach to application development and maintenance, serves to reduce the risk to the Agency.

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- Business and Operational Continuity: Deloitte combines business process, policy, technology and sound project management expertise to mitigate risks and drive operational efficiency
- Collaborative Approach: We are more than your contractor of choice; we are your business partner.
- Rigor and Structure: We infuse rigor and structure through proven management planning and execution that help take DHHR systems to the next level of quality and delivery.

Subsection 4.1, Goal 1: Management Plan

RFP Reference: Attachment A, page 15

Goal 1: Management Plan
The goal of these requirements is to provide regular and frequent communication to the Agency regarding the following: staff resources, management approach for new tasks, adherence to schedules, and problems or issues that could affect successful outcomes of work under the contract. This plan should include, but is not necessarily limited to, meetings (such as who should attend, responsibility for minutes), reports (creation and dissemination of), issues resolution (such as documentation, tracking, resolution, and disposition) and a transition plan (such as project initiation with a new vendor, system documentation, transfer of user acceptance testing, and system conversion). Vendors are encouraged to propose innovative approaches for using communication technology to facilitate and enhance a collaborative and productive exchange of management information between the Agency and the vendor.
Objective: To provide constructive meetings with the Agency, to provide reports for monthly production status of all areas of work, to provide a constructive plan for issues resolution, and to facilitate a transition in the event services are terminated for whatever reason.

Vendor Response:

The Agency needs a vendor who understands the value of an effective Management Plan to provide for the overall success of the project. Regular and frequent communications to the Agency regarding staff resources, the management approach for new tasks, adherence to schedules, and problems or issues that could affect work are required to facilitate a collaborative and productive project environment. The approach to meetings, reports, issues resolution, and a transition plan using various communication techniques must be considered and included in the Management Plan. Deloitte has extensive experience in creating Management Plans that follow standards from the Project Management Institute's Project Management Body of Knowledge (PMBOK) and also has the knowledge of the needs and vision of the Agency so that the plan is tailored specifically for the Agency. Deloitte's Project Management Plan meets the communication goals and objectives that have been set by the Agency.

In addition to developing an effective plan for the project, Deloitte brings the management team that has experience with the Agency and is required to facilitate adherence to the plan. Nagen Suriya, the current RAPIDS project manager, will be overall project manager for the RAPIDS suite of applications, with overall responsibility and accountability to the DHHR leadership team. His knowledge and experience will be continue to be leveraged to support the DHHR IV-A system. Neil Killey, the current RAPIDS deputy project manager, will fulfill the key deputy project manager role and will focus on the continued M&O and enhancement of the RAPIDS suite of applications. Neil is extremely well versed in the RAPIDS system, having demonstrated strong analytic and project management capabilities. His close working relationships with the OMIS RAPIDS management team enable him to effectively guide the RAPIDS project. Vinny Prasad, a long term fixture on RAPIDS with extensive integrated eligibility and technical experience, will continue to play a key role in supporting RAPIDS and mentoring its track leads as RAPIDS application manager. Chandra Appachiannan, also a very experienced RAPIDS practitioner, is proposed to continue to provide leadership and management to the RAPIDS technical team, which provides operations and DBA support for the RAPIDS suite of applications. Together, this management team delivers the experience and strong leadership that is essential in implementing a successful Management Plan.

The proposed approach to managing the RAPIDS suite of applications is centered on the fundamental principles of project management, combining the leading practices of the Agency and Deloitte project management methodologies and tools. Deloitte understands the vision of the Agency and our project management approach supports the future of the eligibility market for the Agency. We have the experience with IV-A systems, a strategy

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for value add application development and maintenance that goes above and beyond standard service delivery and have a management plan that supports this goal. For example, we have successfully implemented the Master Data Management system that can be used across the enterprise to provide increased data accuracy and reduce errors in case processing and the same approach can be used to implement additional DHHR enterprise enhancements, such as moving to more of a managed service model. The resulting approach has been refined and tuned for the needs of the Agency through collaboration to become the foundation for our combined success.

The methodology behind the Project Management Plan is based on standards that have been tailored to support the Agency. The root of this management methodology is based on the universally accepted and effective Project Management framework called the Project Management Body of Knowledge (PMBOK), which was developed by the Project Management Institute (PMI).

SECTION HIGHLIGHT

Deloitte's experience and leading practices provide for a successful Project Management Plan

- Processes tailored to the Agency's needs
- Transparency into M&O and enhancements
- Frequent status communications with the Agency through reports, meetings and automation in JIRA

Within the PMBOK framework, there are multiple processes that can be used to plan, execute and control work, which is important for the Agency enterprise. For maintenance and operations, the focus is on the effective parallel execution of a number of enhancements and defect corrections managing quality, and a smooth migration of approved changes through the lower environments and ultimately into production. For enhancements, the full scope of the System Development Life Cycle (SDLC) is utilized to turn business requirements into practical tools that bring business value to the users. To achieve project success it is crucial to distinguish between maintenance and operations vs. enhancements, and our experience with the Agency and in project management allows us to clearly separate the two. We have a transparent approach for determining whether changes are maintenance and operations or enhancements, and we have developed an appropriate process for each based on the separate requirements for the type of work. We adapt our strategy using common sense and both national and West Virginia specific experience to guide the process and provide the flexibility required to support the business. Our methods support both the mainframe legacy and web-based technologies.

The workflows in the process management model are adaptable to meet Deloitte's need to deliver and our client's need for transparency and input. These needs change and evolve over time. The Deloitte team is committed to meeting the DHHR's needs with optimized and client-friendly processes. For example, Deloitte has worked closely with the state on the management processes around enhancement request estimation, approvals and prioritization. Now that the process is in place, Deloitte is working to help automate the process with JIRA-enabled workflows to reduce administrative burden and provide real-time information to the RAPIDS Project Director. We believe this exemplifies our adaptability to meet the Agency's needs and ability to raise the bar with effective workflows and tools.

Together we have continuously modified and remained flexible in applying the methodology. The following Figure 4.4.1-1 highlights how we've integrated enhancements and maintenance efforts within the PMBOK framework. The project management staff is well versed in PMBOK and we have three certified Project Management Professionals on our team.
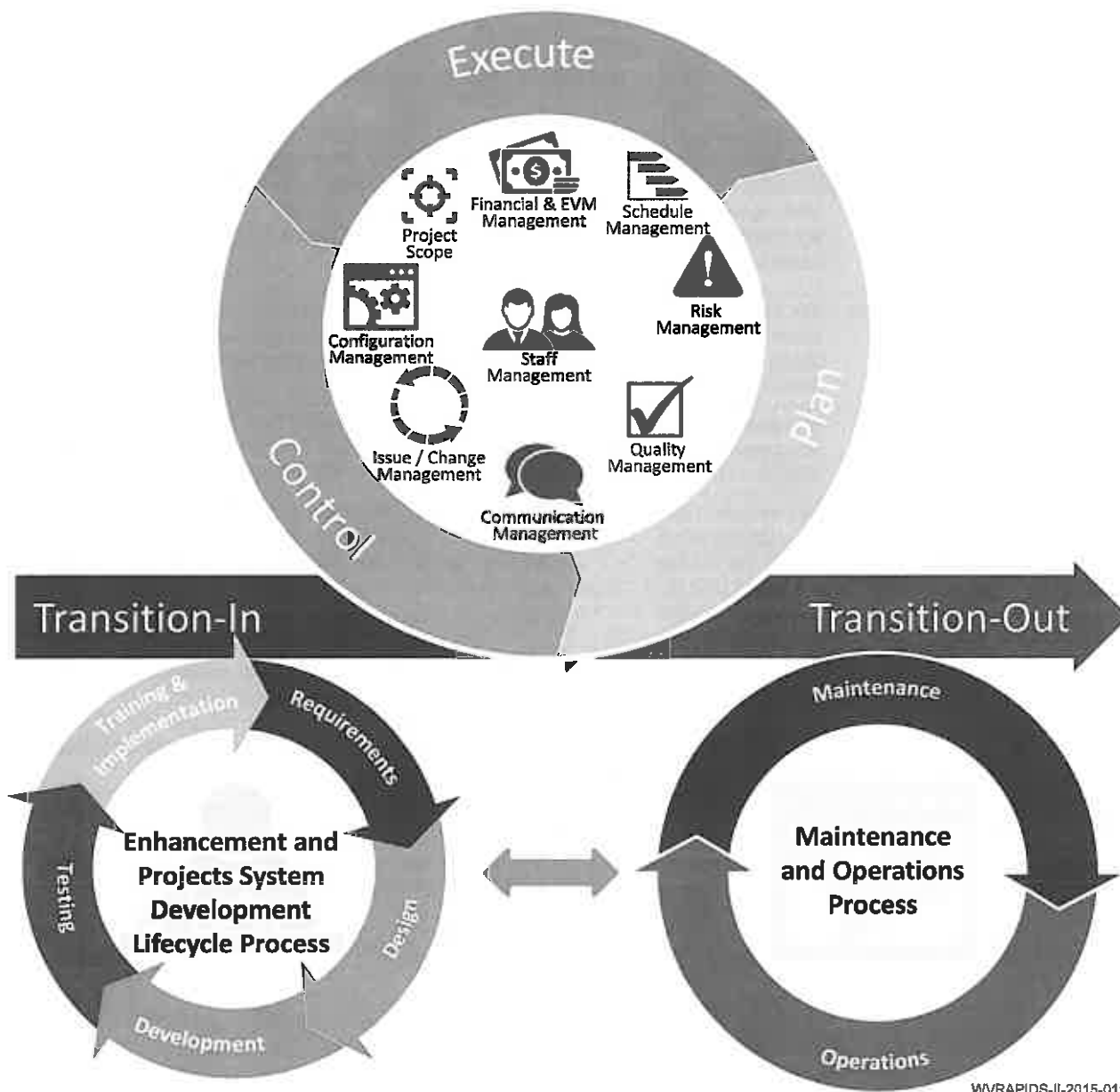
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Figure 4.4.1-1. RAPIDS Project Management Components.
RAPIDS' Project Management approach is based on PMBOK and tailored further using Deloitte's EVD for SI providing oversight and controls to application development and maintenance activities.

The project management approach also leverages aspects from our Deloitte's proven EVD for SI methodology. EVD for SI, which incorporates processes and practices from PMBOK, is a methodology enhanced further by Deloitte through our vast experience in successfully delivering and maintaining complex and highly customized software solutions. EVD for SI defines tailored processes, complete with input and output artifacts, as well as accelerators such as artifact templates.

The following figure displays highlighted values the established project management methodology brings when executed by Agency and Deloitte staff working in concert.

Our Core Project Management Values		Our Project Management Approach Benefits DHHR
	Not Re-inventing The Wheel	The Agency and Deloitte have collaborated successfully at RAPIDS, and the knowledge and experiences of DHHR enterprise systems and processes brings continuity to managing the programs.
	Clear Communication Channels	We communicate frequently and openly with stakeholder groups so everyone is "in the know" on project status. The related communication processes facilitate rapid and timely information sharing, collaboration and efficient decision making, founded on the overarching principle of "no surprises."
	Transparency	We provide the Agency with a clear and timely picture of how the project is progressing, who is responsible for each activity, who to contact to resolve questions and issues, what decisions have been made, and risk mitigation strategies.
	Collaboration	We establish and promote a strong working relationship with our Agency team colleagues, which is especially important given the involvement of multiple programs. When the "rubber hits the road" this aspect of our client engagement model and culture is critical to mitigate risk and identify opportunities that maximize value to WV citizens, field staff and the Agency.
	Measuring Progress	Most activities do not get done – or done properly – unless they are measured. Our methodology establishes meaningful metrics based on past experience and tailored for the Agency's unique interests and timing. We quantify project progress and enable measurement via our toolset. We report progress and issues through reports and regular status meetings, coupled with a well-defined escalation process for critical issues and dependencies.
	Standard Methods and Tools	We create predictability and then reliability. We use standard project management methods and related tools, detailed procedures, templates, standard work plans, status reports, and other materials that support each phase of program management, including planning, design, development, testing, implementation, and post implementation support.
	Software/Hardware Agnostic	We are not tied to any specific vendors or products. When the need arises to determine new software applications or hardware components for the project, we research available options without bias. Based on the findings of the research and the defined needs and vision of the Agency, we recommend the best fit without being restricted by any vendor or product connections.
	Adaptation	We adapt to new project management approaches, like a steering committee that has oversight of the common needs of separate systems to manage the specific needs and complexity of the project as a whole; and provide depth and breadth of project resources and knowledge at the right time, to meet deadlines and enable a timely implementation while delivering a quality solution.

Figure 4.4.1-2. Core Project Planning and Management Principles.
Our Core Project Planning and Management Principles have a number of benefits for the Agency.

Guided by the EVD for SI methodology, PMBOK, and previous experiences, we provide a project management plan that addresses the requirements you have laid out in your RFP. The plan is familiar to you, not only because it embodies the industry standard components that you expect, but because you have already seen a sample of the plan through the Affordable Care Act (ACA) change order that Deloitte recently and successfully delivered to the

Agency. The proposed Project Management Plan will leverage the current and effective processes used for RAPIDS. However, when the engagement starts, the plan will be updated to support the project's full scope and the Agency's revised organization.

Sample Project Management Plan Contents

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Figure 4.4.1-3. Example of the RAPIDS Project Management Plan.
For the RAPIDS ACA project Deloitte delivered a project management plan that addressed the various activities needed for effective and efficient project management.

As can be seen in Figure 4.4.1-3, the Project Management Plan contains not only sub-plans for the processes that you have asked for in the RFP, but also sub-plans and approaches for the management activities that we'll undertake in the RAPIDS suite of applications, and providing modification services for RAPIDS and other DHHR initiatives:

Project Management Plan Component	Component Description
Project Scope	For maintenance, activity scope is controlled through prioritization of work through meetings such as Triage, and level of effort estimates for each unit of work which are aggregated to size the routine releases.
	For enhancements, initiatives are prioritized in Change Control Board meetings, with oversight from the Executive Steering Committee, and then requirements are defined through JAD meetings and documented in the System Requirement Specifications (SRS.)
Overall Project Management Estimating	Initially work is estimated to a rough order of magnitude (ROM) to give the Agency a sense of how much effort the work will entail; once prioritized, this is then refined into a detailed level of effort using Deloitte standard estimation model that has been successfully used on the RAPIDS project.
Schedule Management	From the ROM, the team uses a bottom up estimation approach to establish a rough order of duration to furnish the Agency with information to define timeframes for implementation; work plans are developed using Microsoft's Project Plan software to provide detailed schedule management.
Staff Management	Staff management is more than just personnel management. Although that is an important feature, it also identifies the roles and responsibilities of the personnel on the project by position and the authoritative boundaries of those positions.
Financial Management	For this fixed price proposal, costs as viewed from the Management Plan perspective are represented by the detailed LOE of each activity, and how that LOE deducts from the corresponding Software Modification Pool (SMP) as activities are completed and formally delivered to the Agency. The allocation of these hours is approved by the Change Control Boards of the systems, with oversight from the DHHR Steering Committee.
Performance Measurement	The Performance Measurement Plan describes the approach for measuring various metrics to evaluate the progress of different aspects of the RAPIDS suite of applications.
Communications Management	The Communication Management Plan documents the methods and activities needed for timely and appropriate collection, generation, dissemination, storage, and ultimate disposition of project information among the project team and stakeholders. Further details of the communications approach are described in the below section titled, "Communication To the Agency."
Risk Management	The Risk Management plan describes the systematic process of identifying, analyzing, and responding to project risks. It includes maximizing the probability and consequences of positive events and minimizing the probability and consequences of adverse events to project objectives.
Quality Management	The quality assurance methodology is integrated into the overall project management approach. It seeks to objectively evaluate the project delivery process and the resulting deliverables, documentation, system code, and system features. It is based on and compliant with IEEE standards, CMMI, and other industry standards that guide quality assurance.
Change Management	Change Management defines the approach, administrative procedures, roles and responsibilities for submitting, evaluating, coordinating, approving or disapproving and implementing business and technical changes to project scope as defined in the contractual documents and approved deliverables.

Project Management Plan Component	Component Description
Configuration Management	Configuration management defines the process for establishing and maintaining consistency of the functionality of the project work products with its requirements, design and operational information throughout the project lifecycle. In this context, work products include client deliverables and other supporting artifacts needed for successful implementation of the project and encompass both software code and documents.

Figure 4.4.1-4. Major Project Management Plan Components.
These major project management components align with the EVD for SI processes, CMS guidelines and the process that you have asked us to respond to through the RFP.

Through the Project Management Plan, we meet your objectives to provide constructive meetings with the Agency, to provide reports for monthly production status of all areas of work, to provide a constructive plan for issues resolution, and to facilitate a transition if required.

While the Communications Management Plan defines multiple mediums of communication, including when and how to use these mediums, a key communications component that is defined is meetings. In the Communication Management Plan, standard meeting protocol is defined, such as who should attend, who is responsible for documenting meeting minutes, and possible meeting locations. Another significant mode of communication between Deloitte and the Agency would be standard reports. The process and frequency by which project reports are generated and disseminated is documented within the Communications Management Plan. This benefits the Agency as the project team has a standard approach when documenting and communicating meeting action items, issue resolutions, and decisions made. When the approach is standardized, project team members are familiar with the artifact and can more easily review and consume the information being communicated.

The Issues Management section of the Project Management Plan details the approach to documenting, tracking and resolving issues that could be blocking various project team tasks. This would include the tool which is to be used to track issues and the role that is responsible for creating and maintaining issues across the project. In case termination and transition support is required, a Transition Plan is provided, which allows for continuation of uninterrupted service and prepares Agency staff, or their designee, for the ongoing maintenance and enhancement of CHHR enterprise assets (such as project initiation with a new vendor, system documentation, transition of User Acceptance testing, and system conversion.)

Lastly, Deloitte continues to identify and implement innovative technology solutions for enhancing communication and collaboration, such as the launch of the RAPIDS Resource Center website and tailoring JIRA to fit RAPIDS-specific processes. The proposed Project Management Plan also addresses other areas of project management that are not specifically requested in the RFP but are essential to good governance, such as Quality Management and Risk Management.

The following sections elaborate further on processes requested in the RFP, by describing some of the Project Management Plan's sections. We will elaborate on the other processes and approaches upon the project's start date, and after we've developed the Project Management Plan deliverable.

Communication to the Agency

Open and timely communication is vital to the success of any project. The Agency and Deloitte, along with other Agency enterprise stakeholders, have an established, strong working relationship that allows information to flow

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freely in all directions. This transparency is demonstrated in various stages of the project life cycle and contributes to the spirit of collaboration and ultimately successful project delivery. In order to provide the scope of work required in this RFP, we will build upon and expand the current communication approach by recognizing that effective communication to the stakeholders helps provide timely collection and dissemination of project information. Deloitte project management principles stress open and effective communication, and we consider it fundamental to building a strong partnership between members of the project team.

The use of innovative technologies to support the communication within the project is important to stay on the leading edge of successful project management. For example, Deloitte has utilized the Application Lifecycle Management tool JIRA on many of our projects and has developed leading practices based on our experiences and lessons learned. For the RAPIDS project we have implemented JIRA following these leading practices, and have tailored specific functionalities to support the Agency's vision and approach. Many of the communication processes that will be included in the Communication Plan have been integrated into JIRA based on the process work flows to create automation of the communication steps. Automation of these key processes is vital to allow for standards in communication and promote timeliness and accuracy.

Modes of Communication

Being flexible and adapting to various modes of communication is critical to project success. We work with the Agency to facilitate regular outreach and communication between project teams, Agency stakeholders and, when appropriate, external stakeholders. We use several communication mechanisms to support the needs of the project, such as status reports, formal meetings, information discussions, conference calls, and documentation, some of which will be discussed in greater detail later in the section. Furthermore, information must travel through multiple mediums to get to stakeholders, and we have crafted the communication strategy to address this need. A representation of commonly used modes of communication can be found in the following graphic.

Modes of Client Communication

Figure 4.4.1-5. Modes of Communication Used by Deloitte.
Information travels through multiple mediums to get to stakeholders, and we have crafted our communication strategy to address this need.

As depicted in Figure 4.4.1-5, the methods of communication revolve around Agency staff participation and the direct interaction with the Agency. Having a variety of communication methods available is not only critical for project success, but it leads to faster issue identification and resolution in addition to providing transparency across the Agency. The following is a brief description of the various modes of communication and when they are commonly used.

- **On-site Meetings.** Meetings held at the project site occur almost daily and range in size from small track level or status meetings to larger requirements gathering and JAD sessions. Smaller meetings may require participation from only internal stakeholders, while larger requirements and design sessions often include external stakeholders as well, such as the policy units, field staff, and change center workers. Given the shared office space with the internal Agency staff, on-site meetings are easy to organize and are the preferred method of communication. A detailed description of the common types and format of on-site meetings is found later in this section, under *Meetings*.

- **Telephone Calls.** One-on-one telephone calls are used less frequently, but they are the most common form of communication if issues arise. If any party is not onsite, telephone calls are used as the most direct form of communication to relay the issue between Agency and Deloitte staff and to determine the best course of action for a quick resolution. On occasion, telephone calls are used when communicating with Agency staff deployed in the field. In addition, each desk and cubicle space in the office is equipped with a phone, and phone calls are made directly between the on-site Agency and Deloitte staff daily for quick questions or inquiries that do not require a formal meeting or resolution.

- **Conference Calls.** Conference calls are commonly used whenever external stakeholders located across the State are included in a meeting. An example of this includes the monthly RAPIDS Resource Team meeting, where field workers from across the State call in each month to discuss RAPIDS issues, suggestions, and enhancements. Additionally, a conference call line is added to many meetings to accommodate resources that are not on-site.

- **E-Mails.** E-mails are the most frequent mode of communication currently on the RAPIDS project. For questions or issues that do not (or cannot for logistical purposes) require an on-site meeting, and for ones where a decision should be clearly documented and recorded, e-mails are the best mode of communication. Deloitte and internal Agency counterparts e-mail on a daily basis, for issues ranging from small questions to larger requirements clarifications. E-mails between Deloitte to external stakeholders are sent through their internal Agency counterpart, and communication between the Deloitte staff and external stakeholders is relayed through them.

- **System Messages.** Urgent messages are communicated to the end users through system messages on the application homepages. To communicate important announcements or issues to the field staff, a message is displayed on the eRAPIDS homepage. For messages that need to be distributed to the West Virginia citizens, text is displayed on the inROADS homepage alerting them to an upcoming or recent change, program date, or system issue. These messages can be easily added and removed from the homepages of both eRAPIDS and inROADS by Agency staff, with minimal system down time

- **RAPIDS Resource Center.** The RAPIDS Resource Center is a new form of communication that is used to broadcast messages, release notes, and other important information to the Agency resources, both internal and external. The RAPIDS Resource Center content is managed by the Agency, but Deloitte provides input on the content and important information that should be included. This new tool has provided an invaluable communication channel between the project team and the user community, promoting transparency and organization change management.

- **Web Conferencing.** Web conferencing is frequently used in conjunction with conference calls. They are often used to project a meeting deck to individuals offsite. Web conferences are also commonly utilized to demonstrate system functionality to external meeting participants, such as Federal Agency representatives. This meeting style provides a way to make remote meetings more beneficial to the external stakeholders by allowing system functionality to be visualized and demonstrated.

- **Status Reports.** Status reports are submitted to the State to convey important information regarding project health and metrics. We provide various types of status reports, ranging from track level reports to project-wide reports. A detailed description of the types of status reporting is found later in the section, under *Reports*.

- **Mobile Devices.** The implementation of JIRA as the application lifecycle management tool provides for the use mobile devices as another form of communication. Users can log into JIRA from their mobile devices (subject to State policy approval) and can configure their settings for notification of certain status updates. As project team members and management are constantly on the go, the ability to stay informed from a mobile device is vital for maintaining open and timely communications within the project. JIRA also sends status email updates that are accessible via remote email available to some DHHR employees.

In addition to the modes of communication listed above, Deloitte has extensive experience in using SharePoint as an effective mode of communication within the firm internally. SharePoint is a web application platform that can be utilized to combine many functions including intranet, document management, and web content management. Deloitte understands the value this powerful form of information sharing can have to agencies such as DHHR, and can provide the knowledge required to extend the State's current use of SharePoint.

Communication Strategy

Using the various modes described above, Deloitte is in frequent communication with the Agency leadership and staff. These frequent, multi-faceted communication modes and strategies promote transparency and help to keep both Deloitte and the Agency aligned. When the approach to implementing new enhancements and resolving system issues is aligned with your expectations, we are able to work together effectively to provide a broad, functional system to the Agency workers and citizens. To achieve this goal, we have a solid communication strategy that aligns with your needs. The communication strategy, which is used across system teams, is highlighted in the following Figure 4.4.1-6 and followed by a detailed explanation of its components.

Staff Resources

Managing staff and resources, including subcontractors, and communicating their project status to State management is critical for providing the State with transparency about available resources for upcoming M&O work or new initiatives.

Figure 4.4.1-6. Deloitte's Communication Strategy.
The communication strategy is aimed at mitigating communication challenges arising from the areas listed in the figure above.

When new resources are on-boarded, they are provided with a set of onboarding materials related to the RAPIDS project and undergo knowledge transfer sessions with experienced members of the team. Resources are also assigned a specific track to manage or to serve as a back-up to the primary track lead. Using this approach, sub-systems have both a primary and back-up track lead. For more details related to the staffing process and proposed organizational structure, please see **Subsection 4.3.2: Staff Qualifications and Experience**.

Deloitte recognizes that the most critical aspects of resource management are the timely communication of resources that are leaving the project and the transition of their knowledge to their replacement. We mitigate the risk of resource turnover upfront by having a well-trained, knowledgeable back-up for each subsystem. In the event that a Deloitte resource leaves the project, the impacted sub-system will have an adequate replacement that is able to take over the role of track lead with reduced transition time.

The RAPIDS project has strong project management processes around staff on-boarding and off-boarding the project. Onboarding documents and a supportive team have proven effective at getting new resources productive efficiently. When a resource is leaving the project, we promptly identify a transition strategy and focus that resource's remaining time on finalizing knowledge transition and preparing their back-up resource to fully assume the responsibilities. We also communicate the transition approach to the State team promptly.

Management Approach for New Tasks

Effectively managing communication for new tasks is crucial to the initial planning and prioritization of the work. Maintenance tasks and SMP initiatives will be initiated differently, as they require differing modes and channels of communication. We distinguish between Maintenance tasks that are standard for system operation and SMP initiatives that are defined as changes in the documented requirements so that proper communication is followed for each. The clear difference between the two types of work provides clarity into how initial planning for initiatives should begin.

The following graphic highlights the process for managing the communication during the initiation phase for Maintenance and SMP initiatives, with a focus on the communication channels and modes required for each type of initiative.
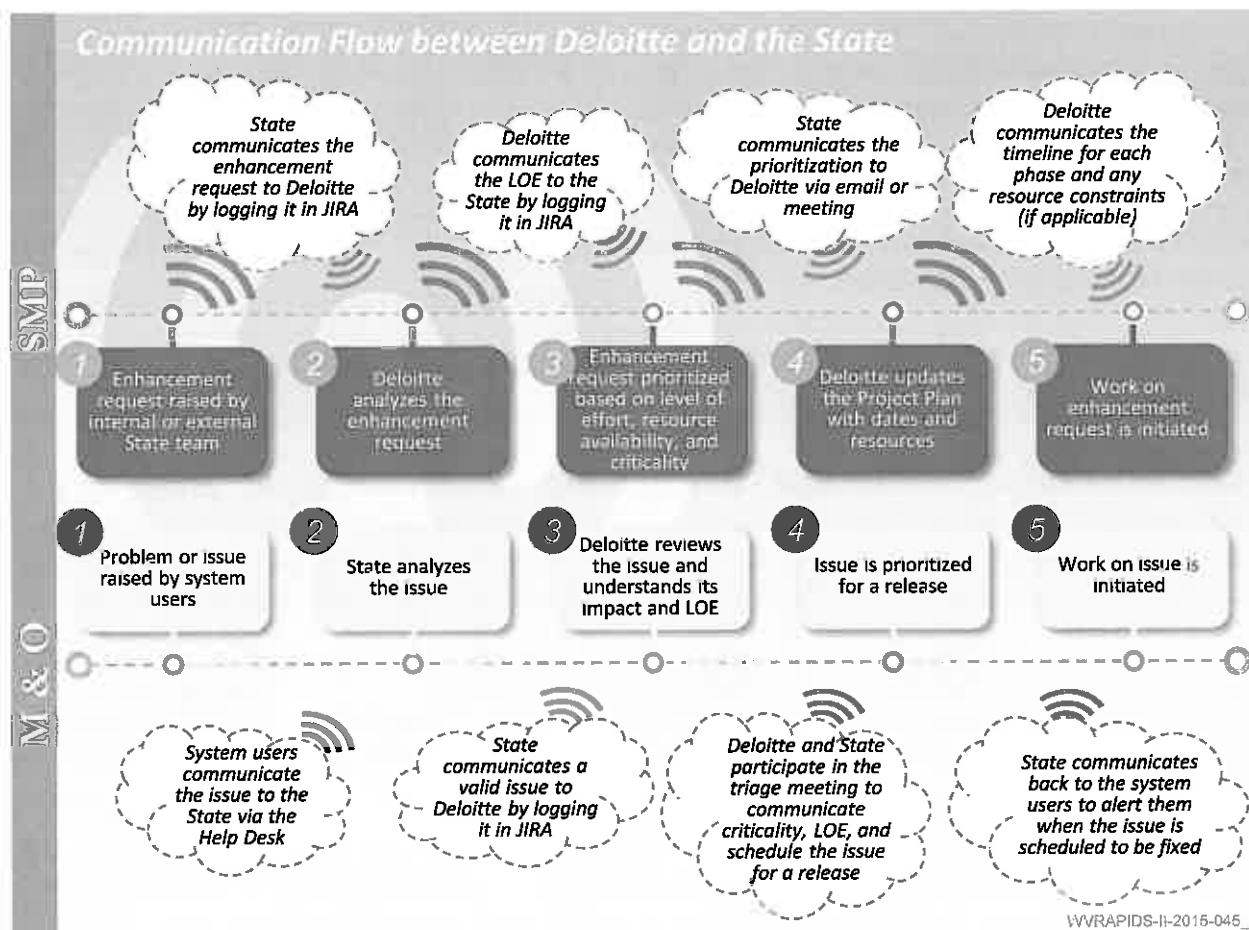
Figure 4.4.1-7. Flow of Communications for SMP and Maintenance Work.
The flow of communications differs between Maintenance and Operations Work and Enhancement (SMP) work, but in both cases involves constant interaction and communication between Deloitte and the Agency.

Once new tasks are initiated and underway, the SDLC and communication management process is the same for both Maintenance and SMP initiatives. Maintenance tasks and SMP hours are tracked in a detailed, broad project plan and in JIRA, both of which are described below. Progress against the plan is communicated regularly to

Agency stakeholders through various communication modes and issues or risks are escalated as soon as they are realized. Often, larger SMP initiatives are incorporated into the Maintenance release cycle, requiring constant communication between the Deloitte and Agency teams to make sure resources are appropriately balanced and enough time and resources are allocated for the development, testing, merging, and deployment of the parallel initiatives.

Schedule Adherence

Transparent communication regarding schedule adherence is important for keeping the Agency apprised of the progress of M&O tasks and new enhancement initiatives. Communication related to schedule adherence is managed throughout the project lifecycle in a variety of ways. The most common schedule adherence communication methods used by Deloitte are detailed below.

- **Project Plan.** Project tasks are compiled in a project plan, using Microsoft Project. This project plan contains details for the work threads planned and being executed within the overall project. These tasks are integrated into one cohesive project plan to gain an understanding of the project as a whole. By tracking not only tasks but also resource allocation and usage, it provides the management team with insight as to which resources are available to start new tasks. This information is communicated to Agency staff as new enhancements are prioritized and planned. Furthermore, Microsoft Project has the ability to track the percentage completion of each individual task, and it has the ability to adjust as project circumstances change. This information is communicated to the Agency through status reports and meetings, and urgent or concerning schedule issues are escalated promptly using one of the communication modes described above. The following graphic represents a snapshot of the Project Plan currently used by Deloitte to track M&O and enhancement tasks, and is representative of the type of Project Plan used across systems
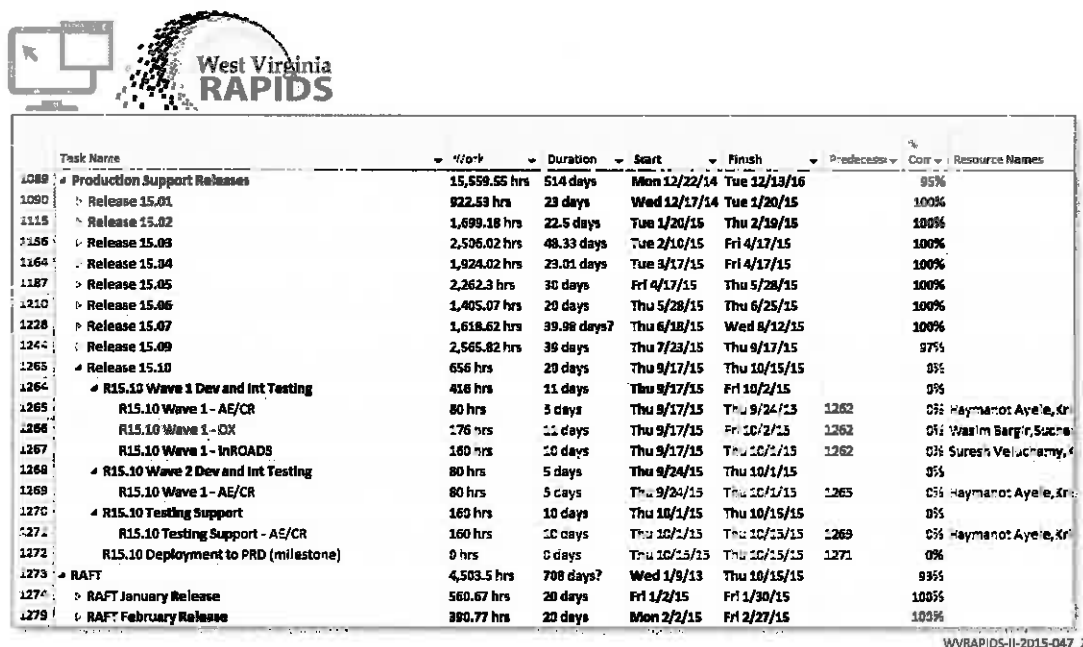

	Task Name	Work	Duration	Start	Finish	Predecesor	% Comp	Resource Names
1089	Production Support Releases	15,559.55 hrs	514 days	Mon 12/22/14	Tue 12/13/16		95%	
1090	Release 15.01	922.59 hrs	23 days	Wed 12/17/14	Tue 1/20/15		100%	
1115	Release 15.02	1,699.18 hrs	22.5 days	Tue 1/20/15	Thu 2/19/15		100%	
1156	Release 15.03	2,506.02 hrs	48.33 days	Tue 2/10/15	Fri 4/17/15		100%	
1164	Release 15.04	1,924.02 hrs	23.01 days	Tue 3/17/15	Fri 4/17/15		100%	
1187	Release 15.05	2,262.3 hrs	30 days	Fri 4/17/15	Thu 5/28/15		100%	
1210	Release 15.06	1,405.07 hrs	20 days	Thu 5/28/15	Thu 6/25/15		100%	
1228	Release 15.07	1,618.62 hrs	39.98 days?	Thu 6/18/15	Wed 8/12/15		100%	
1244	Release 15.09	2,565.82 hrs	39 days	Thu 7/23/15	Thu 9/17/15		97%	
1265	Release 15.10	656 hrs	20 days	Thu 9/17/15	Thu 10/15/15		0%	
1264	R15.10 Wave 1 Dev and Int Testing	416 hrs	11 days	Thu 9/17/15	Fri 10/2/15		0%	
1265	R15.10 Wave 1 - AE/CR	80 hrs	5 days	Thu 9/17/15	Thu 9/24/15	1262	0%	Haymanot Ayele, Kri
1266	R15.10 Wave 1 - OX	176 hrs	11 days	Thu 9/17/15	Fri 10/2/15	1262	0%	Wasim Bargir, Suche
1267	R15.10 Wave 1 - InROADS	160 hrs	10 days	Thu 9/17/15	Tru 10/1/15	1262	0%	Suresh Veluchamy, (
1268	R15.10 Wave 2 Dev and Int Testing	80 hrs	5 days	Thu 9/24/15	Thu 10/1/15		0%	
1269	R15.10 Wave 1 - AE/CR	80 hrs	5 days	Thu 9/24/15	Thu 10/1/15	1265	0%	Haymanot Ayele, Kri
1270	R15.10 Testing Support	160 hrs	10 days	Thu 10/1/15	Thu 10/15/15		0%	
1271	R15.10 Testing Support - AE/CR	160 hrs	10 days	Thu 10/1/15	Thu 10/15/15	1269	0%	Haymanot Ayele, Kri
1272	R15.10 Deployment to PRD (milestone)	0 hrs	0 days	Thu 10/15/15	Thu 10/15/15	1271	0%	
1273	RAFT	4,503.5 hrs	708 days?	Wed 1/9/13	Thu 10/15/15		93%	
1274	RAFT January Release	560.67 hrs	20 days	Fri 1/2/15	Fri 1/30/15		100%	
1279	RAFT February Release	380.77 hrs	20 days	Mon 2/2/15	Fri 2/27/15		100%	

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Figure 4.4.1-8. Snapshot of Current RAPIDS Project Plan.
This snapshot of the Project Plan used by Deloitte to track M&O and enhancement tasks is representative of the type of Project Plan that will be used across systems.

- **JIRA.** The RAPIDS project uses JIRA as their Application Lifecycle Management tool. JIRA has the capability to capture project "health" by reporting on critical project metrics such as the status of enhancements that are in progress. The metrics reported by this tool are used to communicate the status of the project to the Agency and to raise awareness of dates that are at risk. The Agency team has access to JIRA to view the numbers at any time; however Deloitte also presents these metrics to the Agency in their formal status meetings and reports. The following graphic represents a sample of JIRA and its project/schedule tracking dashboard.

Figure 4.4.1-9. Snapshot of a JIRA Dashboard.
JIRA has the capability to capture project "health" by reporting on critical project metrics.

- **Status Meetings and Reports:** Regular status meetings and reports are provided to the Agency based on the metrics gathered using the above methods. These meetings convey important project metrics, with one of the key metrics being schedule adherence, task tracking, and resource allocation as it relates to the critical tasks at hand. More details about the status meetings and reports and their specific contents can be found in subsequent sections, under *Meetings and Reports*.

Issue Management

Special consideration is made within the communication strategy when it comes to managing project issues. The communication surrounding issue management and resolution is critical to the timely identification, prioritization, and resolution of issues, whether they are related to the system or a business process. Further, by establishing standard communication processes when managing issues, the project team and Agency realize benefits from

increased transparency and improved coordination. By effectively managing the communication and messaging around system issues and defects, the following risks are mitigated:

- **End user distrust of the system.** When defects or errors are found and reported, it can cause temporary distrust among the end users of the system. By reacting promptly to reported issues and errors and communicating that the RAPIDS team understands the problem and that Deloitte is working to resolve it based on the prioritized date, the project team is able to suppress the distrust of the end users.

- **Multiple reports of the same error.** The average reported issue takes anywhere from 1 hour to 1 day to analyze the cause and diagnose. If a defect or error is reported and we do not effectively communicate the cause of the issue or the timeline for resolution of the issue, it raises the risk that the same problem will be reported multiple times. Each time the problem is reported it requires Agency and Deloitte resource time to analyze the issue, verify that it is a duplicate, and respond appropriately.

- **Reduced customer service due to errors.** After an issue is reported an analyzed, it is prioritized for a release in a weekly triage meeting depending on a number of factors. These factors commonly include the severity of the defect and the Agency and Deloitte resource bandwidth to fix and test the applicable errors without compromising the quality of the work. In some instances, viable workaround solutions are identified for system errors. In the event that such a workaround exists, the workaround steps are communicated to the end users to avoid interruptions in their daily course of business prior to the permanent fix being implemented.

Effective communication is also crucial after a release has been deployed. Often, releases include a combination of defect fixes and enhancements, and sometimes releases are targeted primarily for the release of new, major functionality. This communication is released by the Agency Communications Lead and is crucial for the end users to have an understanding of what has changed with each release. Deloitte assists this process by providing detailed notes in JIRA about each defect that has been fixed and the impact of the fix. For larger enhancements, Deloitte helps, as needed, to make sure impacted subsystems affected by the new enhancement are represented in the release notes, providing the end user a broad manual for reference during their daily tasks.

JIRA is the primary source of transparency and communication regarding issue management and tracking. This tool provides dashboards and metrics that allow Deloitte and Agency leadership to understand the progress on current issues, track M&O initiatives, generate ad-hoc reports on the status of initiatives, and identify new issues that arise. JIRA provides for automated approvals of SMP initiatives to ease the process of communicating initiative approvals amongst all parties. JIRA is also the tool through which code implemented to fix the issues will be promoted. More information about this tool can be found in this section, under *Issue Resolution*. The communications conveyed through this tool are passed from Deloitte to the Agency PMO team, who then shares the status with the Change Control Board and the Executive Steering Committee. Keeping the Change Control Board and the Executive Steering Committee abreast of the latest developments in schedule adherence, progress on tasks, and new issues or risks that have been raised will allow them to better prioritize new work while taking into account the current initiatives. The following section describes in more detail the interactions between the Executive Steering Committee, the Change Control Board, the technical team (Office of Technology), and the individual system teams.

Communication Hierarchy

At the top of the communication hierarchy is the Executive Steering Committee. The RAPIDS project currently operates with a level of executive leadership, and Deloitte recommends transforming the existing leadership

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structure into a formal Executive Steering Committee. This committee is comprised of key executive-level individuals from the Agency IT department and vendor executive leadership. The Executive Steering Committee approves overall SMP work and helps to allocate the shared pool of SMP hours allotted to the enterprise services. This committee governs the budget for the work completed and resolves issues that the Change Control Board cannot resolve on its own.

The Change Control Board is directly responsible for changes, including M&O operations, system enhancements, infrastructure changes, data fixes, and configuration management changes. The Change Control Board is comprised of relevant internal stakeholders and external stakeholders (such as the policy unit or field staff supervisors), IT representatives, and Deloitte Delivery Managers. The Change Control Board's main purpose is to manage SMP hours and make sure hours are appropriately allocated to mission critical tasks. In the event that the Change Control Board is having trouble deciding how to allocate hours or how to implement enhancements, the issues are escalated to the Executive Steering Committee for resolution. By working together, the Change Control Board and the Executive Steering Committee will provide oversight for implementing enhancements that improve the performance of the systems and enhance the experience of the end users.

To facilitate ease of communication between the Executive Steering Committee, the Change Control Board, and the project team members completing project work, JIRA has been tailored to fit the business processes that have been specifically defined to fit the Agency's needs. Many steps in the communication process have been integrated into JIRA to provide automated notification to the required recipients. For example, Statement of Work documents are attached to specific Change Requests in JIRA and are approved by the Change Control Board through a status update of the Change Request, which then notifies Deloitte of the approval. This level of automation removes many of the manual steps that would otherwise be required, and increases accuracy and timeliness for communications throughout the project teams.

A representation of the process flow amongst the different groups and the places of automation in JIRA during the SMP change management process on RAPIDS is depicted in the following graphic.

RAPIDS Change Management Process
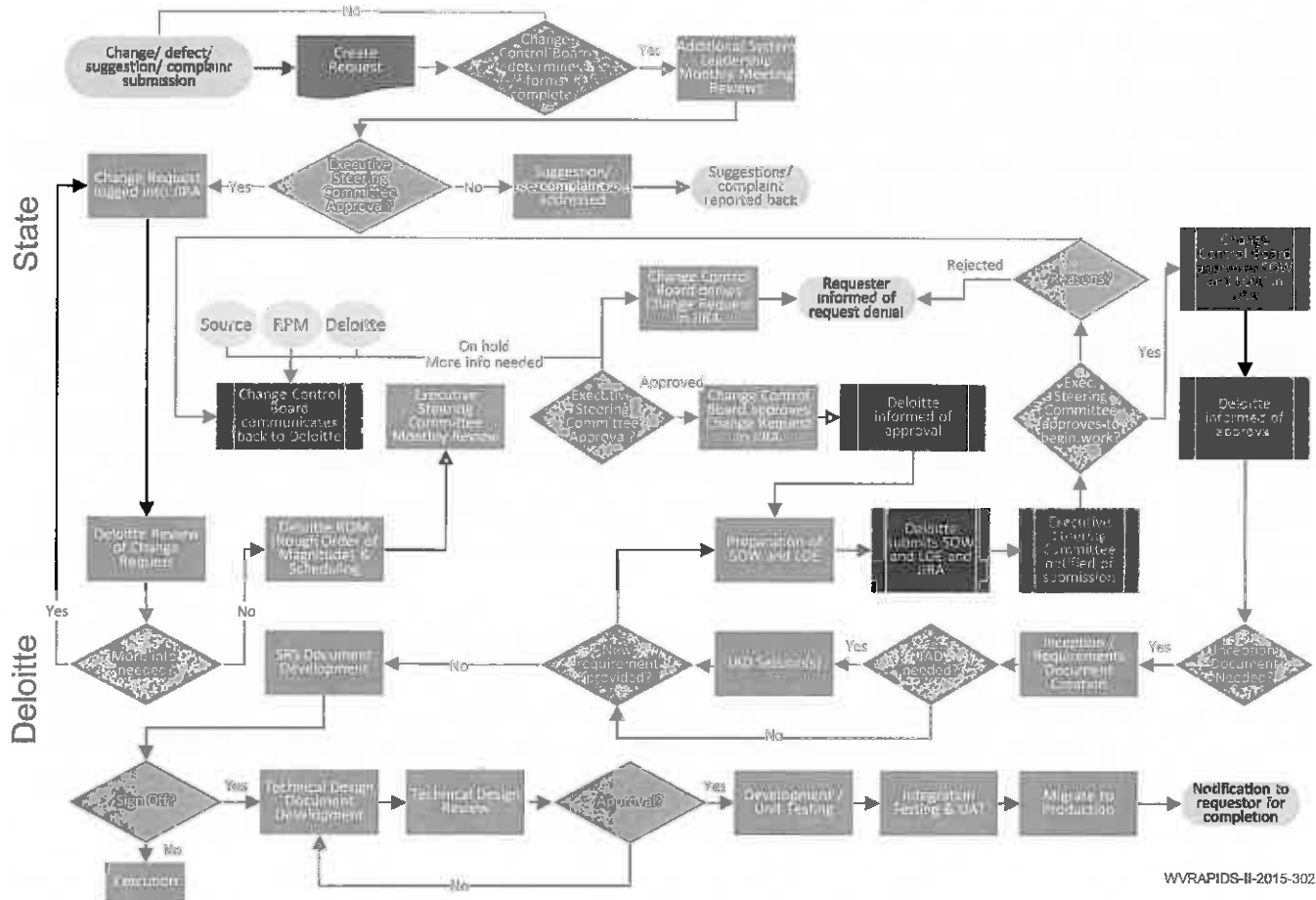
Figure 4.4.1-10. Communications during Change Management Process.
The Executive Steering Committee has oversight in terms of project-wide communications and the Change Control Board manages the specific approval of changes; many steps are automated through the use of JIRA.

In addition to the Change Control Board and the Executive Steering Committee, there is a dedicated Maintenance & Operations team, which may include both Agency and Deloitte resources. This team works on the day to day operations that keep the systems functioning. This team is the first line of response for issues and communicates these issues effectively upward in order to mitigate risks and promote transparency. The team is responsible for absorbing the work done by the SMP teams after the code is released into Production. By remaining in direct communication with the Change Control Board and the Executive Steering Committee, the team helps to keep initiatives aligned and provide the basis for a stable, efficient system.

Deloitte resources coordinate with the Agency's infrastructure team for things such as hardware support, network administration, data storage, system performance monitoring, and other technical tasks. The Deloitte and Agency infrastructure teams work together to resolve issues from each individual system and to increase system performance whenever possible. They also communicate clearly to the individual system management teams whenever a database outage is expected due to a planned software upgrade. By working closely together, the

infrastructure team and the system teams are able to provide high quality and reliable technology solutions that address the everyday needs of West Virginia citizens.

The communication hierarchy proposed for the RAPIDS suite of applications is based on Deloitte experience across the country and industry leading practices but tailored to West Virginia. This innovative approach facilitates the exchange of management information easily and frequently across the various West Virginia systems. Furthermore, it enhances the structure of the communication between the Agency and Deloitte, providing a formal chain of command and clear lines of communication for resolving M&O issues and initiating and managing new SMP initiatives.

Meetings

As described above in the section *Communication to the Agency*, meetings are an important part of the communications strategy, especially given our shared office space with the internal Agency staff making on-site meetings easy to organize. Formal status meetings with executives and external stakeholders are also critical in disseminating and discussing key information, and obtaining agreement on tactical and strategic decisions.

The approach to meetings includes bringing relevant background information, subject matter specialists, defined objectives for problem resolution, current priorities and critical resolution timeframes to enable productivity within these meetings.

Another enabler to the success of our joint meetings is the correct team composition. Our experienced and integrated team coordinates closely with Agency counterparts to confirm that the right people required and those who can contribute effectively to the meeting context attend. The frequency or regularity of meetings regarding an issue or initiative is defined by the requirement or complexity of the issue. Whenever possible, Deloitte follows the following guidelines to help confirm proper participation and follow-through on meetings:

- Schedule critical meetings at least a week in advance to enable awareness and support key stakeholder participation
- Provide the agenda for the meeting at least two business days before the meeting
- Provide the meeting minutes within two business days after the meeting
- The agenda and meeting minutes will be released as formal correspondence documents in a standardized format and logged for historical reference

By adhering to a standardized approach for conducting meetings, a widespread understanding is fostered among RAPIDS stakeholders answering "the what, where, when, why, and how" of the decision-making process.

The four meeting rooms at the project location are used to conduct the meetings, and a standard existing scheduling/reservation policy is used for the scheduling of meetings. This scheduling is supported by our administrative staff.

We also make provisions for the digital projectors and other equipment as needed for the meeting purposes. We understand that Agency staff will have to report to work at their local county offices as needed, and therefore, we also provide teleconferencing facilities as well as use of other technological tools such as WebEx to conduct meetings.

The following table provides a description of the types of project meetings that will be conducted for integrated eligibility, child welfare, child care and child support enforcement. Deloitte will work with the Agency to review and refine these meetings at the start of the project:

Meeting Title	Description/Purpose	Value	State Attendees	Deloitte Attendees	Responsibility for Minutes
Executive Steering Committee Meeting	Review and approve SMP hours; discuss status of work in the various project threads; decide on tactical and strategic direction for the Agency.	Oversight of work under the contract	Executive representation from RAPIDS; Other stakeholders such as MIS, BCF, BMS	Leadership/Project Manager and project leads	State
Change Control Board Meeting	Review and approve SMP work	SMP work is prioritized and planned in advance	System managers and leads	Project manager and leads	Deloitte
System Status Meeting (bi-weekly)	Review the status of the various aspects of the system: including M&O activities and SMP activities; review issues, risks, priorities, performance metrics, etc.	Overview of the performance of the system team, and advance planning of work	System managers and leads	Project manager and leads	Deloitte
Triage Meeting (weekly)	Triage new defects and minor enhancement requests to validate and prioritize them	Requested changes are vetted and prioritized	System managers and leads	Project manager and leads	Deloitte
End-User Focus Group Meeting (monthly)	Facilitates open communication between the system and the end users	A "direct line" of communication from the end users perspective instills the sense that they are being heard; emphasizes important messages to the end user	Communications lead; System managers and leads; End-user representatives	Project manager and leads	State
Team Lead Meeting (weekly)	Review current work plan, priorities, resource availability/constraints, risks and status, issues and status, and changes in policies and procedures	Teams stay "on the same page" and understand overall priorities, and collaborative needs	System manager and team leads	Project manager and team leads	Deloitte

Meeting Title	Description/Purpose	Value	State Attendees	Deloitte Attendees	Responsibility for Minutes
Track Meeting (weekly)	Review current work plan, priorities, status, risks, issues, and successes	Allows team members to understand priorities and gives them a sense of involvement	Team leads; Team members	Team leads; Team members	Deloitte
Meetings with External Stakeholders (as needed)	Provide status, receive updates and consultation with external partners such as CMS, FNS, etc.	Compliance with external stakeholder expectations	Executive representation as needed; System Managers as needed; Specialists as needed	Executive representation as needed; Project Managers as needed; Specialists as needed	State
Quarterly Public Sector Knowledge Sharing Webinar	Presentation and open discussion of leading practices from Deloitte's Public Sector group	Provides exposure for the Agency to see leading practices and innovations being implemented by Deloitte's other State Government customers	Executive representation as needed; System Managers	Executives; Project managers	Deloitte
Quarterly All-Hands Meeting	Update the system staff at-large	System staff understand the strategic direction of their system, and how it fits with Agency-wide strategy	DHHR Executives; System Managers; System staff	Executives; Project managers; Project staff	State for communication to State staff, Deloitte for communication to State staff

Figure 4.4.1-11. List of Meetings for the RAPIDS Project.
Recommended meetings, their purpose, value, and recommended attendees.

Initiative specific meetings are held throughout the SDLC process to facilitate communications. The following graphic depicts these checkpoints and on-going communication channels. It is important to engage both the Maintenance and Operations teams and the enhancement (SMP) teams at these various checkpoints to coordinate and communicate activities that are occurring separately or in conjunction with one another.
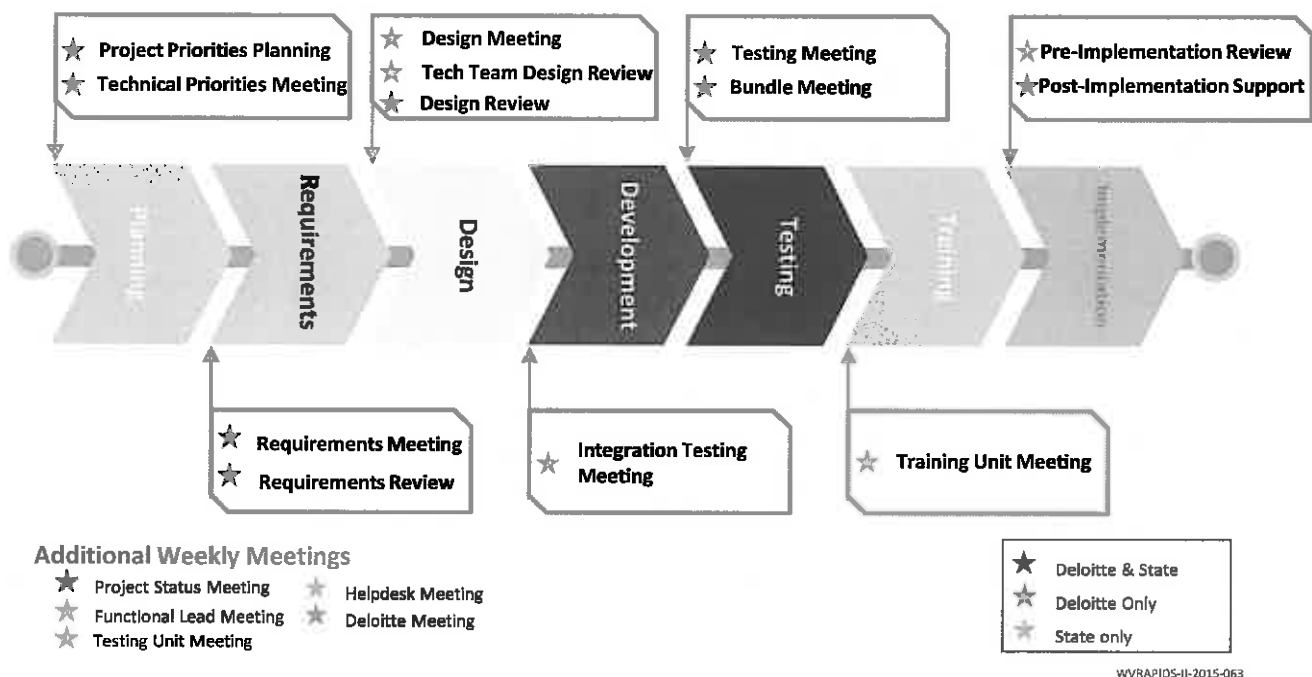
Figure 4.4.1-12. Initiative Specific Meetings.
Initiative specific meetings are important at each step of the SLDC to act as checkpoints and validate the work in progress.

Reports

Deloitte believes that maintaining a relationship with the Agency through ongoing, open dialogue is essential to the successful completion of every project. We understand the need to establish clear and frequent communication channels, both within the RAPIDS Team and with external stakeholders, and to participate face-to-face during the management of key activities. The project management team communicates on an informal day-to-day basis with their Agency counterparts to discuss issues, formulate approaches, and resolve minor problems. In addition to this frequent informal communication, the Deloitte team also uses an established process for more formal project tracking. Based on experience with the Agency and leading practices in the industry, Deloitte has developed a schedule and is responsible for the creation and dissemination of the reports listed in the following sections.

In addition to timely reporting of project status, reporting on performance measurement is paramount to achieving project success. JIRA provides the ability to collect and analyze data in order to report on the performance of the project. Dashboards in JIRA are configurable to show metrics that are of highest priority to the user so that management can view the data that is required to make effective decisions to improve project performance. Deloitte collaborates with the Agency to define these performance measures that are most critical to the project's success.

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✗ JIRA   *Enhancement Requests*

Initiative Name	Total LOE	Sep 15	Oct-15	Nov-15	Dec-15	Jan-16
Initiative 1	410	100	200	50	20	
Initiative 2	1,420	300	600	450	50	
Initiative 3	855	400	300	27		
Initiative 4	590	350	100	40		
Initiative 5	1,259	500	427	100	32	
Initiative 6	1,207	17	40	500	400	250
Initiative 7	960			500	300	120
Total Allocated		1,667	1,667	1,667	802	370
SMP Target		1,667	1,667	1,667	1,667	1,667
Remaining		-	-	-	865	1,297

RAPIDS SMP YTD	Hours
SMP Approved	19,135
Target	20,000
Remaining	865

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Figure 4.4.1-13. Sample JIRA Dashboard.
JIRA Dashboards can be configured to display management-level information such as the status of monthly SMP hours.

Project status reporting is the formal vehicle through which progress, issues, and performance against the schedule are communicated to stakeholders. Monthly status reporting keeps the project team up-to-date on progress made and deals with the macro aspects of the project, including budget and overall direction. The bi-weekly report provides detailed project tasks for each sub-system and aids in addressing issues at a more granular level. With our collaborative approach, there are no surprises during status meetings as many issues or concerns are informally discussed prior to the regularly scheduled meetings.

The Project Management Team is responsible for overseeing and controlling the project processes and schedule. This team will also be responsible for providing timely status reports to the Agency and providing transparency regarding the SDLC process and timeline. The Project Management team will also track project status and will be responsible for escalating project related risks or issues to the Agency. Deloitte believes the most critical purpose of project communication whether in status meetings, one-on-one communication or written reports is to keep everyone involved on the same page and to proactively resolve project issues.

Deloitte's approach to status reporting is directly tied to the approach for project team communication, issue tracking and resolution, and analyzing and measuring risks to the project. The five key principles that drive our approach to this critical thread of project management are shown in this table:

Status Reporting Principle		Description and Benefits to the Agency
	Document and assign it	Both status reports and issues are documented and tracked with clear assignment of owners and follow-up steps.
	Quantify and measure progress	We measure performance against the project plan, as well as quantifying number of outstanding issues, number of system defects, and number of completed test scenarios.
	Clear lines of authority	Staff members have a clear understanding of who owns which part of the project and system, and who they can go to clarify issues. Regular status meetings encourage identification and resolution of issues.
	Agreed on escalation procedures	Project issues need to be resolved promptly to keep the project on schedule. Clear delineation of when and how issues are escalated is provided to the Agency and Deloitte staff.
	Meet regularly	Face to face meetings are the lifeline of communication on a project. Meeting regularly at different levels of the project team to discuss and record project progress and escalate issues as needed to higher authority for resolution is important to maintaining project progress.

Figure 4.4.1-14. Status Reporting - Principles.
Benefits to the Agency of Deloitte's status reporting principles.

Status reports depict risks, issues, and change requests as well as progress tracking against baselines established for both cost and schedule. The status report deliverables illustrate progress against completion dates compared to approved baseline; escalated risks, issues, and action items; a disposition of logged issues and risks; and key decisions. Status reporting is provided via weekly transmissions and will be available in real-time through JIRA. The status reports also provide the necessary information required to successfully monitor and report on project progress and health. We provide reports on a monthly and bi-monthly schedule as planned and when applicable will provide status and other relevant information on an as needed basis.

The main objective of status reporting is to collect and document information on project status, progress, and changes to scope, schedule, cost, quality, and resources. This enables the Agency stakeholders to make informed decisions. Project performance information is collected and reported in three ways:

- Status Reporting: Describes the current position of the project;
- Progress Reporting: Describes what the team has accomplished within the reporting period;
- Issue Reporting: Describes the key issues that could affect future project performance.

The following table illustrates Deloitte's key differentiators in our approach to progress tracking and status reporting:

Differentiator		Deloitte's Approach
	Collaboration	We drive a "one team" approach with everyone collaborating – being fully committed to the success of the project. We involve the whole project team, Agency and Deloitte staff at each level, to promote open and effective communication.
	Co-location	Co-located RAPIDS staff provides the ability to informally meet and creates a dynamic and cohesive team culture that aids in achieving project goals.

Differentiator		Deloitte's Approach
	Executive Buy-In	Executive buy-in and the applicable level of executive support are crucial to project success. As part of project initiation, our executive leaders actively engage with the Agency's senior leadership to set up common goals for the project and to establish team alignment.
	Transparency	Status reports are shared to the relevant stakeholders and stored in a common repository so that the team has access to reports relevant to their project role.

Figure 4.4.1-15. Differentiators of Deloitte's Approach to Progress Tracking and Status Reporting.
Key differentiators in the approach to progress tracking and status reporting.

Deloitte's approach also includes defining communication requirements, methods of distribution, and project stakeholder expectations management throughout the life of the project to provide a mechanism for project stakeholders to receive the most accurate information in a timely manner. Deloitte proposes the following status update reports to achieve these goals.

Monthly Steering Committee Report

Deloitte provides monthly status reports to keep the Agency Steering Committee abreast of project status, relevant risks, outstanding issues, project budget, and resource requirements. Specifically, monthly status reports detail progress made during the prior month, progress expected during the next month, resources expended, significant problems or issues encountered, recommended actions to resolve identified problems, and variances from the proposed schedule. Deloitte templates are customized in collaboration with the Agency and used for the Monthly Status reporting. The template can include critical issues, personnel utilization, activity, tasks, defect reporting (as appropriate during the testing and validation phase), deliverable status, budget status, and activities planned for the next reporting period. The template can also include key business metrics that are defined in collaboration with the Agency and the goal of customizing the template is to provide the Agency with information that can help leadership in making decisions. A sample template is shown in the following graphic.

Monthly Status Report

Project Status Executive Summary

West Virginia
RAPIDS

Project Status Summary

Overall Project Status	R	Scope	Resources	Schedule	Quality
	-	Y	R	G	Y
		=	=	+	-

Project Trends Key

+ Trending Up (Improving)	= Flat Trend (Steady)	- Trending Down (Declining)

Project Status Summary	- Describe project progress against critical path. - Explain changes in project ratings or trends above. - Summarize key highlights for the reporting period. - Etc...

Items Needing Leadership Attention

Request ID	Description	Priority/ Severity	Target Resolution Date
Risk XX	Risk description....	Critical	17-May-2013
Issue XX	Issue description...	Critical	01-Jun-2013
Decision XX	Decision description...	High	17-Jun-2013

Upcoming Deliverable and Key Milestone Status

Deliverable / Milestone Name	Progress	Baseline Finish Date	Planned/Actual Finish Date	Status	Comments
Deliverable 1		18-May-2013	18-May-2013	C	
Deliverable 2		21-May-2013	21-May-2013	G	
Deliverable 3		23-May-2013	25-May-2013	Y	
Milestone 1		26-May-2013	4-Jun-2013		
Deliverable 4		1-Jun-2013	3-Jun-2013	NS	
Etc...					

Deliverable Status and Milestone Summary Legend	NS	Not started		Completed	G	On track	Y	<1 week behind schedule		>1 week behind schedule

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Figure 4.4.1-16. Sample Steering Committee Report.
Sample report that will be customized based on discussions with the Agency

Monthly SMP Status

Deloitte provides a monthly status report specifically for SMP initiatives. This report focuses on the status of SMP initiatives that have been approved by the Agency, their current status and work performed in the previous month. The report contains details on the work that is scheduled for the next month and other activities that require the involvement of Agency counterparts. It also contains an update on the SMP hours that have been consumed through the current date and the activities that have been approved and are in progress. This perspective is crucial to the decision making process for Agency management and to prioritize business critical project activities.

Bi-weekly PMO Status Reports

Deloitte will provide status reports every two weeks in a template that is customized in collaboration with the Agency. This report provides a summary of project activities for the past two weeks, including major milestones. It forecasts scheduled activities for the upcoming two weeks, an action plan for reaching target milestones and overall

timelines for each sub-system, organized by phases of the system development life cycle (Requirements, Design, Development and Integration Testing, Systems Testing, Regression Testing, and Deployment and Post Implementation). Key performance metrics are also included in this report (e.g. defects open, upcoming enhancement requests, etc.). This aids the Agency in pinpointing problem areas and focusing on opportunities for improvement.

Issues Resolution

Deloitte's risk and issue management processes are an integrated component of the project management methodology and play a critical role in the successful planning, execution, and delivery of the project. Our practitioners participate in a broad training program, focused on Deloitte's project management methodology and are intimately familiar with the issue and risk management processes, tools, and techniques. The issues resolution process includes documentation, tracking, resolution and disposition of issues and enables practitioners to consistently and effectively manage and execute projects.

The following Figure 4.4.1-17 outlines some of the features of the approach to issue and risk management and the associated benefits to Agency:

Features of Deloitte's Approach	Benefits to the Agency
Experience	Broad issue management capabilities are based on Deloitte's system implementation experience in projects of similar size and scope and are embedded within the project management discipline.
Transparency	Status reports document the risks and issues so that project stakeholders are aware of possible items that may impede project progress.
Collaboration	The methodology enables project staff to collaboratively identify, track, mitigate, monitor, control, and resolve risks and issues.
Empowerment	We promote a project environment that empowers team members to identify and escalate project risks and issues.
Authority	Deloitte works with the Agency during initial project startup to identify the Agency resources that will be the primary points of contact for escalation.

Figure 4.4.1-17. Features of Deloitte's Approach to Issue Management.
An outline of some of the features of the approach to issue and risk management and the associated benefits to the Agency.

The issue and risk management approach provides a broad system for large-scale and mission critical initiatives, while providing an efficient mechanism for streamlined issue tracking and resolution for smaller project impacts. We realize that as the project progresses and changes are prioritized by the Agency, issues can arise at various phases of the development life cycle. If these issues are not addressed in a timely way, they can result in negative impacts to schedule, scope, quality, and budget.

Issue Management

The team follows a six step approach to help the Agency identify, categorize, track and resolve issues. The Issue management process is outlined in the following figure.

Issue Management

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Figure 4.4.1-18. Issue Management Process.
Steps followed by Deloitte that result in effective Issue Management.

The following table provides a detailed summary for each step within the process.

Steps	Description
Step 1: Issue Identification	A potential issue that may impact project progress is identified by members of the Agency or the Deloitte project team, or the project stakeholders.
Step 2: Issue Documentation and Tracking	Based on the source of the issue, the issue is logged into JIRA. The identifying party is responsible for entering the minimum information, which includes the description of the issue, identification date, and the resource(s) responsible for resolving the issue. The tracking system at a minimum provides for an issue description, assigned priority, dependencies and plans for mitigation or resolution, staff assignments, schedule or other impacts (if any), targeted and actual resolution dates, and the resolution or mitigation action.
Step 3: Issue Analysis	Team members analyze the issue and perform an initial evaluation of the source, cause, dependencies, as well as business and system impacts. The team works with the Agency to develop recommendations for resolution or mitigation of the issue. An initial priority for the issue is also determined at this point to enable appropriate escalation of the issue.
Step 4: Issue Escalation	Depending on many factors that include the effect of the issue on scope, budget, quality, and schedule as well as the impact on business users, the issue is escalated using different channels of communication to the project managers and Agency project management and/or executive leadership. Issues are reported in the weekly and monthly status reports throughout the analysis and resolution process.
Step 5: Issue Categorization and Prioritization	Agency and Deloitte members collaboratively identify the category of business area to which the issue belongs, the priority of the issue, and a plan for resolution that includes the target due date and assigned resources.
Step 6: Issue Resolution	Deloitte works with the Agency team to resolve the issue. Once the issue is resolved, it is marked as complete in JIRA with the actual resolution date, as appropriate.

Figure 4.4.1-19. Steps in the Issue Management Process.
A detailed summary for each step within the Issue Management process.

Planning for Issue Management

The issue management planning process defines how issue management activities are conducted and establishes an agreed-upon process for managing project issues. At project initiation, the project management team will work with RAPIDS project managers and other key stakeholders to define the specific project issue management strategies, roles and responsibilities, issue categories and profiles, issue analysis and impact, escalation criteria and paths, and reporting, which will be documented in the project's Issue Management Plan.

The following table outlines the roles and responsibilities of the RAPIDS project team for issue management:

Role	Responsibilities
Deloitte Project Manager	• Manage and implement the Issue Management Plan • Identify and escalate issues • Delegate analysis and tracking of issues • Schedule monthly issue reviews • Document and monitor alternative processes needed if an issue affects the current approach • Monitor, document, and report on the status of issues • Own or participate in the issue management process, when applicable
Deloitte Team Leads	• Identify and escalate issues; perform analysis of issues • Implement issue response plans as directed by the project manager • Own or participate in the issue management process, when applicable
State Project Management	• Identify issues • Review and accept/ reject the Issue Management Plan • Participate in monthly issue reviews • Own or participate in the issue management process, when applicable

Figure 4.4.1-20. Issue Management - Key Resources.
The roles and responsibilities of the RAPIDS project team for issue management.

Issue Analysis, Assessment, and Prioritization

After identification and documentation of an issue, project team members analyze the issue and perform an initial evaluation of the source, cause, dependencies, and business and system impacts. Each open issue is discussed at project management and team meetings. In these meetings, issues are given a priority of low, medium, high, or critical. Once the priority is determined, it is assigned to a project team member for resolution with a planned issue resolution date. Issues may be referred back to the submitter for additional details if the problem cannot be analyzed as submitted. In addition, issues that cannot be resolved are escalated to the project management team and, if applicable, to the Project Steering Committee. Deloitte recommends the issue priorities shown in the following table:

Issue Priority	Description
Critical	Issue is jeopardizing overall project objectives and must be addressed promptly
High	The issue is negatively affecting the project significantly (for example, cost overruns or milestone delays) and must be addressed as soon as possible
Medium	The issue is negatively affecting the project and should be addressed, monitored, and controlled using regular issue management processes
Low	The issue has minimal effect and should be addressed as cost and schedule permits

Figure 4.4.1-21. Issue Priority Levels.
Recommended issue priorities that have been used in other projects of similar size and scope.

Issue Escalation, Resolution and Closure

Depending on factors that include the effect of the issue on scope, budget, quality, and schedule and the impact on business users, the issue is escalated using different channels of communication to the project managers and the Agency management and/or executive leadership. Issues are reported in the project status reports throughout the

analysis and resolution process. The following table represents recommended issue escalation levels for unresolved issues.

Escalation Level	Role Description	Criteria
Level 1	Deloitte and Agency project manager(s) or team leads	• Issue unresolved with past due <=5 days • High and critical issues will be brought to the project manager's attention promptly
Level 2	Deloitte and Agency project leadership	• Issue unresolved with past due >5 days and <15 days • Unresolved critical issues will be brought to project leadership within three days of being identified
Level 3	Steering Committee, Executive Leadership	• Issue unresolved with past due >15 days • Unresolved critical issues will be brought to leadership attention within five days of being identified

Figure 4.4.1-22. Issue Escalation Levels.
Recommended issue escalation levels for unresolved issues.

Once an issue is resolved, the actual resolution date and resolution comments are recorded. Resolution is also communicated to Agency management in status meetings. If the problem is not resolved according to the resolution plan and the lack of resolution significantly affects the project, the issue will be escalated. After evaluation and consultation with the project team, existing project issues may be closed for the following reasons:

• The issue has been resolved and/or mitigated

• The issue is no longer a concern for the project

On a project with a high level of complexity like RAPIDS, there are a number of factors that need to be identified and managed proactively. Unresolved issues can have a negative impact on many different aspects of the project, including schedule, budget, scope, staff morale, quality, and compliance. The issues resolution approach is designed to meet the needs of the RAPIDS project and to effectively deal with issues that arise during the project lifecycle.

Transition Plan

Deloitte has provided M&O support for large-scale HHS projects for more than 35 years. A key responsibility on most of those projects was preparedness in case termination and transition support was required. Deloitte shares the belief with the Agency that you accomplish an effective transition with a strong turnover plan and rigorous execution of that plan. We know that strong collaboration principles, coupled with knowledge of the West Virginia business and technology domains, are required for the Agency or its designee to continue providing support for the enterprise solution.

The end goal is a transition that provides continuation of uninterrupted service and prepares individuals for the ongoing maintenance and enhancement of the system.

Our Transition Experience

Our successful past service experience with HHS projects across the country helps us to reduce West Virginia's risk during the critical phase of transitioning support to a successor team while also continuing to maintain system

availability and service levels. The following graphic highlights where we have successfully provided transition services to projects similar in size and scope to RAPIDS.

Deloitte Experience Footprint	Example	Deloitte Role in Providing Services Similar to West Virginia's Requirements
State of Texas	Texas Integrated Eligibility Redesign System (TIERS)	In 2005, we helped the Texas Health and Human Services (HHSC) agency position a successor vendor for uninterrupted continuity of services supporting TIERS. Two years later, in June 2007, the successor vendor contract was cancelled and Deloitte was re-engaged by HHSC to maintain and enhance TIERS.
State of Florida	Florida Eligibility and Child Support	We conducted a transition of the Florida Eligibility system and the Child Support Enforcement Automated Management System (CAMS) to a state support team. Florida has successfully taken over the maintenance and operations of these systems.
State of Delaware	Delaware Client Information System II (DCIS II)	A complete application transition, including management of maintenance and enhancement activities. This project included a shift away from a mainframe application to a much larger client/server application. Deloitte continues to provide development support to supplement Delaware's staff.
State of West Virginia	Families and Children Tracking System (FACTS)	Deloitte conducted a complete transition of FACTS to West Virginia. This included the transition of maintenance, enhancement and operation activities, as well as the use of several new technology components.
State of Minnesota	Health Match IV&V	As the IV&V vendor for the Health Match (eligibility) project, Deloitte helped transition completed work to state resources. Minnesota had previously terminated the Health Match contract with ACS.
State of Ohio	Ohio Job Insurance	Deloitte successfully transitioned the OJI project to Ohio Job and Family Services (ODJFS) after completing our transition activities. This included training state staff to prepare them for the transition. Today the State maintains and operates the system.
State of Pennsylvania	Human Service Network (H-Net)	We worked with Pennsylvania to facilitate transition of database services and system components (e.g., XML, configuration management, middleware, technology standards and procedures) for H-Net.
	AOPC Common Pleas Case Management System	For the Administrative Office Pennsylvania Courts we completed a successful transfer of responsibility and knowledge to AOPC leadership and staff for aspects of the Software Development Life Cycle used for the Common Pleas Case Management System.
	Master Provider Index (MPI)	Maintenance of the Master Provider Index (MPI) was turned over to Pennsylvania resources

Figure 4.4.1-23. Deloitte Experience Successfully Transitioning Systems.

Transition Methodology

Our experience shows that providing for an effective and orderly transition is a continuous and phased process that relies upon a positive, collaborative learning environment. This process must be established early in the project life cycle. For West Virginia, each system/track team must understand what is needed to fully transition their system to the state or to another vendor. Throughout the project the team members on all systems work closely with the Agency team members to successfully accomplish project activities. In doing so, the approach provides Agency staff the opportunity to observe, absorb, and practice completing the same project tasks, applying the same procedures, and using the same tools as the Deloitte team resources. This helps alleviate the burden created by a large volume of information presented when a formal system transition is scheduled for a set period of time at the end of the contract.

The following graphic highlights Deloitte's transition methodology, which is built upon three key components: transition planning, execution, and closeout.

System Support Transition Methodology

Phases

Deliverables/ Work Products

Transition Planning
- Identify Transition Objectives, Components, Services and Resources
- Develop Transition Plan
- Finalize and Approve Transition Plan
- Develop Transition Results Report Template
- Finalize and Approve Transition Results Report Template

Transition Lessons Learned Plan Report

Transition Execution
- Perform Identified Transition Services/Transition Identified Components/Knowledge Transfer
- Risk and Issue Management
- Transition Quality Assurance/Readiness Assessment

Status Reports

Transition Closeout
- Update Status of Each High Level Task and Activity
- Finalize Status of Identified Risks and Issues
- Compile and Document Transition Readiness Assessment Information
- Monitor Progress and Impact of Transition Activities

Transition Results Report

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Figure 4.4.1-24. System Support Transition Methodology.
Deloitte's transition methodology for transferring a project to West Virginia or another vendor.

Deloitte follows this three-stage methodology that facilitates the system transition and enables the Agency to continue to meet business obligations during the system transition phase. The overall objective of each phase is highlighted in the following graphic.

Transition Planning	Develop the detailed System Support Transition Plan that drives the knowledge transfer effort to the Agency's staff or another vendor
Transition Execution	Execute and monitor the approved System Support Transition Plan. As part of this stage, Deloitte provides phase-in training at key points

Transition Closeout	Consolidate observations and findings from the transition execution phase and provide the Agency with an assessment of whether the transition process met/exceeded the acceptance criteria

Figure 4.4.1-25.

Additional aspects of the transition methodology and considerations are explained in further detail in the following subsections.

Project Initiation with a New Vendor

When preparing for a new vendor to assume control of part of or the entire suite of systems, careful planning needs to begin prior to the end of the project. During the planning phase a detailed Transition Plan is developed, a sample of which can be found in the following graphic.

	Task Name	Start	Finish
1	Transition and Ongoing Release	Wed 4/1/15	Wed 4/1/15
2	1 - Project Initiation and Planning	Wed 4/1/15	Wed 7/1/15
3	Orientation Meeting	Wed 4/1/15	Thu 4/2/15
4	Detailed Transition Work Plan to focus on M&O work	Wed 4/1/15	Wed 4/15/15
11	Review Risks	Thu 4/16/15	Fri 4/17/15
12	Develop Recommendations for Risk and Issue Management	Mon 4/20/15	Wed 4/22/15
13	Revise Risk Mitigation Strategy based on comments from the State	Thu 4/23/15	Mon 4/27/15
14	Review Reports	Thu 4/16/15	Fri 4/17/15
15	Revise Reports based on comments from the State	Tue 4/21/15	Wed 4/22/15
16	Review QA Standards for Application Development	Mon 6/15/15	Wed 6/17/15
17	Review Plan to Implement Process Changes	Thu 6/18/15	Fri 6/19/15
18	Confirm Contract Support Activities for HSD	Mon 6/22/15	Wed 6/24/15
19	Monthly Performance Review Meeting	Fri 4/24/15	Wed 7/1/15
20	Monthly Performance Review Meeting 1	Fri 4/24/15	Wed 7/1/15
21	Prepare Monthly Meeting Materials	Thu 4/30/15	Thu 4/30/15
22	Define Project Schedule	Fri 4/24/15	Fri 4/24/15
23	Plan near term activities	Fri 4/24/15	Fri 4/24/15
24	Develop Deliverables	Fri 4/24/15	Fri 4/24/15
25	Plan Staffing	Mon 4/27/15	Mon 4/27/15
26	Identify Project risks	Mon 4/27/15	Mon 4/27/15
27	Perform Quality Assurance	Tue 4/28/15	Tue 4/28/15
28	Identify Issues	Tue 4/28/15	Tue 4/28/15
29	Address Action items	Wed 4/29/15	Wed 4/29/15
30	Discuss Other topics	Wed 4/29/15	Wed 4/29/15
31	Participate in Monthly Performance Review Meeting	Thu 4/30/15	Thu 4/30/15
32	Publish Meeting Minutes	Fri 5/1/15	Fri 5/1/15
33	Prepare Monthly Meeting Materials	Fri 5/29/15	Mon 6/1/15
34	Define Project Schedule	Mon 5/25/15	Mon 5/25/15
35	Plan near term activities	Mon 5/25/15	Mon 5/25/15
36	Develop Deliverables	Mon 5/25/15	Mon 5/25/15

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Figure 4.4.1-26. Snapshot of a Sample Transition Plan.
The Transition Plan details the approach and timeline for transition in a step by step process.

This plan provides a step by step process for transitioning the system to a new vendor, and provides dates by when the transition activities need to take place. This detailed Transition Plan sets the stage for the creation of the Transition Checklist. The Transition Checklist, found in the following Figure 4.4.1-23, helps to track the items created in the Transition Plan to a more granular level of detail, indicating that appropriate action has been taken on each transition task.

The collaborative approach to project delivery means that we expect to work with Agency staff on a continual basis in order to help RAPIDS achieve its goals. This approach helps to ease the final transition process, in the event services are terminated for whatever reason.

System Documentation

As part of a system transfer, the availability and transfer of system documentation is crucial for the ongoing success of the project, regardless of the vendor. The first step in securing a successful transfer of system documentation is making sure that the documentation is kept up to date throughout the project lifecycle. As part of Deloitte's formal process for change to the system, we provide updated system documentation. By updating the documentation throughout the lifecycle of the project and by requiring Agency sign off on documentation changes, it alleviates the burden of verifying that the transferred system documentation is up to date and accurately reflects the system functionality.

The documentation method is standard across the project. We create detailed Software Requirements Specifications (SRS) for each major system component. These baseline SRS's are updated whenever changes are introduced into the system, and they include details such as use cases, driver flows, screenshots, and functionality matrices. This standard documentation across the project allows for easy transition of documentation, as the incoming vendor or Agency team has only one style of documentation to

Figure 4.4.1-27. Example of a Transition Check List.
A transition checklist highlights all major tasks that need to be undertaken during the course of the transition and indicates their level of completeness.

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understand and adopt. Furthermore, the Agency reviews documentation submitted and maintained by Deloitte, making them intimately familiar with the documentation process. The practices we currently use on the RAPIDS project position us for a smooth transfer of system documentation.

Transfer of User Acceptance Testing

Currently, User Acceptance Testing (UAT) is performed by the Agency staff. The resources who typically perform the UAT depend on whether the change is related to M&O or SMP. For M&O changes, the UAT team is comprised of the corresponding subsystem Agency track leads. During UAT, the defect resolution is tested to make sure the error has been corrected, and regression testing is performed to confirm the new code did not affect existing functionality. For larger SMP releases, the testing team is often comprised of Agency track leads from various subsystems. This method of UAT allows for other individuals to become more intimately familiar with the enhancements in other tracks, and it also allows for individuals that were not included in the initial requirements meetings to test the functionality without being as familiar with it.

Although the internal Agency staff currently performs User Acceptance Testing, it is possible that UAT may eventually be transferred to an external testing team. In this event, Deloitte is prepared to work with the new testing team to help them understand the scope of the UAT activities as well as the tool used to track UAT progress. Given our close collaboration with the Agency currently for UAT, the Agency also is well equipped to ease the transition process from internal UAT to external UAT.

System Conversion

As part of the Transition Plan, Deloitte identifies system components and data and determines the plan for transfer if any system conversion is required. System conversion may include transition to new hardware or software, such as the transition from one current configuration management system to another. Deloitte will include the steps necessary for a successful system conversion in the transition plan and checklist.

Subsection 4.2, Goal 2: Technical Approach

Goal 2: Technical Approach

The technical component should be thorough and sufficiently detailed to allow the Agency to fully evaluate proposed operations and to assure the Agency that, if the vendor is selected, RAPIDS will be maintained and properly documented.

Objective: To ensure RAPIDS is maintained and properly documented in regard to the following.

• Routine maintenance of all environments: The vendor should describe how it will provide the necessary support and/or maintenance and documentation required for the RAPIDS system of software, including but not limited to, code review, unit test, acceptance test, training region, and production.

• Emergency maintenance: The vendor should describe its process for providing emergency assistance to RAPIDS production site 24 hours a day, seven days a week.

• System changes/enhancements: The vendor should provide a detailed description of its system development life cycle methodologies and describe how it will manage necessary changes to RAPIDS.

• Software releases: The vendor should describe the system of controls and the support for new versions of the RAPIDS software.

• Software testing.

• Change Control: The vendor should fully describe its proposed Change Management Plan.

• Program migration.

• System management.

• Database administration.

• Staff support: The vendor should fully describe the staff support for conferences, maintenance meetings, telephone conferences, etc.

• System security.

• Tracking: The vendor should describe its plan for a system that would allow for conversion of all current and historical data from the current tracking systems.

• Network monitoring strategies.

Vendor Response:

Health and Human Services is a world where technology plays a critical role in the execution of the core departmental missions, the cost-effectiveness of program administration, and the delivery of vital services to West Virginia's citizens. It is with these aims and the ever-constant forces of change – innovative technologies, evolving business models, and transformative state and government policies – that Deloitte proposes a team and proven approach for the maintenance, operation, and enhancement of the West Virginia, Department of Health and Human Resources (DHHR) enterprise solutions. The proposed technical approach to maintain and properly document RAPIDS, as well as other DHHR enterprise assets, is based on common sense tactics to build a value mindset, institutionalize a value based service model, and deliver on targeted business outcomes.

It is also clear that you have an enterprise vision that includes the reuse of technology assets while consolidating data assets. This section is thorough and sufficiently detailed to allow you to evaluate how this technical approach is consistent with your vision and supports a broad, yet adaptable operational model.
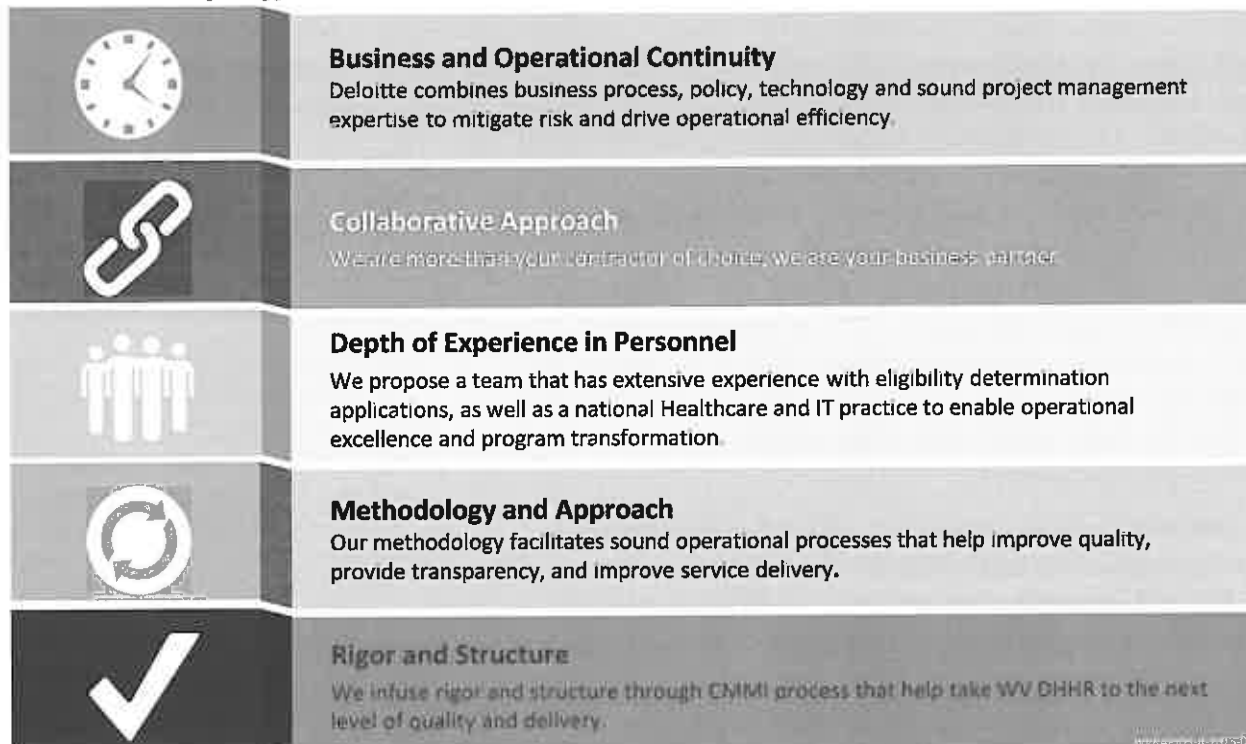
SECTION HIGHLIGHT

- An approach based on 35 years of providing M&O support of HHS systems comparable in size and complexity to the WV RAPIDS enterprise solution.

- Proven methodology and tools.

- Our Knowledge and unique insight of WV DHHR and its systems based on 20 years of being a valuable partner to the Agency, and delivering outstanding results throughout this period.

The following section presents our Value Level Management approach for ongoing maintenance and operations support followed by numbered sub-sections describing the DHHR objectives listed in your RFP: These sub-sections are:

4.2.1 Routine maintenance of all environments

4.2.2 Emergency maintenance

4.2.3 System changes/enhancements

4.2.4 Software releases

4.2.5 Software testing.

4.2.6 Change Control

4.2.7 Program migration.

4.2.8 System management.

4.2.9 Database administration.

4.2.10 Staff support

4.2.11 System security.

4.2.12 Tracking

4.2.13 Network monitoring strategies

As an experienced and trusted partner, Deloitte intends to be a catalyst to fully realizing DHHR's vision for an enterprise solution as well as providing quality IT services to DHHR. In addition to managing the maintenance and operations of enterprise assets, through collaboration and a structured approach the enterprise will institutionalize sound operational processes that help improve quality, provide transparency, and improve customer service. Our technical approach enforces this by placing a primary focus on continuous IT improvement and business outcomes.

Deloitte's Key Differentiators Enabling Ongoing WV DHHR Operations

Business and Operational Continuity
Deloitte combines business process, policy, technology and sound project management expertise to mitigate risk and drive operational efficiency.

Collaborative Approach
We are more than your contractor of choice, we are your business partner

Depth of Experience in Personnel
We propose a team that has extensive experience with eligibility determination applications, as well as a national Healthcare and IT practice to enable operational excellence and program transformation.

Methodology and Approach
Our methodology facilitates sound operational processes that help improve quality, provide transparency, and improve service delivery.

Rigor and Structure
We infuse rigor and structure through CMMI process that help take WV DHHR to the next level of quality and delivery.

Figure 4.4.2-1. Deloitte's Key Differentiators.
Our experienced staff leverage existing business and technical resources and extend them, while maintaining quality and improving efficiency.

We believe and have learned that a critical value-add to successful M&O is to keep the RAPIDS team (Deloitte and DHHR)up to date on the current environment while also providing insight for future considerations. We leverage our experience from other large, complex, Health and Human Services (HHS) enterprise solutions to explore options to further increase online availability and provide additional functionality.

A Strategy Enhanced by Value Level Management

Deloitte recognizes that our performance is measured by the objectives and business outcomes of our clients. We, therefore, support the identification, rationalization, prioritization, and justification around potential opportunities. Continuous feedback loops will allow innovative opportunities from domain professionals to be incorporated in planning cycles. Ongoing business case measurement and realization reporting are required for true outcome/value-based efforts. Our strategy provides the structure, process, and methods to define, rigorously track, and help enhance value to the agency.
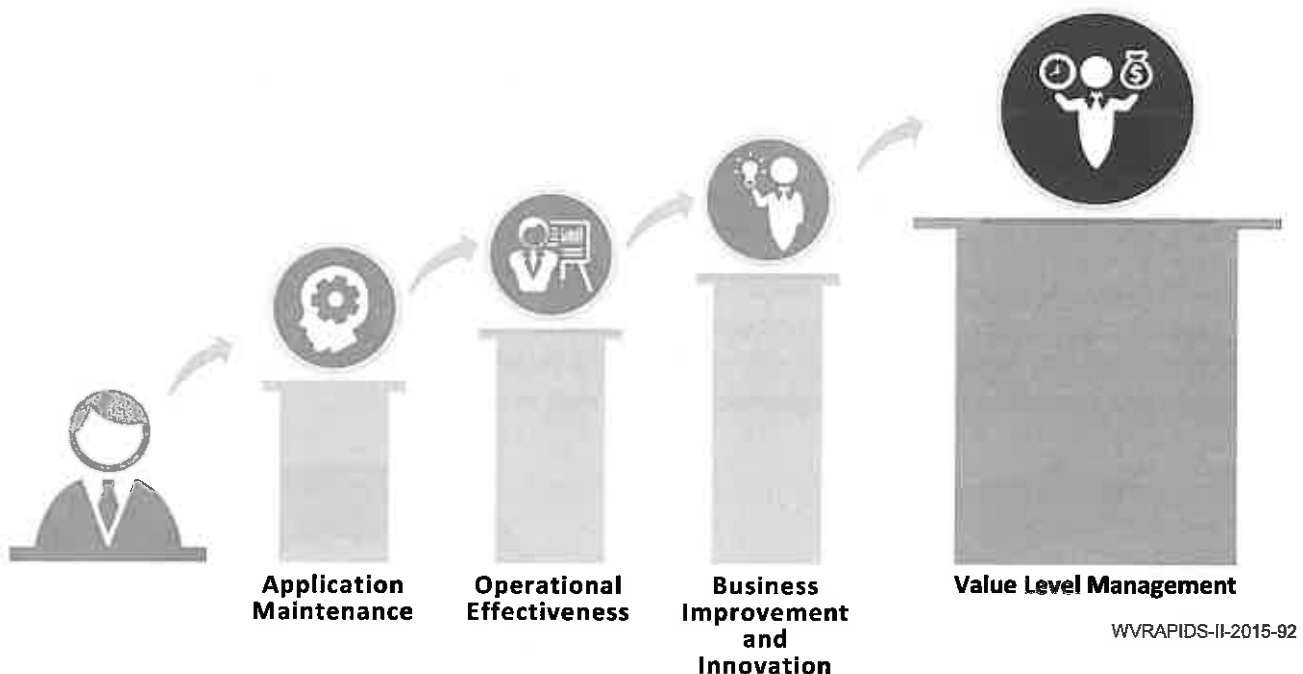

Application Maintenance   Operational Effectiveness   Business Improvement and Innovation   Value Level Management

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Figure 4.4.2-2. Ongoing Maintenance & System Support.
Value level management describes the objective and measurable value goals of ongoing maintenance and operations support Deloitte delivers to DHHR.

Application Maintenance

The core of the base level of support is performing corrective, adaptive, and preventive software maintenance across RAPIDS suite of applications, in addition to implementing the enhancements from needed initiatives and changes in policy. The scope of services defined for maintenance and operations not only includes application work requests, but also includes activities such as performance monitoring and tuning, source code changes for minor screen modifications, and the addition, deletion, or modification of data elements incorporated within the source code or within system reference tables.

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West Virginia
RAPIDS

Operational Effectiveness

The key to operational effectiveness is a drive to continuously improve the IT function and create better, smarter, faster applications and operations. Organizations at this level have had some success with continuous improvement of their underlying IT operations. They need to continue to pursue efficiency gains for IT, but also extend focus into business-oriented outcomes – identifying areas of potential value addressable through IT maintenance, management, and enhancements. The first step should be defining explicit metrics and proving to the business that the IT support organization can meaningfully drive value.

DISTINGUISHING FACTORS

Deloitte brings the rich Maintenance and Operations experience to WV:

- Deloitte currently maintains and operates 26 Eligibility Systems and 23 self-service portals throughout the country.
- 26 different states participate in our established client network, providing a ready platform for the exchange of ideas and lessons learned.

Business Improvement & Innovation

The end goal is to integrate business objectives along with IT objectives into the maintenance and operations model. The strategy is based on making practical decisions about application alignment, enhancements, and innovations that facilitate desired business outcomes. This is only possible when the organization has established operational effectiveness.

Application Development and Maintenance

Deloitte's methodology includes parallel processes for enhancement releases along with the maintenance and operations of existing applications. The parallel processes represent corrective, adaptive and preventative maintenance and operations activities in tandem with enhancement implementation. The following figure shows how maintenance and operations and the enhancement process work in parallel.
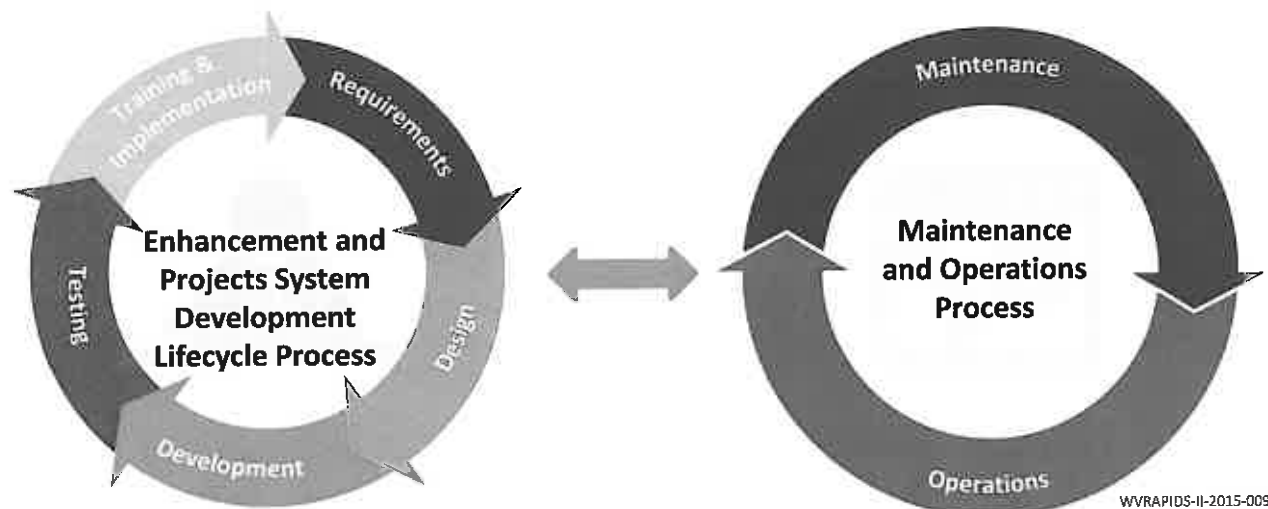

Figure 4.4.2-3. Parallel Activities for Regular Enhancement Releases along with Maintenance and Operations.

4.2.1 Routine Maintenance of All Environments

- Routine maintenance of all environments: The vendor should describe how it will provide the necessary support and/or maintenance and documentation required for the RAPIDS system of software, including but not limited to, code review, unit test, acceptance test, training region, and production.

Today's RAPIDS integrated eligibility solution consists of multiple supporting applications (e.g., Self-Service Portal, Worker Portal, Master Data Management, Enterprise Service Bus, etc.) and each application has multiple environments (e.g., development, integration test, user acceptance test, training, production). Numerous technologies and products are maintained to support the continuous improvement of the solution and the demands of the business. The proposed approach to routine maintenance incorporates tightly integrated maintenance activities and quantitative data to drive the efficient resolution of issues and a stable RAPIDS suite of applications. The following figure depicts the key activities necessary to provide ongoing routine maintenance services for the Agency.
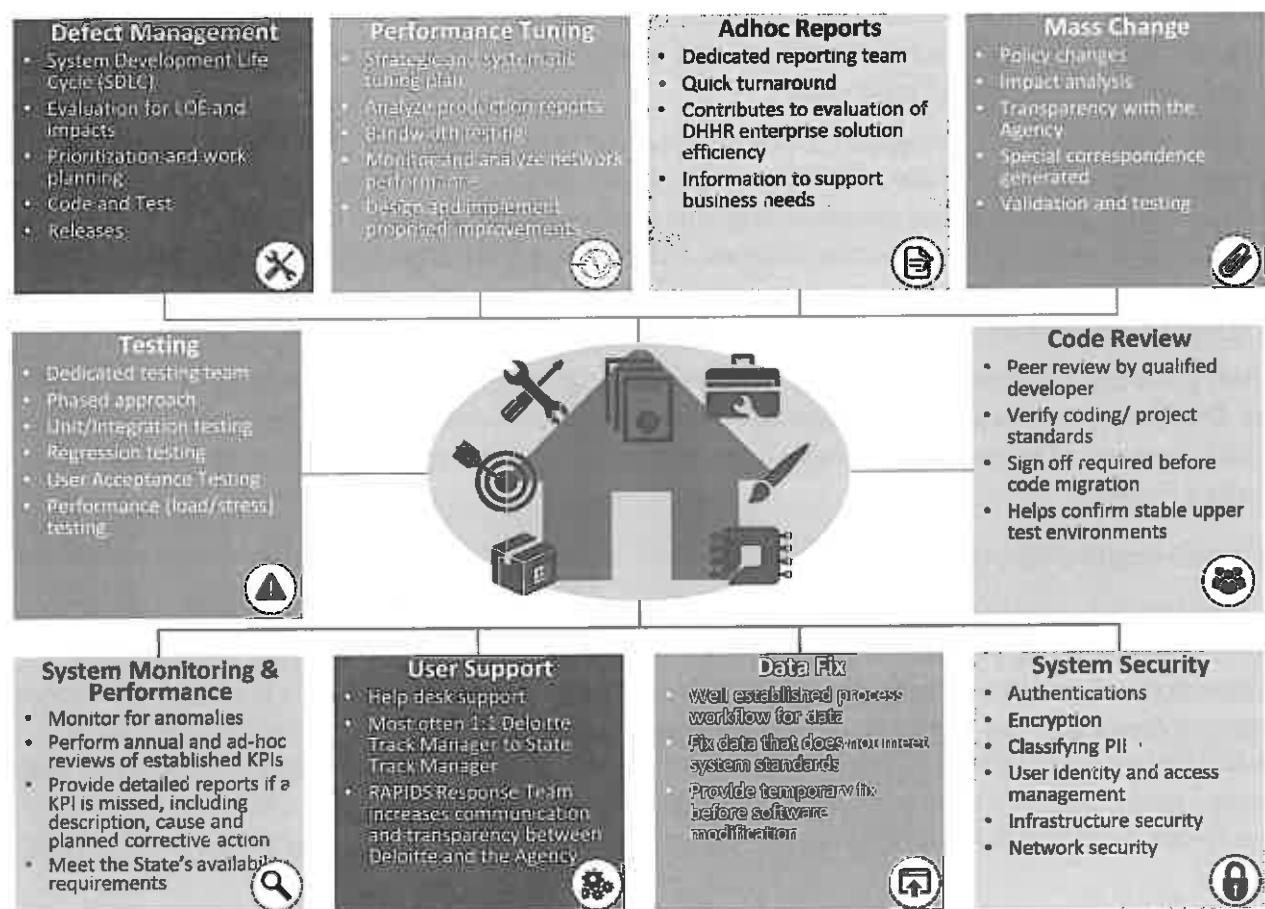
Figure 4.4.2-4. Key Routine Maintenance Activities.

Each of these activities has been elaborated on the following pages in greater detail to help better understand the activities and resources involved.

4.2.1.1 Defect Management

Defects are an inevitable part of software development for every project team—large or small. One of the critical success factors to effectively manage maintenance activities across systems is to provide access to defects and promote transparency within the agency. Defect management is essential for checking that critical services and benefits the department provides are not delayed as a result of an error in the system. Our current approach to defect management is based on our experience and supporting processes to provide a complete managed solution, focused on timely reporting, transparent activities and mutually agreed on prioritization for corrective changes.

Defects are recorded in the Application Lifecycle Management (ALM) tool and prioritized for a release in a weekly triage meeting with the Agency. Once a defect is reported, Deloitte analyses the defect and determines the root cause, impact and Level of Effort (LoE) for the solution. The RAPIDS project will be using JIRA as their ALM tool. JIRA makes defect tracking personalized and painless, so the team focuses their energy on what matters most; a solid production system and user experience.

Defects identified in lower environments (i.e., Development or Test) are generally fixed prior to promoting the software baseline to the next environment. Production defects are assigned to a release and bundled with other maintenance change requests and enhancements. The final scope for the release is published to the team and used for planning development and testing activities. Defect fixes are first tested by Deloitte in the integration test environment and then tested by the Agency as part of User Acceptance Test. The overall scope of the release is used to plan for and execute regression testing.

In certain situations, Production Defects may require the deployment of an Emergency Release to resolve critical issues. Emergency Releases follow an alternate release plan process consistent with the requirement for expediting the hand off between teams. Refer to **Section 4.2.2: Emergency Maintenance** for more details on Emergency Releases.

4.2.1.2 Performance Tuning

To operate at high levels, each of the DHHR enterprise components needs to be monitored and tuned. Deloitte collaborates with MIS and the Office of Technology in creating, documenting, and reporting system tuning processes that include defining the system maintenance procedures, scheduling system maintenance windows, upgrading software patches, archiving/purging databases, monitoring capacity, and performance testing of significant system modifications. The Deloitte DBAs are involved in assessing the performance of queries when the application teams develop new code or modify existing code. Our developers will work with DBAs to verify that the queries do not result in expensive table scans or Cartesian joins, which can degrade the performance of other processes.

Performance tuning is an important outcome of network and system monitoring. In order to successfully and efficiently maintain a high functioning DHHR enterprise solution, the team must first monitor and analyze many aspects of the system. Once data has been gathered and analyzed, design modifications are proposed in order to

maintain application performance standards. Refer to **Section 4.2.1.7: System Monitoring and Performance** and **Sections 4.2.8: System Management** for further details on Performance tuning.

4.2.1.3 Ad hoc Reports

Deloitte supports an ad hoc reporting process through which stakeholders can request data based on business needs. The Deloitte team collaborates with the Agency to understand the nature of the ad hoc reporting requirements and prioritizes them for the reporting team. The reporting team analyzes reporting requirements in priority order and determines if the data is already available through a standard report, the data warehouse/reporting solution or if a previous ad hoc report was developed for a similar requirement. If necessary, a custom query is developed and tested. When a similar report is requested repeatedly, the corresponding data will be made a priority for a new data warehouse report.

4.2.1.4 Mass Change

Updates to program policy or a change in Federal standards (e.g., cost of living adjustment for SSI benefits) may impact the eligibility or level of benefit that a citizen is receiving from a program. Rather than have Case Workers re-run eligibility for applicable cases, a Mass Change is executed to automatically update eligibility on applicable cases at one time. In many scenarios, downstream activities, such as the generation of special correspondences to affected citizens or the creation of ad hoc reports, may also be required. Deloitte supports the implementation of mass changes by working closely with DHHR leadership and policy specialists to define specific eligibility criteria and to run mass change programs to identify cases that would potentially be impacted by the change.

When mass change updates are implemented, each impacted assistance group is typically identified using ad hoc reports that allow workers to distinguish online mass change determinations from worker-initiated determinations. As part of the testing effort associated with a mass change, Deloitte identifies appropriate caseloads and performs several rounds of pre-determined test executions to validate the accuracy and assess impact. Deloitte collaborates with the Agency to plan, communicate, test, and implement mass change updates.

The Deloitte team collaborates with the agency to identify critical annual mass change activities, a sample list of such critical annual activities are listed below:

Annual/Fiscal Year Activity	Description
Auto issuance of Low Income Energy Assistance Program (LIEAP)	Annual no-touch initiative to automatically issue LIEAP benefits for qualifying households
COLA Update	Annual update from SSA for RSDI income and Medicare premiums processed via the BENDEX interface
Auto issuance of School Clothing Allowance (SCA)	Annual no-touch initiative to automatically issue SCA benefits for qualifying children
SNAP Payment Standards Update	Annual update to payment standards, income limits, and deductions that results in a change to benefits

Figure 4.4.2-5. Sample Annual Maintenance Activities.

Deloitte implements periodic mass change that update eligibility and benefit determinations on all or part of the RAPIDS caseload. We also produce mass mailings that notify customers of information pertinent to their situation, based on State policy and requirements.

Building Success in Mass Change through Proven Processes

Our structured approach to mass change and mass mailings are optimized for reference table, eligibility parameter, and software enhancement mass changes. But each change is unique, and we employ effective planning, selection criteria, and checkpoints with the State. This not only provides correct benefits and properly formatted accurate communications; it also helps reduce the burden on the on the DHHR administration and field staff (case workers).

The critical components of a successful mass changes and mass mailings are depicted in the following figure.
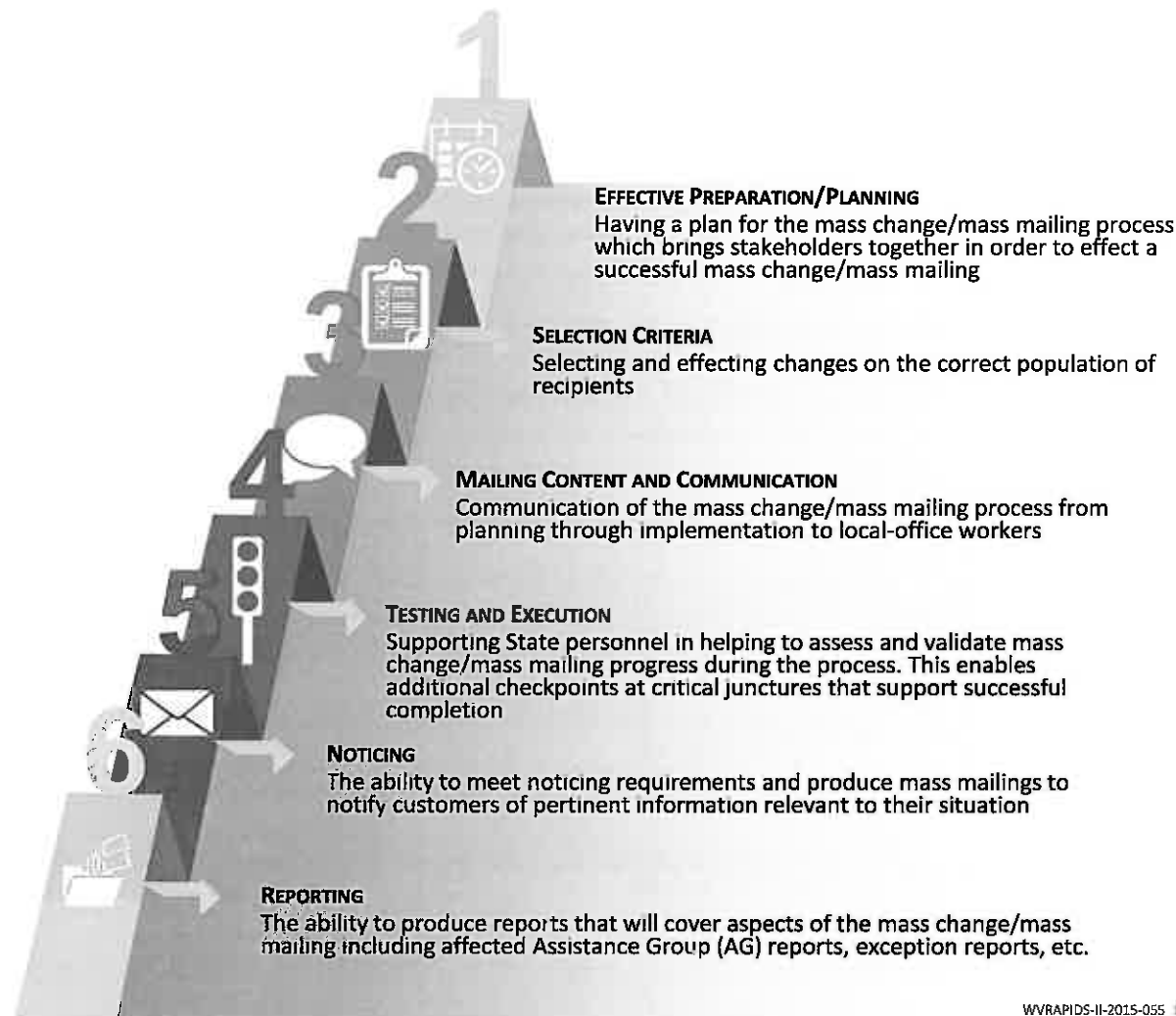

EFFECTIVE PREPARATION/PLANNING
Having a plan for the mass change/mass mailing process which brings stakeholders together in order to effect a successful mass change/mass mailing

SELECTION CRITERIA
Selecting and effecting changes on the correct population of recipients

MAILING CONTENT AND COMMUNICATION
Communication of the mass change/mass mailing process from planning through implementation to local-office workers

TESTING AND EXECUTION
Supporting State personnel in helping to assess and validate mass change/mass mailing progress during the process. This enables additional checkpoints at critical junctures that support successful completion

NOTICING
The ability to meet noticing requirements and produce mass mailings to notify customers of pertinent information relevant to their situation

REPORTING
The ability to produce reports that will cover aspects of the mass change/mass mailing including affected Assistance Group (AG) reports, exception reports, etc.

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Figure 4.4.2-6. Structured approach to Mass Change.

Mass Change/Mass Mailing Process

Ordinarily, the architecture behind running mass changes/mass mailings is fairly static, although periodic enhancements and requirement changes may be required. Deloitte has been operating the Mass Change/Mass Mailing requirements on the RAPIDS project for the past 17 years. We have – alongside DHHR staff – developed the proper queries for Mass Changes which are run, validated and adjusted, based on new requirements or enhancement requests. In case of a change, a requirements and design phase will be kicked off where Deloitte, in collaboration with the Agency, define the exact needs for the change. The definition of the selection criteria is the most important phase of the Mass Change, and the main aspect that goes into testing of the UAT Mass Change run. After development and a UAT run of the query, Deloitte and the DHHR RAPIDS staff will validate the cases and confirm that notices are being produced appropriately. Finally, if it is determined necessary, a test of the Mass Change report will be run.

Effective Planning and Requirements Gathering

Planning and requirements gathering for a standard Mass Change follow a proven process in which the requirements and selection criteria have already having been defined. Although, when we do an ad hoc or irregular Mass Change, a full life-cycle of software development must be initiated. Informal requirements meetings, official JADs and/or documentation of requirements in a SRS may be required for irregular Mass Changes and have all been used in the past.

Selection Criteria

The first active, technical step of a mass change is producing a query or queries to identify those cases or individuals affected by the mass change. These queries have various levels of complexity based on the type of mass change being initiated and the requirements specified in the planning steps.

- **Scheduled Mass Changes.** Scheduled mass changes ordinarily have complex selection criteria; however, these criteria were defined years ago and the RAPIDS team has executed these mass changes dozens of times since.

- **Reference Table Mass Changes.** Again, reference table mass changes, such as the COLA mass change, are an ordinary maintenance activity for the RAPIDS Deloitte team.

- **Eligibility Program Change Mass Changes.** Eligibility program mass changes vary in complexity. Such mass changes are made when a policy change to eligibility requires a change in eligibility code and a correction to benefits based upon such change.

- **Other ad hoc Mass Changes.** Other ad hoc mass changes are rare and can also vary in scope and complexity. The aforementioned ACA auto-enrollment mass change is an example of a complex one that was executed with very few lingering issues.

Mailing Content and Communication

This phase of the mass mailing is important during eligibility program and ad hoc mass changes. This process is to confirm that the mailing will be clearly understood by the intended recipients. Deloitte collaborates with the Agency's dedicated staff to determine the format, font, text size, etc. are accurate and come out on the notice formatted properly so that it will be clearly understood by the intended parties. Those mass changes that are part of

the routine maintenance of the system have predefined templates and only need to be re-verified before running the mass mailing.

Testing and Execution

From inception through testing, mass changes and mass mailings are defined and developed by Deloitte staff alongside Agency stakeholders. There are constant informal checkpoints for clarification and requirement explanation. Further, formal integration testing by Deloitte staff and user acceptance testing by Agency staff and documentation of both provides a cohesive record and audit trail of the development of the mass change through the systems development life cycle.

Testing a mass change/mass mailing has the same critical dependency as any other software change. Each mass change/mass mailing can be particular in the selection criterion, process and the content. Standard Unit and Integration testing procedures are followed just as with any software implementation. The testing procedures outlined in **Section 4.2.5: Software Testing and Quality Assurance** are adhered to for Mass Change, although mass changes often represent merely an implementation rather than new software, validation steps play a more important role in the authentication process.

After completing our unit and integration testing, we work with DHHR staff to execute and validate the mass change/mass mailing in User Acceptance Test (UAT) environment. Once the mass change/mailing is completed in production, we verify results by confirming change counts (hash totals) and sample validation of mailing contents. We understand that what is produced from mass change/mass mailing is seen directly by customers, so this verification process is critical for the successful implementation of any mass change process.

Reporting

The final step of a mass change/mass mailing is reporting on the results of the program. Generally, reporting requirements for such mass changes are relatively simple, but in the cases of eligibility change and ad hoc mass changes reporting requirements must be defined and documented ahead of time. Final metrics of the number of cases and individuals for which the mass change/mailing was completed as well as any pertinent metrics are included with any other metrics required by the Agency. These metrics are usually communicated via email by the Deloitte Mass Change Track Manager to the relevant staff within the Agency.

In short, through the proven process, Deloitte has developed alongside the Agency over the past 17 years of running the various kinds of mass changes and with the experience Deloitte brings from numerous other projects, mass changes and mass mailings are understood as a critical part of the business process. Together, our combined knowledge of running such processes in West Virginia significantly mitigates many risks associated with touching potentially hundreds-of-thousands of cases and individuals in one single business process.

4.2.1.5 Testing

Broad and efficient testing is critical to successfully deploy a modification into production. In addition to conducting testing in multiple testing environments, our approach includes, Unit, Integration, Regression, Performance, Vulnerability and Volume testing. Furthermore, Deloitte is proposing a dedicated testing team to promote consistency throughout the testing environments and into Production. Refer to **Section 4.2.5: Software Testing** for more details on our testing approach.

4.2.1.6 Code Review

Code reviews are an integral part of the development and quality assurance processes. Modified code goes through a rigorous code review process, including a structured peer review that allows for a senior developer to validate coding standards are met. Prior to coding, Deloitte will conduct architecture and design reviews to verify that our programmers have the proper input to properly structure their programs. For example, if the design review team feels a particular component should be developed as a reusable service, the design input would identify that before a programmer mistakenly codes the logic into a single use program. This input is critical to avoiding work and rework of programs.

Once coding is complete and components will be attached to the PCR/Issue in the ALM tool, the analyst will change the status of PCR from Work in Process to "Initiate Code Review." The system will then assign each program to an analyst in the code review team. The code is reviewed comprehensively against a detailed checklist of coding standards before being approved and then promoted to the integration environment where it is tested. The following figure shows the current code review process using the ATS ALM tool.

Code Review Process

| Change status from WIP to "Initiate code review" | Code review activity assigned | Visit associated components | Compare old and new version | When complete, approve the code review in ATS |

- Coding completed
- Attached components to the PCR in ATS

- Code Review Team (Random selection by the system)

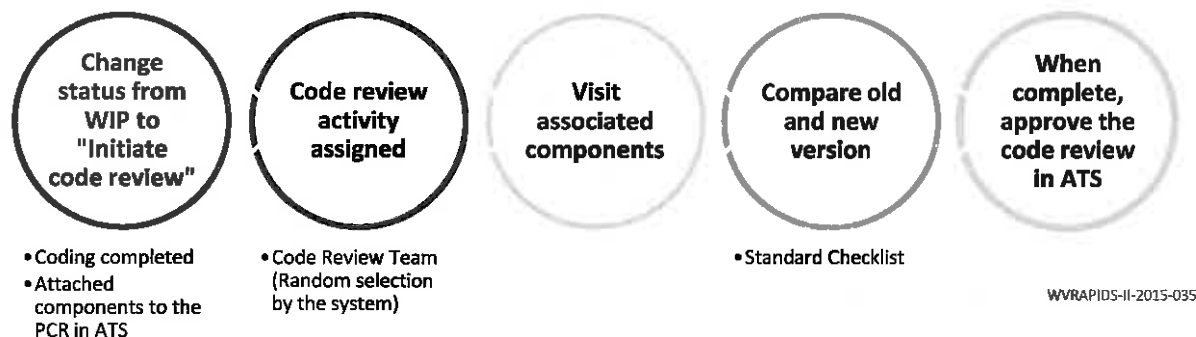- Standard Checklist

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Figure 4.4.2-7. Code Review Process.

During these reviews, the code is inspected for things such as conformance to standards, proper coding constructs, comments, error handling, tracing, maintainability, and performance. Code sign off is required prior to code migration to the upper environments.

In addition to peer code reviews, we leverage automated testing tools such as Sonar and StyleCheck to efficiently and effectively evaluate the quality of code. During this process Deloitte will conform to the State's Information Technology Procedures, which include but are not limited to, data set naming conventions, transaction naming conventions, and program naming conventions. Deloitte has extensive experience working with the Agency and has followed existing procedures and, when appropriate, defined standards for the RAPIDS system. Moving forward, we will continue adhering to naming standards for such components as data sets, transactions, and programs.

Standards and Conventions in Practice

One example of the naming conventions employed by RAPIDS are related to the databases. The Deloitte DBA team maintains naming standards when creating new databases, table spaces, database links, directories,

backups, and other database objects. The RAPIDS table names and column names are named to convey its functional purpose allowing users to navigate to the table names promptly and develop ad hoc SQLs. The table names in the RAPIDS database have the following pattern:

T[xxxx]_table_name,

Where:

[xxxx] – is table number followed by table name

Table Type	Naming Convention	Example Tables	Details
Application Tables	T[xxxx]_table_name	T0001_CASE T0011_INDIVIDUAL	Case and Individual application tables.
Framework Tables	TF[xxx]_table_name	TF001_PAGE_DTL TF002_PAGE_ELT_DTL	eRAPIDS Framework tables used by web architecture.
Archival Tables	TA[xxx]_table_name	TA026_AG_ELIG	Archival table used to archive T0026_AG_ELIG table.
inROADS Tables	TI[xxx]_table_name TN[xxx]_table_name TR[xxx]_table_name	TI001_APL TN017_CS_DSGN_PAY TR001_APL	The second characters I, N, R represent the inROADS tables.
Reference Tables	T[xxx]_RT_table_name	T0280_RT_TBL_STRU T0281_RT_VER_DES T0282_RT_CUR_DATA T0283_RT_FIELD_DES T0311_RT_TOT_DATA	These tables store RAPIDS reference table structure and its contents. These are used as look-up data in online and batch applications.

Figure 4.4.2-8. RAPIDS Database Naming Standards.

4.2.1.7 System Monitoring and Performance

Environment and application monitoring is essential for mitigating risks and proactively addressing system constraints before they can become performance issues. The Deloitte process calls for system monitoring and for establishing a standard action plan for when key system metrics reach established limits.

High performance is an important component to a mission critical solution such as RAPIDS. RAPIDS consists of a diverse platform built upon legacy Mainframe applications, a DB2 database, stored procedures, Java-based web applications, a rules engine, distributed Enterprise Service Bus (ESB) based application components, and a master data management solution. This makes performance monitoring and tuning a complex task. In this section we describe our approach to "developing the solution for high performance" and "monitoring and addressing performance-related issues".

The following definitions are used to further elaborate and establish Deloitte's approach for meeting the State's performance requirements **(RFP Subsection 5.8)**:

1. Response times are exclusive of any telecommunications time on the network or queuing time in the host and are defined as: the total amount of time that a transaction takes to complete processing in the central

processing unit (CPU). On the mainframe, this time is measured from the time a transaction enters the CPU and leaves the CPU which is reflected on the daily TMON CICS report. Print commands are measured by the elapsed time after the command is given to print a screen until it appears in the appropriate queue.

2. Whenever measurements point out that specific transactions are not meeting their respective performance requirements, Deloitte will work with the Agency to determine the cause of and the solution to the non-performance. Furthermore, Deloitte will work with the State to improve functionality to achieve the most cost-effective use of the mainframe network.

3. Deloitte will measure and evaluate the transactions that fail to meet the ninety-five percent (95%) standard and to present the results of the evaluation to the Agency. The evaluation will address efficiency of code, complexity of the transaction, and user requirements. If the efficiency of code or some other application-related problem is determined to be a cause of the performance problem, Deloitte will document the corrective action to be taken and will make the changes in accordance with the documented corrective action plan.

4. Should the State engage a third party for system evaluation purposes, Deloitte will work with the State and the third party to identify resulting performance improvements. Upon mutual agreement between Deloitte and the State of the corrective action to be taken, Deloitte will complete the state-recommended changes, at no additional cost, to maintain the system performance within the agreed thresholds set by you.

DID YOU KNOW?

Deloitte has proven track record of providing maintenance and Operations:

- Deloitte's maintenance and operations approach has been proven to promote stable operations in other large states.
- Active maintenance in Texas and Michigan supports more than 250 million combined online transactions per month.
- We average a combined 96 percent standard of promptness (SOP) across all IE programs.

5. Deloitte and the State will work together to develop and agree on the criteria for measuring and evaluating the response times for inROADS and Web-enabled aspects of RAPIDS. For example, the following will have to be considered and agreed to be excluded from the response times:

   a. Time required for data transmission to and from the application server. The data transmission time is dependent on the State Network and not within Deloitte's control.

   b. Time required to execute services external to the RAPIDS system (e.g. Federal Data Services Hub), which are not within Deloitte's control.

Performance Centric Development

Deloitte uses established standards, processes, tools, dashboards, etc. for improving system performance. These standards and processes are integrated with software development methodologies deployed by Deloitte on variety of large enterprise systems. Deloitte's approach to meeting performance and response time requirements is a continuous four-step process as described in the following graphic.

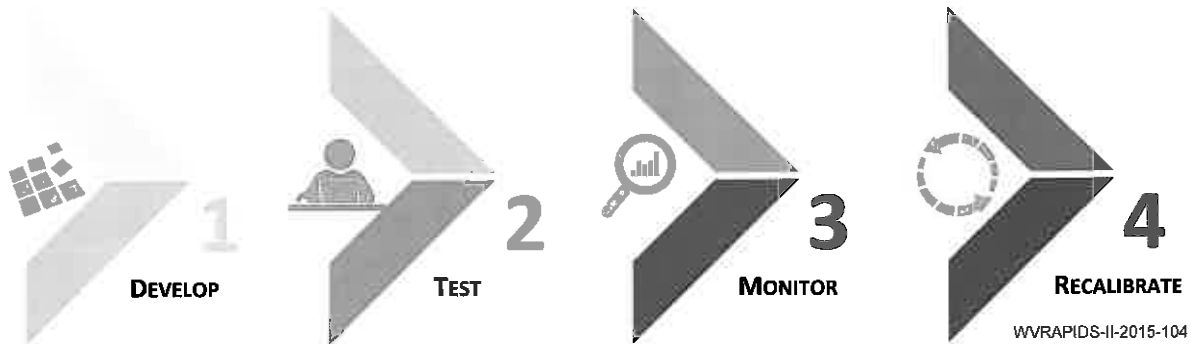## Deloitte's Performance and Response Time Requirements

Figure 4.4.2-9. Standard Monitor and Recalibration Process.
Standard performance improvement processes are built into the development methodologies specified by EVD for SI which defines standards and guidelines for performance improvement, monitoring and recalibrations.

Develop to Standards

Development activities undergo mandatory code and SQL reviews. These code reviews are engrained into the development process for application components including web pages, web services, programs, legacy code, and procedures. This helps in establishing that developed applications are using the efficient data retrieval and manipulation mechanism to meet set thresholds and standards. This also helps in testing the code and database queries for performance and fine-tuning. The software components are unit tested during the development stage. This helps to find and address performance issues before software components are readied for integration testing.

Rigorous Tests

The application programs and integrated code are tested thoroughly during the Integration testing phase of the project. This process often identifies remaining performance issues that were not identified and rectified during development. Additionally, acceptance test provides a view into actual user interaction and response time in user acceptance test environment which is similar to production. Response limits set on the acceptance testing environments allow for instant feedback to the developer on bad performing queries.

Specialized performance tests are conducted when significant enhancements or systems are brought online and the State believes that performance could be impacted. Performance tests attempt to simulate real-time load to identify performance issues only visible during high system usage.

Proactive Monitoring

Deloitte's technical team closely monitors the system and component level performance statistics. The technical team monitors system performance for online transactions, web servers, database queries, ESB, distributed services and batch jobs. This is critical for system health, availability, and functional delivery required to meet the Agency's business goals and objectives. The technical team also generates program-level performance statistics reports to capture performance metrics from daily operations. The reports are generated based on average elapsed time, average response time, total number of transactions executed, average CPU time, total CPU time, and the percentage of CPU of TOTAL CPU time. The technical team identifies resource intensive programs to set up special monitoring for early detection of performance issues.

System Parameters Monitoring

We will leverage Deloitte's EVD for SI methodology to establish operations management procedures to define, document, and perform monitoring operations. Deloitte uses a monitoring strategy which keeps track of a number of relevant system parameters and then assimilates monitoring information on these parameters to present point-in-time visibility into performance of the system. This monitoring strategy divides the monitoring activity across two broad categories:

- Operational monitoring on day-to-day basis to keep track of relevant system parameters

- Exception monitoring done to collect additional data to help diagnose a performance issue

System Parameters	Monitoring Benefits
DB2 database connections, lock information, buffer pools, partitions etc.	• Visibility into the DB2 response times, CPU usages and cost monitoring. • Identification of bottlenecks e.g. disk space, CPU, memory, system laziness • Active eyes on locking, availability and effective use of shared resources
Server performance	• Information on server connectivity, loading and utilization of distributed parallel servers, CPU/memory usage, etc. • Information on network traffic, file descriptors, requests per second, thread counts etc.
Application performance	• Transaction processing, success and failure rates, throughput etc. • Application logs management, resources, uptime, utilization, error rates and bottlenecks. • Interfaces use, availability and performance
End user performance	• Peak volumes, average/ mean response times, 95% line, active/ passive user volumes • User distribution, service call frequencies, page utilization, and most used and least used pages

Figure 4.4.2-10. Enterprise System Parameters associated with System performance.
Deloitte is committed to monitoring system parameters, configuration management, database management and other activities to provide accurate and effective insights to the system health and performance.

Deloitte's technical team uses a mix of tools to monitor different system parameters and performance data. This helps in generating dashboards and reports to generate a point-in-time visibility report. This report will be regularly shared with the Agency for continuous system health and performance appraisal.
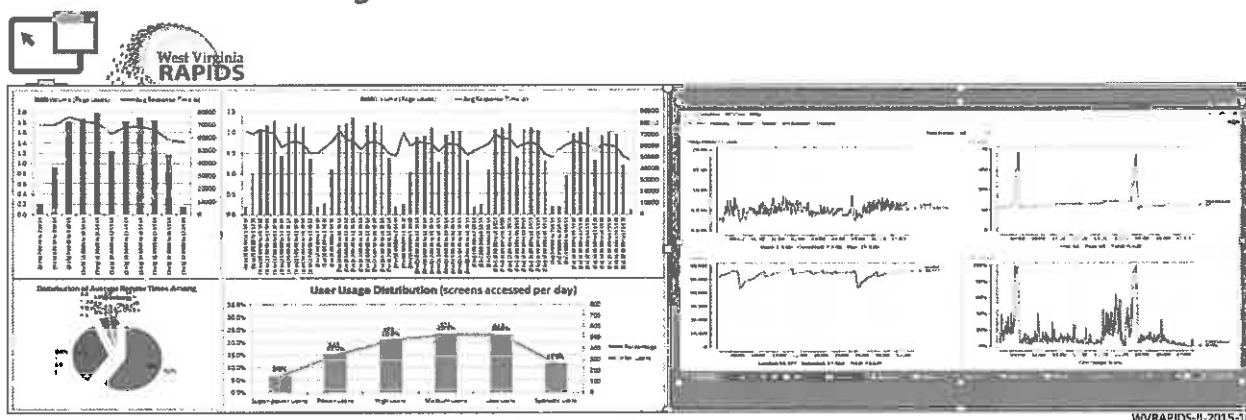
Web Server Monitoring

Figure 4.4.2-11. Web Server Monitoring, Load and Resource Usage in RAPIDS.
Established processes, advance and customized tools provide accurate pulse of the different layers in the enterprise systems. This helps in establishing and meeting performance expectations for enterprise-scale application systems.

Deloitte's proactive monitoring approach provides useful system performance insights which can help detect performance issues. These insights also guide maintenance and operations activities to identify potential performance issues. Our approach leads to preventive system maintenance. The technical team conducts preventive maintenance activities such as DB2 tuning, disk space checks, log backups, cache management, system security, vulnerability, checks etc.

The corrective maintenance helps in taking appropriate administrative actions to correct issues which may impact system performance. The corrective activities such as patch deployments, system upgrades, etc., help the system grow and mature while performing within thresholds set by the Agency.

Applied Tools and Technologies

The following table describes some of the advanced tools we will use for proactive system performance monitoring. Some of these tools are Mainframe based and provided by the Agency. The other tools are based on open source utilities and customized by Deloitte's technical team to suit the needs of RAPIDS application system.

Technology	Usage
STARTOOL (SYSTAR)	Used by analysts for browsing flat files and data sets on the mainframe utilized to monitor mainframe response times
Platinum DB2 Suite	Provides for database access to DB2 on the mainframe for team members supporting RAPIDS maintenance
TMON CICS/ DB2	DBAs use this in validating and monitoring CICS and DB2 activity
j-Console	Used to monitor memory and CPU usage on the web servers
Custom Java/ JMX	Used to capture and communicate the production statistics from web application servers

Technology	Usage
Boomerang	Used to capture periodic system trends and usage by end users, the user distribution, call volumes, error rates etc.
NEWRELIC	NewRelic offers a product suite for performance monitoring of enterprise application systems. Although it is not used at RAPIDS currently, Deloitte has used this tool for several comparable Integrated Eligibility solutions in other States and agencies. In order to measure and monitor system performance for SLA compliance Deloitte realizes the need to work with DHHR / OMIS to implement a State (DHHR/OMIS) purchased/licensed instance of NewRelic on RAPIDS.

Figure 4.4.2-12. Technology Matrix.
Standard tools and technologies are used to measure system performance matrices. Online/batch performance is analyzed using monitoring tools for DB2 and Mainframe. These tools help facilitate the analysis of Input/Output (I/O), locking waits, paging constraints, CPU utilization, channel and device utilization, and database access paths. Advance JAVA-based tools and utilities are used to monitor the web server performances, CPU and memory usage, load volumes and response times.

Recalibrate

Based on the results of the extensive monitoring, Deloitte's technical team identifies potential problem areas or performance bottlenecks. This includes the components that are consuming high CPU times or high elapsed times. These programs are then reviewed for changes to improve their performance. If the technical team identifies changes, an incident is created. The Agency is apprised of the performance incident which is then analyzed for prioritization and proper resolution.

Performance Issue Resolution

Deloitte will work with the Agency to communicate performance related issues where system performance does not meet the criteria set by the Agency. A root cause analysis will be conducted and a remediation plan will be formulated for the Agency's approval. Once the remediation plan is approved, Deloitte will execute the remediation steps and technical team will continue to monitor and communicate the effectiveness and overall results of the resolution to the Agency.
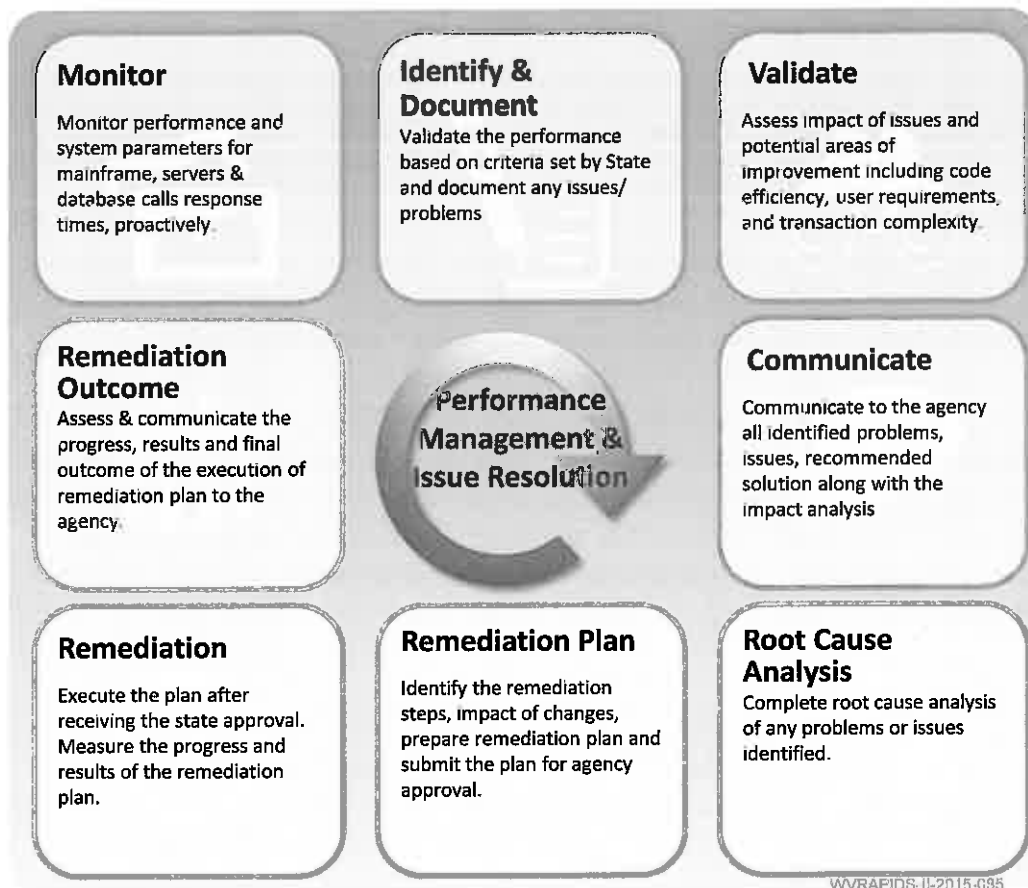
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West Virginia
RAPIDS

Performance Issues Resolution Process

Monitor

Monitor performance and system parameters for mainframe, servers & database calls response times, proactively.

Identify & Document

Validate the performance based on criteria set by State and document any issues/ problems

Validate

Assess impact of issues and potential areas of improvement including code efficiency, user requirements, and transaction complexity

Remediation Outcome

Assess & communicate the progress, results and final outcome of the execution of remediation plan to the agency.

Performance Management & Issue Resolution

Communicate

Communicate to the agency all identified problems, issues, recommended solution along with the impact analysis

Remediation

Execute the plan after receiving the state approval. Measure the progress and results of the remediation plan.

Remediation Plan

Identify the remediation steps, impact of changes, prepare remediation plan and submit the plan for agency approval.

Root Cause Analysis

Complete root cause analysis of any problems or issues identified.

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Figure 4.4.2-13. Performance Issues Resolution Process.
Performance-related issues are identified and documented. Root cause analysis is conducted to identify the problem areas and to help devise a remediation plan.

Performance Statistics

Deloitte takes system and mainframe response time improvements and cost reduction very seriously and takes steps towards meeting these standards. Deloitte realizes the importance of the performance requirements for application system, user transaction types as well as Mainframe/CPU response times. We have demonstrated success in reducing average Mainframe CPU response times at RAPIDS, further demonstrating our ability to continue to meet mainframe and system response time and performance expectations.

Average Screen Response Time for August 2015
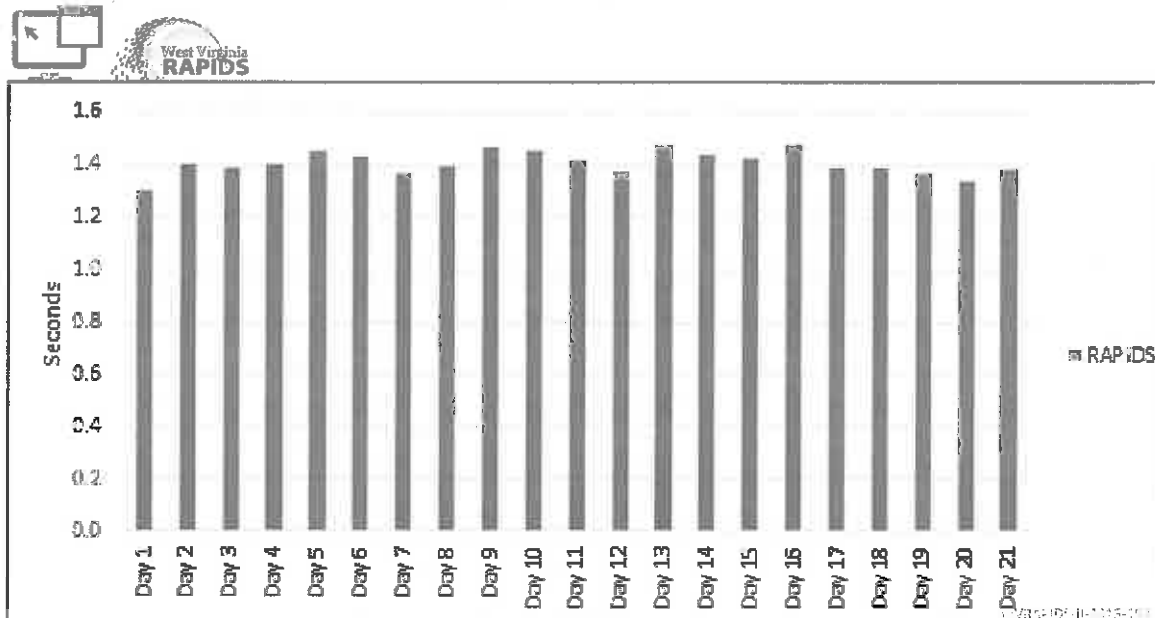
Figure 4.4.2-14. Daily Average RAPIDS Response Times.
Deloitte routinely monitors a variety of performance-related reports including the one shown here that compares daily response time metrics. When a problem appears, we work diligently to understand the cause and perform remediation if under our control, or provide insights and/or suggestions if outside of our control.

By combining performance oriented design and development during the Software Development Life Cycle (SDLC) and proactive monitoring of the production application for response time issues, Deloitte will continue to provide an enterprise application which continuously exceeds the performance requirements set by the Agency. As a result, less time is spent on post-production performance issues fixes and more time is spent on enforcing standards during the development and test phase. Our approach to performance is proactive versus reactive, and we look forward to building on this history of success.

In addition to our rigorous monitoring activities, Deloitte will also schedule annual and ad-hoc KPI reviews with the Agency so the SLAs are continually accurate and optimal for the state. While we strive for all of our KPIs exceed expected values, in the rare occurrence that one is not met, Deloitte will provide the Agency with a detailed analysis of the anomaly. This will include, but is not limited to: the missed KPI, a full description of the issue, the cause of the issue, risks related to the issue, a resolution for the issue (including failed solutions implemented prior to resolution), as well as the proposed corrective action going forward to avoid missing the KPI in the future. Deloitte will submit this report and will only implement the proposed corrective action upon receiving approval by OMIS.

4.2.1.8 User Support

Deloitte works with the Agency to support communications with the user community and to respond to questions, concerns, and technical issues as they arise. Regardless of the channels of communication, the goal is to confirm that the issues are addressed efficiently. Not all issues can be handled by the Help Desk staff, especially when dealing with issues of a technical nature. In such cases, we closely support direct communication with end users through telephone conversations, IM and emails by the Deloitte team and the RAPIDS OMIS staff.

To further support the field staff, Deloitte will continue the RAPIDS Response Team (RRT) initiative. The RRT allows the project to gather firsthand accounts from the people who use the system. Refer to **Section 4.2.10: Staff Support** for more on User Support.

4.2.1.9 Data Fix

In certain instances, due to the complexity of the eligibility rules, case structures and information capture and validation processes in IV-A/IE systems, the data residing in the database needs to be corrected as it does not conform to system standards. Deloitte's approach is to identify the source of the data integrity issue, make code modifications to resolve the issue, coordinate the UAT, and obtain approvals to deploy the code modifications in production. Deloitte, at times, uses data fixes to ease the urgency of software modifications, thereby allowing more time to provide a corrected code.

Deloitte supports application related data fixes in each of the environments. Data fixes are executed for a number of reasons, including:

Develop Application Related Data Fixes activities	Deloitte's approach to Develop Application Related Data Fixes
Application Configuration	• Reference table data to drive application drop down values, reference table code/description combinations, business rules, rates or criteria ranges used to make business decisions. • "Day Zero" or seed data that is required to allow the application to function properly. This could be altering data in structures that house screen prompts that are used to dynamically generate web pages.
Data Corrections	Periodically, application issues, end user data entry errors or incorrect business decisions need to be rectified by natively altering the data in the database.
Functionality Activation	Application "driver" tables are used to determine if a user should be presented with certain functionality. This is typically used during a phased rollout in order to limit new functionality to a finite user community. Alterations to values in the table would support the rollout of functionality to additional users.

Figure 4.4.2-15. Deloitte's approach to Develop Application Related Data Fixes.

Deloitte reviews the data fixes that are performed to identify potential system defects and initiate a defect request to address code change. This on-going task minimizes risks and reduces the number of existing defects that may be in the system but not yet identified.

4.2.1.10 System Security

Keeping the system secure and restricting data to only authorized users is a critical system and operational requirement. Deloitte has processes and tools in place to support network security, infrastructure security, data security, as well as authorization and authentication controls. The State will be responsible for provisioning the required security hardening (e.g. operating system, application server, etc.), which are in compliance with CMS/NIST 500-53 hardening requirements.

Deloitte staff are required to stay up to date on needed DHHR security trainings in addition to the Deloitte training they receive.

Refer to **Section 4.2.11: System Security** for more on our approach to system security.

4.2.2 Emergency Maintenance

RFP Reference: Attachment A, page 14

- Emergency maintenance: The vendor should describe its process for providing emergency assistance to RAPIDS production site 24 hours a day, seven days a week.

To continue sustaining high availability times, the Agency needs around-the-clock emergency response capability from its maintenance and operations vendor. The DHHR enterprise applications support mission critical business processes that need to be routinely monitored and proactively managed to avoid unnecessary downtime. The type of support required is dependent on the type of problem that has been identified. In order to fully support Production systems, all three of the following dimensions of the Deloitte team are required.

Deloitte Team	Role in Emergency Maintenance
Functional	Monitor and Resolve RAPIDS business issues that end users may be facing.
Technical	Monitor that the servers, environments, ESB, MDM and database platforms are calibrated for efficient performance and functioning smoothly and resolve technical issues with assistance from OMIS and OT.
Operational	Monitor batch cycles and Resolve batch operations issue for timely processing.

Figure 4.4.2-16. Emergency Maintenance Roles and Responsibilities.

The Deloitte team is organized and committed to providing Production support 24 hours, seven days a week. In doing so, we will respond promptly to calls that are made during the workday and provide a call tree for getting support outside of normal business hours. The designated contact will engage the applicable people from the support team to resolve the issue.

We currently follow a structured and effective approach to Emergency Maintenance that is depicted in the following diagram.

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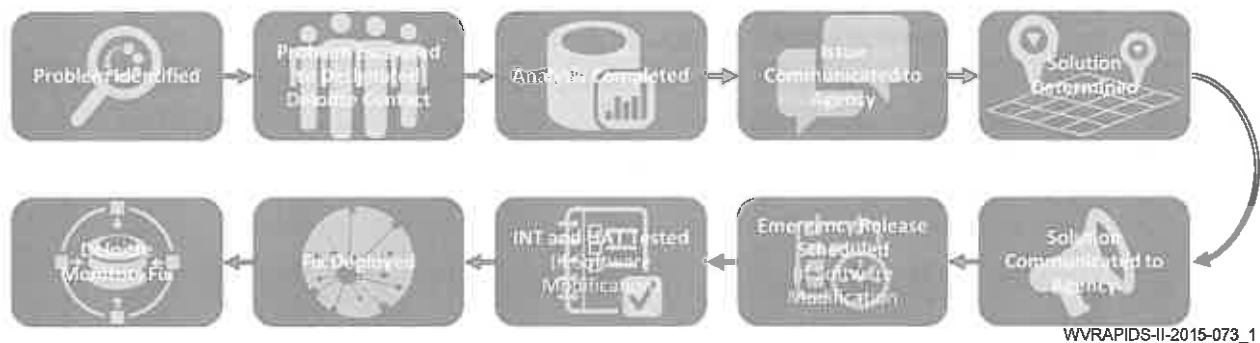
Figure 4.4.2-17. Emergency Maintenance Process.

The steps are further elaborated in the following table.

Step	Description
Problem Identified	Problem Identification occurs when a project stakeholders identifies an issue with the system. A problem can be reported to through the help desk, DHHR Track Lead, operations team or project leadership team.

Step	Description
Problem Escalated to Deloitte contact	Once Deloitte has been notified of an issue, the Deloitte team determines the subject area and escalates the issue to the appropriate track manager.
Analysis Completed	The track manager then reaches out to the track analyst to further analyze the issue and identify the root cause as soon as possible.
Issue Communicated to Agency	The time frame that the issue is communicated to the agency depends on the criticality. Some issues may require the track manager to alert the agency promptly while others may allow for analysis to be completed prior to communication. Problems identified during nightly batch are reported in the daily batch report. The escalation to the agency will be initiated ASAP when the solution requires a functional change.
Solution Determined	Root causes are identified promptly and accurately—allowing us to move on to the resolution sooner. Once the root cause has been identified, possible solutions are determined.
Solution Communicated to Agency	The Agency is contacted to determine the best course of action based on the determined options.
Emergency Release (for software modifications)	Sometimes an emergency release is required to fix a severe production defect. Part of the solution is for Deloitte, with collaboration with the Agency, to determine if an emergency release is required and to decide on the schedule. For emergency batch issues the Deloitte track manager investigates and implements a temporary solution so that the required daily batch jobs are completed on time. The track manager acts at a higher level confirming the change meets design standards and proper escalation and communication occurs. If the problem is critical and affects Production, then the project director or the designee is notified that evening. Critical issues are not relegated to only programmatic issues, but also include network issues, equipment issues, stock issues, or issues that interrupts business services.
Testing (for software modifications)	Once the solution has been completed, the fix is unit tested, integration tested and acceptance tested.
Fix Deployed	Fix is deployed to the Production region.
Monitoring	Once the release is deployed, Deloitte monitors the fix for successfully resolving the issue.

Figure 4.4.2-18. Emergency Maintenance Process

4.2.3 System Changes/Enhancements

- System changes/enhancements: The vendor should provide a detailed description of its system development life cycle methodologies and describe how it will manage necessary changes to RAPIDS.

The section below describes the Value-driven application development and the RAPIDS SDLC methodologies requested in RFP:
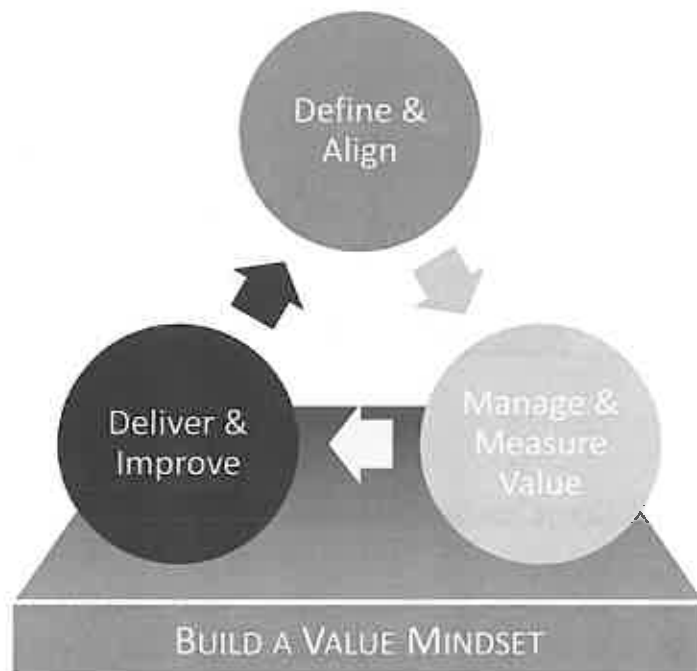
Value-driven application development and maintenance helps to track value opportunities surrounding enterprise solutions – and then executing on those opportunities as business conditions require. By focusing IT staff on governance, they are supporting the cycles that drive innovation and create business value. Most importantly, they are adopting an outcomes-based mentality that can drive internal efficiencies in the "business of IT" – as well as improvements in the "business of the business."

Define and Align

It is important to set the groundwork by defining the managed services operating model, which includes analyzing the objectives and identifying the requisite operational needs, such as people, process and technology. It is also important to define the detailed roles, responsibilities and interactions between involved stakeholders; all of which is captured in the Deloitte M&O plan.

The alignment between DHHR business and IT objectives is imperative to Deloitte establishing a value-driven operations model for RAPIDS. Below are key steps to the process:

- Identify stakeholders and explicitly tie their goals to the delivery of value.

- Confirm that business and IT leaders sign-off on value targets, the governance structure, and roles and responsibilities.

- Define value objectives along four dimensions: Business process value, IT optimization, Customer Experience, and Risk Management.

WVRAPIDS-II-2015-074

Figure 4.4.2-19 Build a Value Mindset.
An approach focused on innovation and continuous process improvement.

- Perform RAPIDS operations diagnostic and benchmark RAPIDS performance metrics against established levels and industry standards.

- Determine major variances and set achievable targets for value, quality, risk, and cost on the RAPIDS Project. This is captured in the Value Index as relevant, measurable value metrics.

Manage and Measure Value

Using tools, including an end user portal and management dashboard, as well as specific business measures from the BI solution, we are able to provide continuous, user-specific improvement. These same tools will also support our process metrics and incident management reporting. The information can then be used to drive additional business process changes or system enhancements and the effectiveness of those modifications can be measured and observed.
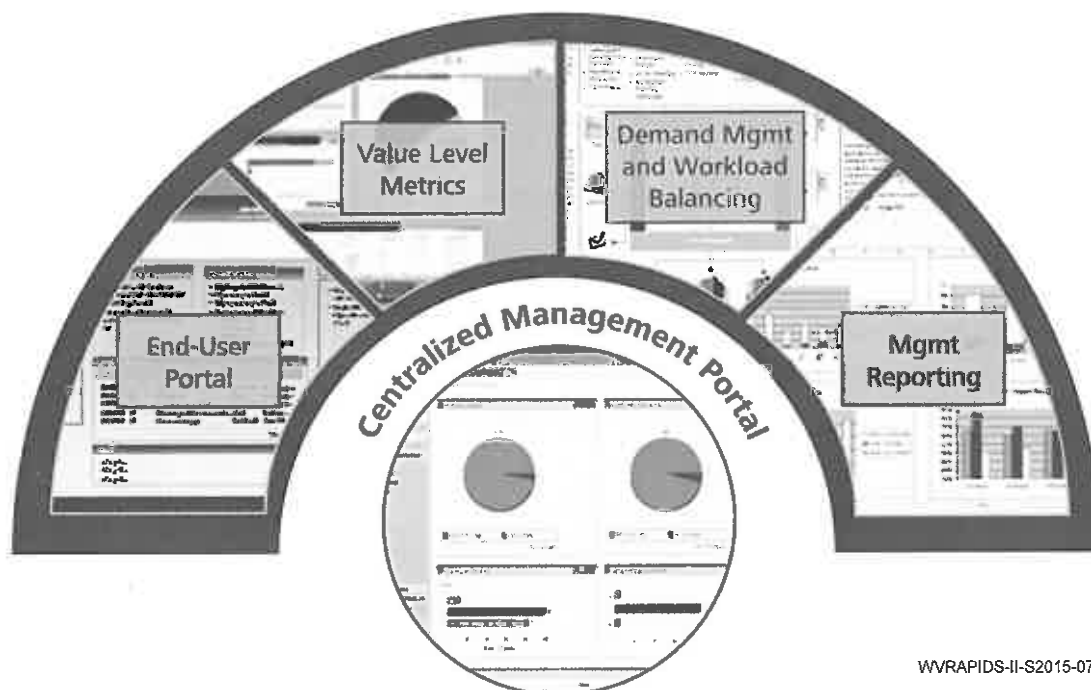
WVRAPIDS-II-S2015-075

Figure 4.4.2-20. Centralized Management Portal.

We propose establishing an application management workbench focused on efficiently executing tasks and delivering application development and maintenance disciplines as a service to DHHR.

For value-driven operations, visibility into performance metrics must be managed and transparent. For outcome and value-based services, business analytics, knowledge management of previous experiences, and benchmarks need to be tracked, interpreted, and incorporated into goals and supporting processes. It is a matter of measuring performance indicators and assessing gaps:

- Get the snapshot you need going in – so you'll be able to track improvements
- Track operational effectiveness by monitoring Key Performance Indicators (KPI's)
- Assess data against business case targets to identify performance gaps
- Maintain performance dashboards and develop gap analysis

Deliver and Improve

Innovation is embedded within the methodology so that the DHHR enterprise evolves to meet the ever-changing demands of the HHS business. Effective application governance helps DHHR identify and understand changes in policy and proactively deliver application advancement. Simple disposition strategies rationalize and prioritize innovation options for release management. Clear and flexible action plans allow the organization to achieve results more efficiently.

How do we implement the value mindset and approach at DHHR and on RAPIDS?

Industrialization of application development and maintenance is the foundation for extending value beyond labor driven cost improvements. It allows you to find efficiencies from the transaction level up, reduce wasted time, and streamlines feedback to drive continuous improvement. Additionally, value can ignite when industry and business knowledge are used as catalysts to reduce the amount of effort required to return the desired result. Patterns in value metrics can become the fuel for targeted improvements and innovations – but only if you have built in an operating model that identifies those patterns in the first place.

▷ ◁ **PROJECT SPOTLIGHT**

Our successful maintenance efforts in Texas helped HHSC improve timeliness from 70% to more than 98% today and reduce payment error rates to 2%, below the national average of 4%.

- Deloitte performed maintenance activities during the statewide rollout of TIERS, supporting stability and improving operations in the midst of complex enhancements and other technical upgrades (e.g. Oracle 10g to 11g).

- Maintained more than 10 million lines of code, 220 interfaces and supported sub-second response times across 130 million monthly online transactions.

The pinnacle or end goal is to integrate business objectives along with IT objectives into the maintenance and operations model. This goal can be achieved by making practical decisions about application alignment, enhancements, and innovations that facilitate desired business outcomes. Our performance is measured by the established performance metrics, objectives and business outcomes of our clients. We, therefore, recognize the importance of supporting the identification, rationalization and prioritization around potential opportunities. Continuous feedback loops allow innovative opportunities from domain professionals to be incorporated in planning cycles. Ongoing measurement and reporting are incorporated for true outcome/value-based realization. Our strategy provides the structure, process, and methods to define, rigorously track, and help enhance value to the Agency.

We have a strong SDLC process for delivering enhancements, and a set of very experienced team members fluent in its use and application. We are committed to improving existing process efficiencies to achieve consistent and predictable quality results in software development and implementation and maintenance,

System Development Life Cycle Methodology

RAPIDS currently uses the Deloitte's Enterprise Value Delivery (EVD) for Systems Integration (SI), which is a use case driven, object–oriented system development life cycle methodology. A use case is a description of a particular series of interactions (steps) between a user and the system. The entire set of use cases that describe the required functionality of the system form the use case model. Each activity within the life cycle is defined in terms of building a model. Even the application code is viewed as a model of real world business processes.

The design, development, and test activities are performed iteratively and incrementally. Each iteration of these activities is defined by a subset of the use case model, which makes up an increment. At the end of any iteration a set of completed, functioning and tested use cases exist. This allows the system to be developed, tested, and possibly deployed in incremental segments, thereby reducing risk for the overall effort. The first iteration is intended to serve as an early win for the project and an architectural proof of concept for the technical team. It also provides an opportunity for the combined project team to work through the various processes together. Lessons learned from going through early iterations can be fed back into the processes for the subsequent iterations.
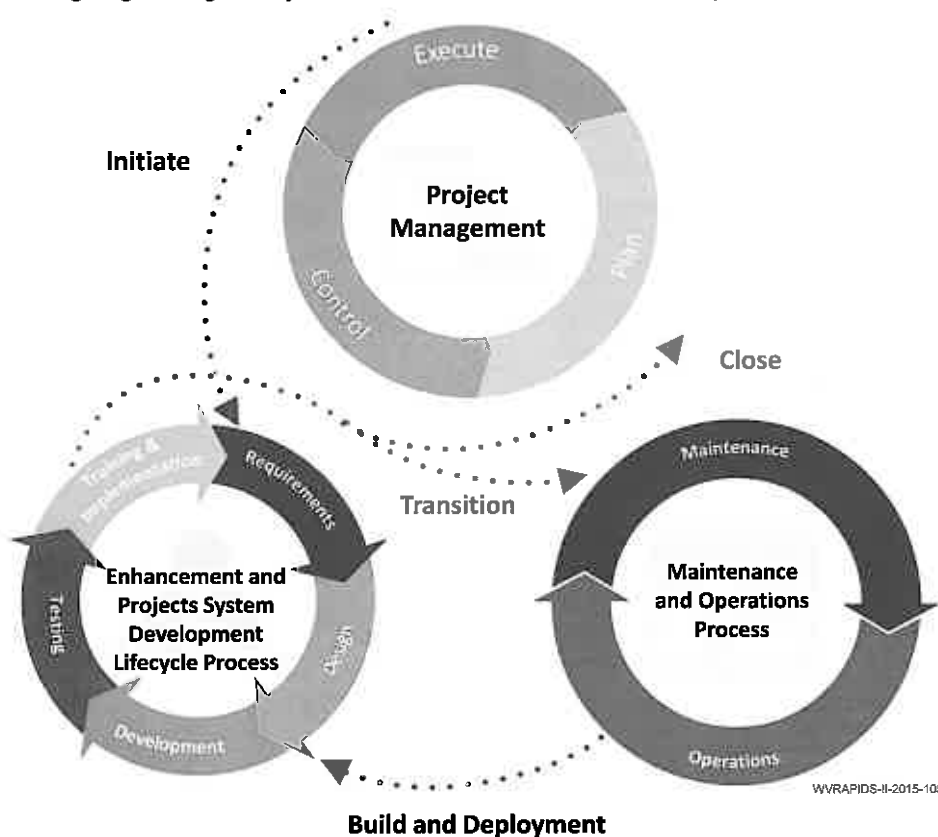
Figure 4.4.2-21. Application Development and Maintenance Methodology.

The following sections provide an overview of the activities involved during each of the SDLC phases. Following the description of each phase is a table listing the documents that are produced during each phase. Each of these phases and activities are further defined in the established software development methodology.

Initiate

The Initiate Phase is the first step in starting a change or enhancement. The Agency Team is responsible for determining what changes and enhancements are required, and the Change Control Board (CCB) has the final decision on approving the change for implementation. The CCB also sets the final priority of the change or enhancement in order to determine the timeline for implementing the change.

Document	Description
Change Request	The Change Request is the actual details of the change documented in the ALM tool. The status of the Change Request is maintained in the ALM tool throughout the life of the Change Request.
Inception Document	The Inception Document defines the reason and the purpose for the proposed change.
Project Plan	The Project Plan is the detailed plan for all phases of the change. The plan will include tasks required to complete phases of the SDLC and what resources are responsible for each task.
Statement of Work	The Statement of Work documents the reason for the proposed change, the level of effort required to define, design, develop, test and implement the change, and the proposed timeline for the change including the final implementation date. The Statement of Work must be approved by the CCB before work on the change is initiated.

Figure 4.4.2-22. Initiate Phase Artifacts.

Requirements

During the Requirements phase, the requirements gathering team uses existing documentation, the current operational system, and joint requirements planning sessions with Subject Matter Specialists (SMSs) to develop an understanding of the problem domain and the system's responsibilities. These SMSs are expected to be business users and technical staff from DHHR (including MIS), CHIP, OIC, OT, and other business users as necessary to create the detailed business and technical requirements. With that knowledge, the team can perform an initial analysis of proposed system functionality. They then conduct Joint Application Design (JAD) sessions, which are used to generate or update use cases, storyboards, and non-functional requirements. Ultimately, the enhancement's requirements are documented into a project standard Software Requirements Specification (SRS) document. This SRS document will be signed off by stakeholders during an SRS review meeting, which will be scheduled once the JAD sessions complete. This will typically involve changes being made in real-time during the course of the meeting, so that sign-off is received for the final product. In the event that changes require additional time, sign-off will be received with the understanding that changes requested will be made for all pending items prior to delivering the enhancement. This meets the State's requirement of having documentation provided within 30 calendar days from the date of change.

Throughout the phase, project management and team leads refine project schedules, identify action items, and manage risks that have arisen. An initial project plan is developed during project initiation, but it must now be further defined and a strategy for meeting each goal is established. Points of contact are assigned to each action item or risk identified, and statuses are updated at weekly team meetings.

Document Name	Document Description
Software Requirements Specifications Document (SRS)	The SRS formally documents functional and non-functional requirements into a standard deliverable format. SRSs are delivered to the Agency for review and approval using the SVN tool.

Figure 4.4.2-23. Requirements Phase Artifacts.

Design

The Design phase includes both high level and detailed design processes. The high level design is captured as part of the Software Architecture Document, which describes each aspect of the system in terms of different architectural views, such as a logical view, process view, deployment view, etc. The Initiative Lead meets with the development team to review the SRS document and the architecture document in preparation for completing detailed designs for a specific iteration or set of use cases. The detailed designs are captured through a series of Unified Modeling Language (UML) standard design artifacts using the Enterprise Architecture (EA) tool. These artifacts are generally developed for each use case and serve as the blueprint for development.

Document Name	Document Description
Application Architecture Document	The Application Architecture Document defines the software architecture.
Application Design Documents	The Application Design Documents include domain models, class diagrams, sequence diagrams, and structured program design diagrams. Application Design Documents are created in Enterprise Architect.
Logical Data Model	The Logical Data Model defines the logical data groupings, relationships, and data definitions. The Logical Data Model is independent of the physical implementation and does not include items such as persistent media, platforms, and performance considerations.
Physical Data Model	The Physical Data Model includes databases, tables, fields, views, indices, constraints, access controls, storage, and more. The Physical Data Model provides clear specifications for the Physical Database implementation.

Figure 4.4.2-24. Design Phase Artifacts.

Development

During the Development Phase, the Deloitte Initiative Lead uses design specifications created by the subsystem analysts and approved by the Agency to lead the development effort. This involves writing software code to enhance/modify the system in accordance with the business requirements and detailed designs. Unit tests and code reviews are conducted to verify that each code unit is functioning as designed, consistent with the design specifications and project standards. Typically development is broken up into multiple threads or increments that are developed in parallel. With the development and unit testing of each thread, it moves into integration testing which is described in the next phase of the SDLC.

Document Name	Document Description
Unit Tested Code	Analysts develop or modify code in order to meet requirements, and are responsible for performing unit testing on the code for accurate results. Details on how code is developed, tested, and migrated are found in the change control approach, **Section 4.4.2.6**.
Tested and Reviewed Source Code	The final tested and reviewed source code is completed when analysts have unit tested the code to make sure appropriate functionality is intact. The source code also will go through a code review process by a peer analyst, who will check that items for Deloitte's standards of coding are met.

Figure 4.4.2-25. Development Phase Artifacts.

Testing

With changes to the system, whether it be a large system enhancement, or a simple defect fix, the testing phase is an integral part of the SDLC. For larger enhancements or system changes, a full User Acceptance phase should be utilized, while smaller defect changes would follow similar processes laid out in this document but might not have all of the corresponding documentation. The Testing Phase helps to validate functionality, determine maximum load scenarios the system can sustain as well as verify that the change to the system has not adversely affected the system's other functionality. The Testing Phase also serves to instill confidence for both the Agency and Deloitte Project Management that the system changes are well prepared to be released into the Production Environment.

It is also anticipated that other agencies engage in testing activities that relate to the RAPIDS work described in this document. Deloitte will work cooperatively with these other agencies in both their testing efforts and in their development of system design for such initiatives.

Document Name	Document Description
Test Plan	The Test Plan documents the approach and timeline for conducting test scenarios.
Integration Test Scenarios	Integration Test Scenarios are created using the use cases in the SRS as a guideline for what needs to be tested. For larger implementations, Integration Test Scripts will be created and tracked in the Application Lifecycle Management tool.
Regression Test Scenarios	Regression Test Scenarios are created to provide steps on testing functionality not specific to a single use case. Regression testing is used so that existing functionality is not impacted when developing for new use cases.
User Acceptance Test Scenarios	User Acceptance Test Scenarios are created by the Agency Team and are created and tracked in the Application Lifecycle Management Tool.
JMeter Performance Test Scripts	Performance testing is performed on larger releases when it is deemed necessary to test the performance of the new or modified functionality. Performance test scripts are created in the JMeter tool and are run to simulate multiple users accessing the same functionality at one time.

Figure 4.4.2-26. Testing Phase Artifacts.

Training and Implementation

Training and Implementation includes tasks to prepare the organization for the new release, plan and execute the movement to the Production environment. Deployment includes data conversions, interface shutdowns and startups, code migration, manual configuration as well as hardware and software infrastructure deployment, depending on the scope of the change.

Throughout the phase, project management, the configuration manager and team leads refine project schedules, identify action items and manage risks that have arisen. An implementation plan is initiated during Develop Phase of SDLC and further refined during the deployment steps in every environment.

Document Name	Document Description
User Manuals/Help Texts	Before implementation, User Manuals and Help Texts to the change are created or updated accordingly with the details of the change and user processes that are impacted.
Implementation Approach	The Implementation Approach identifies critical dependencies related to the implementation and documents details of these.

Document Name	Document Description
Implementation Plan	The Implementation Plan uses the Implementation Approach as an input and documents the detailed, step-by-step plan for implementation.
Production Solution	The Production Solution is deployed during this phase and indicates the final step of implementation.

Figure 4.4.2-27. Training and Implementation Phase Artifacts.

Transition and Close

As part of each significant enhancement project, there is a concerted effort to conduct a smooth transition to maintenance and operations. We propose an integrated implementation and support model, where a critical mass of talent bridges the gap between build and operate. That is to say that a core team that participate in new development initiatives are retained as part of the organization to provide the appropriate mix of platform and business experience with ongoing operations experience. We recognize that knowledge continuity is critical for effective ongoing operations: retaining knowledge, controlling costs, and managing operating risk.

Closing out an enhancement or initiative consists of processes used to formally close activities for a project and the major tasks accomplished include verifying that objectives, goals, and deliverables defined during the project's inception have been completed, obtaining formal acceptance from the Agency for deliverables, identifying required follow-up actions and documenting final lessons learned.

Document Name	Document Description
Final Implementation Deliverable	The Final Implementation Deliverable documents that the implementation is complete and is reviewed and approved by the Agency as final acceptance of the implementation.

Figure 4.4.2-28. Transition and Close.

Managing Changes to RAPIDS

After a change request is prioritized, Deloitte will conduct an impact analysis on the requested change. When determining impact, both the estimated effort and the overall schedule impact will be evaluated. Additionally, Deloitte also analyzes and accounts for the impact that change to one system may have on the enterprise. Our experience with the Agency and in working with the functions of RAPIDS, OSCAR, FACTS and Child Care allow for deeper analysis of changes and their cross-system impacts. By viewing the enterprise as a whole, we decrease risk and provide for successful implementations.

If a change request impacts the critical path of the project, then the cost of that change request will include both the incremental effort plus the cost impact of maintaining other essential resources through the extended duration. The Deloitte project manager is responsible for determining the cost of change requests, based upon the impact determined by the various team members.

Each impact analysis will include:

- The project work products affected by the proposed change, including impact across all systems in the enterprise

- The impact of the proposed change on project size, deliverables, and requirements

- The impact of the proposed change on existing assumptions and constraints

- The impact of the proposed change on schedule, including milestones and dependencies

- The impact of the proposed change in terms of effort and cost

After the impact analysis is complete, the change request is discussed in a Biweekly Status Meeting involving both State and Deloitte Project Management. Deloitte will modify the project plan to account for the change based on the dates determined in the Biweekly Status Meeting. The formal level of effort for the change request along with the plan for implementation will be submitted to the CCB for final approval. Once a change request is approved, the RAPIDS SDLC process will be followed for every change request from design and development through testing and implementation. Status of the change request will be reported to the State periodically during the Biweekly Status Meetings until the change request is implemented by the expected due date.

The final step in the change request process is closure of the implemented change request. Documentation of change requests will be created, maintained, and updated throughout the duration of a change's life cycle. The main documentation for the change request and the documents that are updated and submitted during the change request process above are listed in the following figure.

Document Title	Content Description	Created and Updated Phases
Change Request	Change requests are created by the State Team in the ALM tool documenting the details of the change. The status is maintained in the tool throughout the life of the change request.	• Created during Documentation • Updated throughout all future phases as needed
Inception Document	Inception Documents are created for large change requests as required by the State and includes the reason the change is being made and the general understanding of the change requirements.	• Created during Documentation
Project Plan	The Project Plan is updated with timeline and resource details for a change request during the initial impact analysis, and is updated if dates change during the approval process.	• Created during Impact Analysis • Updated throughout all future phases as needed
Statement of Work	A Statement of Work (SOW) is submitted for change requests as required by the State and includes the reason for the change, the level of effort for implementing the change, and the proposed timeline and implementation date for the change.	• Created during Impact Analysis
Software Requirements Specifications Document	The Software Requirements Specification (SRS) document for a new change request is created and approved by the State before work begins on the change request. If the change request impacts any existing SRSs, the related SRSs are updated accordingly.	• Created during Implementation • Updated throughout all future phases as needed
Final Implementation Deliverable	A completion deliverable is submitted after implementation of a change request and represents final delivery to the State of the change request.	• Created during Closure

Figure 4.4.2-29. The main documentation for the change request and the documents that are updated and submitted during the change request process.

4.2.4 Software Releases

- Software releases: The vendor should describe the system of controls and the support for new versions of the RAPIDS software.

Software Release management is a process that guides IT efforts from application development through testing and into production, helping to focus resources on timely delivery of a feature set that the business needs. Deloitte follows a broad release management process that enables the agency to:

- Improve visibility and insight into project timelines and progress.

- Increase release frequency, to get critical changes and features into production sooner.

- Improve release quality, to increase the number of successful releases and reduced downtime.

- Promote effective traceability, by enforcing consistency through automated program migration.

Production defects and enhancements are documented in the ALM tool as a Program Change Request (PCR). Once a Production PCR is created, it is discussed in the weekly Production Defect and Enhancement Triage meeting to determine the priority and be placed in a release. The total count of PCRs in a release is monitored to make sure the number of PCRs to be included in the release does not grow too large, based on the work capacity of the development and the testing teams.

Deloitte track leads perform a Level of Effort estimate for each PCR, which is captured as part of the PCR content. For additional details refer to **Section 4.2.3: System Changes / Enhancements**. In order to help the Agency better predict when a PCR will reach UAT, and in turn, better manage the testing load, PCRs in each release will have UAT migration dates specified. The release cycle then continues as the code is developed, tested, and migrated through the environments. The last week of the release cycle is reserved for a code freeze so that no new code is added to the release, unless it is code to fix a problem with the existing PCRs in the release. PCRs are reviewed to check that they are in the proper status of "Migrate to Production," which indicates that the change has passed testing and other quality reviews. The PCRs marked in the current release are then migrated to the Smoke Test environment and validated before finally moving to Production.

The following Figure 4.4.2-30 depicts the life cycle of a production PCR.
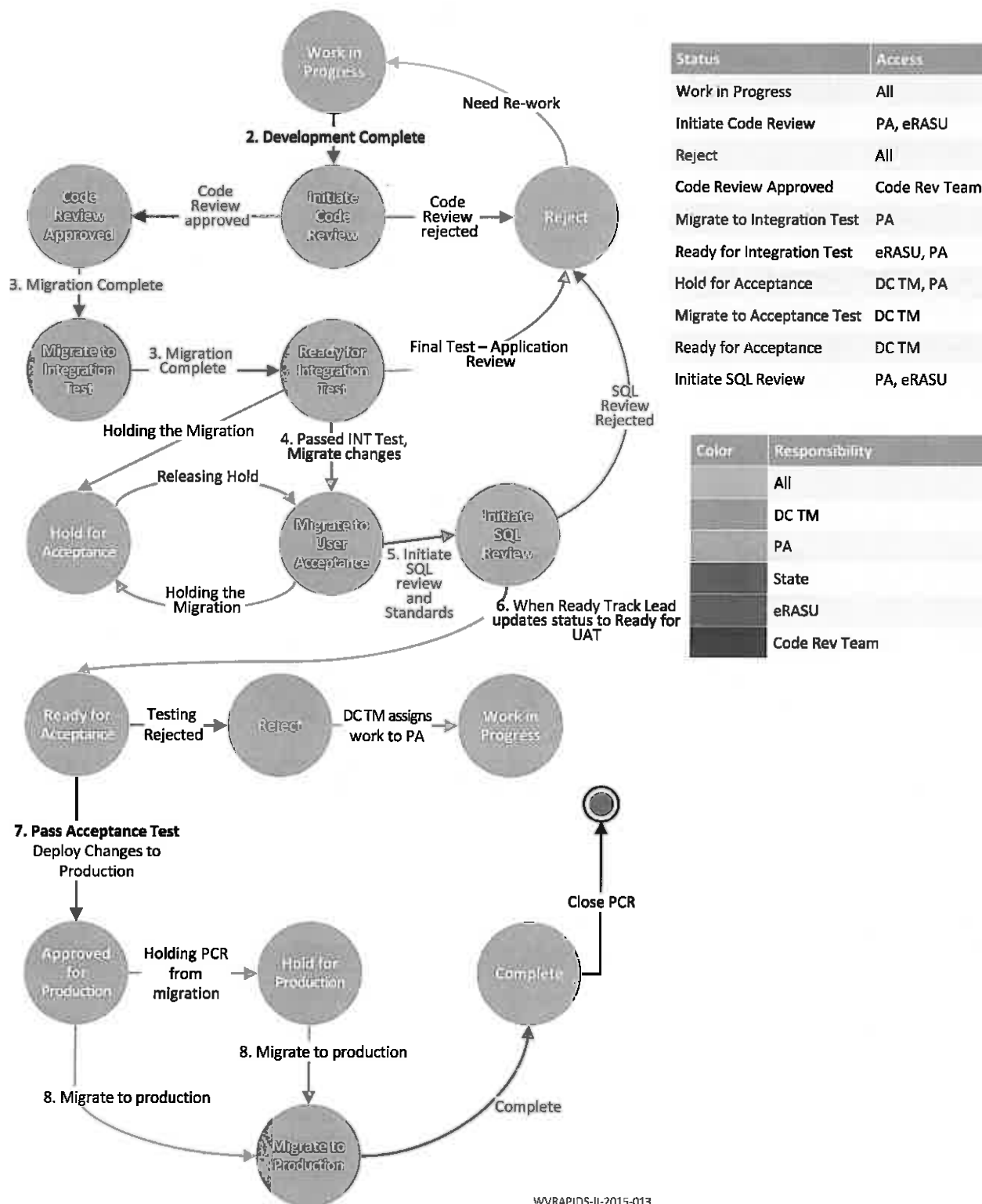
Status	Access
Work in Progress	All
Initiate Code Review	PA, eRASU
Reject	All
Code Review Approved	Code Rev Team
Migrate to Integration Test	PA
Ready for Integration Test	eRASU, PA
Hold for Acceptance	DC TM, PA
Migrate to Acceptance Test	DC TM
Ready for Acceptance	DC TM
Initiate SQL Review	PA, eRASU

Color	Responsibility
	All
	DC TM
	PA
	State
	eRASU
	Code Rev Team

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Figure 4.4.2-30. PCR Process Flow.

Given the breadth of RAPIDS business functionality, the size of the solution, and ongoing changes resulting from federal mandates, Deloitte has developed an application development and maintenance process that could efficiently support multiple, parallel initiatives. To meet this objective, Deloitte has implemented a schedule of monthly defect patches and enhancement releases, as well as ad-hoc emergency releases through an automated build and deployment

Subversion is used for versioning software components. Each application in the DHHR enterprise will have respective configuration repositories in the Subversion server. Weekly, Monthly and Emergency branches will be used for maintenance stream. For enhancement streams, branches will be created on an as need basis. Developers will commit changes to appropriate application branches in the repository. After every production release, the source will be merged and rebased into development branches.

The following diagram depicts the branch management for maintenance streams.

Repository Branch Management
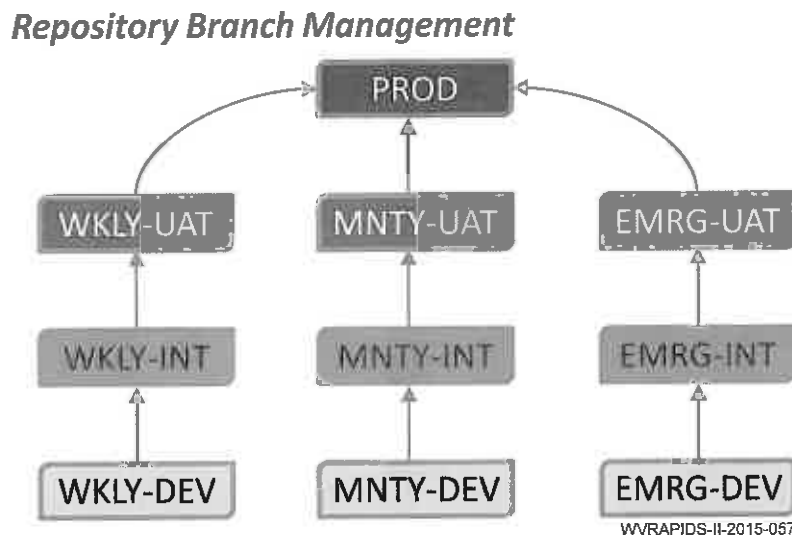
Figure 4.4.2-31. Branch and Merge Process

4.2.5 Software Testing and Quality Assurance

The testing phase is an integral part of the project lifecycle, whether the change is a large system enhancement or a less complex defect fix. Testing validates functionality, determines maximum load scenarios and assesses whether the change has adversely affected other functionalities. Deloitte's standardized testing approach aims to instill confidence in both the Agency and Deloitte project management that the system changes are ready to be released into the Production Environment. Our process contains clear and repeatable tasks, which bring consistent testing results and enables the project management teams to estimate the proper amount of time to budget for testing.

Testing is a broad term and includes a variety of disciplines, each focusing on a particular aspect of system validation. As code is promoted through higher test environments, the type of defects becomes more business-focused rather than code-level technical complications. More information on test activities is given in the following table.

Role	Description
Unit Testing	• Provides verification of the hardware or software prior to system integration • Encompasses user interface validations, as well as functional checks on how data is processed, queried for, and updated • Identifies defects and issues earlier in the development process, avoiding time consuming and major fixes later in the testing cycle
Integration Testing	• Tests the system software and required hardware/network infrastructure as a whole • Validates the system by simulating the numerous variations of user process flows (both positive and negative) • Validates user or application security and system initiated use cases (both positive and negative) • Validates interface data exchanges, conversion of data from legacy systems, and other application requirements
Regression Testing	• Incorporates a regression suite of test scenarios developed from experience with similar eligibility systems to accelerate the testing process • Includes individual as well as batch schedule testing to simulate real world data processing • Tests infrastructure data exchange, such as file delivery via FTP, to identify infrastructure and connectivity issues as they emerge
User Acceptance Testing	• Starts early in the project planning stages and well before the actual execution of UAT scripts • Simulates how the application is actually used in the field • Incorporates feedback from stakeholders ranging from administrators to help desk and field support • Includes two rounds of testing to allow for defect resolution and retesting as required
Performance & Volume Testing	• Entails simulating application load, using virtual users and batch jobs, to measure response time, latency, throughput, and resource utilization of the application • Verifies the performance of business operations on the entire system • Measures performance has not degraded as a result of changes from code releases • Utilizes a separate, production-like environment to mirror business conditions for more accurate testing
Security Vulnerability Testing	• This entails scanning DHHR's self-service portal inROADS prior to deployment • Mitigate application security risk, strengthen program management and achieve regulatory compliance

Figure 4.4.2-32. Testing Activities.

The testing process for smaller code fixes is depicted in the below process flow diagram. Once the defects are raised, these are reviewed and prioritized with a release number during weekly triage meetings where both Deloitte and Agency track leads are present. The Deloitte track lead assigns the defect to a developer for resolution. Once peer code review is done and approved, the track lead promotes the PCR (Program Change Request) from the development to the integration environment and performs integration testing. Regression testing is also conducted so the existing system functionalities are not adversely affected with the change. Deloitte communicates known

issues and test cases to Agency track leads for user acceptance testing. After the Agency track lead approves the change, the code is promoted to the production environment.

Test Process for Defect Fixes
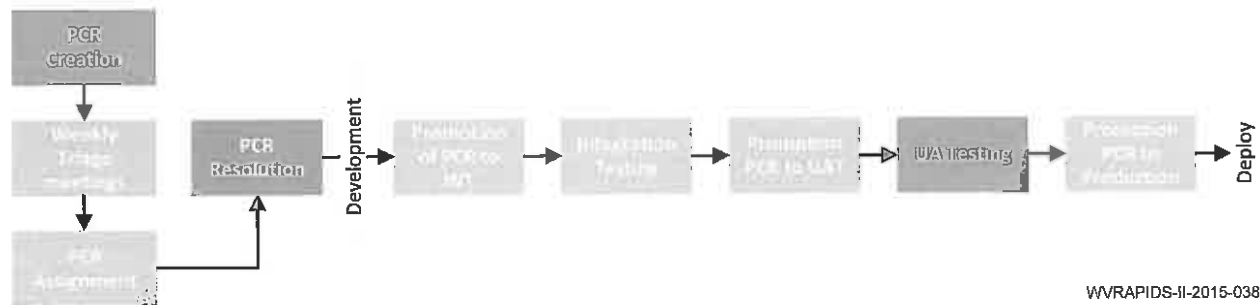

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Figure 4.4.2-33. Test Process for defect fixes.

The following flow diagram addresses our testing processes, including scenario creation and review, integration testing, user acceptance testing and performance testing for major enhancements. Once the Agency creates the test scenarios, Deloitte provides feedback based on the scenario review and performs integration testing and collaborates with Agency track leads in UAT Kick-off meeting to initiate user acceptance testing as planned. After user acceptance and performance testing, Deloitte will seek approval from the RAPIDS Agency management before implementing the change in production.

Test Process for Major Enhancements

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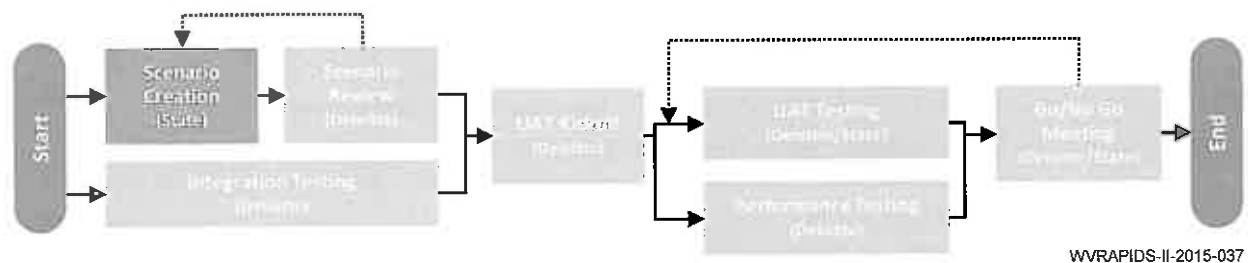
Figure 4.4.2-34. Test Process for major enhancements.

As part of improving the testing process, Deloitte proposes using a dedicated testing team to test changes through various phases and to perform broad regression testing before changes are moved to production. Deloitte track leads work with the testing team to confirm that major enhancements are thoroughly tested. The roles and responsibilities for this team are mentioned in the following table.

Role	Description
Test Manager	• Develop and maintain the Test Management Plan • Develop and maintain the Quality Support Schedule • Track non-compliances identified in the quality assessment to closure
Team members	• Prepare for and participate in quality assessments, project reviews, and testing changes • Implement action items resulting from quality assessment results, project reviews, and method coach visits • Where applicable, attend method coaching events (for example, project process or tool meetings, training sessions, and so on)

Figure 4.4.2-35. Testing team roles.

The testing team also validates that the system's existing functionality is intact and is not adversely affected by changes made by performing end-to-end testing and exhaustive regression testing. The project standard test scenario template is used to document these test steps. These scenarios also cover validations for impacted backend jobs, batch runs, triggers or user reports. The testing team validates that the system is performing according to baseline requirements and communicates gaps to the Agency testing team for effective UAT.

The RAPIDS project will be using JIRA as their Application Lifecycle Management (ALM) tool, which will be the system of record for incidents. Each reported incident is logged in JIRA and tracked with additional information as it becomes available. JIRA assigns a unique reference number (Control Number) that allows the Agency to promptly locate information about the incident – information such as status and steps towards resolution. Additional fields captured in JIRA include description, priority, ownership, resolution, and notes amongst other fields. This data provides information used as input to incident resolution as well as documentation of the resolution and the steps taken to get to resolution.

The RAPIDS project will also be using Zephyr, an automated testing tool for regression testing, used in conjunction with JIRA, before regular and emergency releases. The testing team will also conduct performance testing for major releases that involve architectural changes using jMeter. The findings of these tests will be validated with the Agency before making changes to the production environment. Strategies for mitigating risks, if any, will also be brought up for discussion during these meetings. Deloitte will work with the Agency and formulate a detailed plan for implementing this approach and also for finalizing these tools.

4.2.5.1 Quality Assurance

Deloitte Quality Assurance Methodology is imbedded in our project delivery approach as depicted in the following figure.

Key Quality Assurance Activities

Quality Process	Activities
Define Quality	• Identify deliverables by phase • Set deliverable standards • Review and approve process design with the State • Set quality expectations
Monitor Quality	• Review deliverables against standards • Conduct peer reviews • Perform management reviews • Informal deliverable reviews
Improve Quality	• Produce quality deliverables • Complete deliverable walk-through • Submit quality deliverables • Post deliverable submission debriefs

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Figure 4.4.2-36. Quality Assurance Activities.

Deloitte plans, executes, monitors and controls project quality and performs activities to verify the RAPIDS Team is using the proper methods, templates, standards, and guidelines, as well as practicing the applicable processes to produce high-quality results. These activities include training the RAPIDS team on proper usage of the project's methods, tools, templates, and processes. We monitor and make changes so that the Team is effectively managing its deliverables by performing baselines at appropriate times, conducting assessments to verify the accuracy and completeness of project deliverables, and managing effective change control over deliverables that have been signed off.

The following table describes the various quality assessments to be performed on the RAPIDS project.

#	Quality Assessment Type	Description
1	Milestone based	Planned at the end of major project milestones and focus on the activities that lead up to the milestone.
2	Deliverable based	Performed upon completion of major deliverables or work products. These assessments focus on project deliverables and the activities performed to create them.
3	Schedule based	Based on a predetermined schedule and focusses on assessing all processes and work products.

Figure 4.4.2-37. Quality Assessment Types.

The following sections detail how our quality management processes are applied in the RFP requested areas:

4.2.5.2 Database Reviews

Our team of Database Administrators will review and fine tunes changes that are made to the database in accordance with industry leading practices and based on Deloitte's experience in projects of similar size and scale. The team will review and approves the data model that is a mandatory deliverable for large enhancements. For smaller changes, the team will validate that the data model is updated and that duplication is avoided. SQL that is

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prepared by analysts will be reviewed by the DBA team and recommendations will be made to improve performance and to reduce CPU cost. The team will also perform capacity planning and monitor memory space for the smooth functioning of RAPIDS.

4.2.5.3 Documentation Reviews

Documentation reviews are an integral part of project quality management, and Deloitte will perform documentation reviews for both client deliverables and internal work products. Documents are initially reviewed by the author's project peers and track managers for completeness, accuracy, and compliance to project standards. These reviews help avoid problems and omissions that could later lead to project rework.

Deloitte management reviews provide an additional level of review for important client deliverables. Deloitte management reviews help verify that initiative objectives are being met, that they are clear, and to maintain consistent high deliverable quality.

Client reviews are critical to the deliverable fully meeting the business need. Depending on the deliverable type and client preference, formal walkthroughs and/or offline reviews will be performed. Particular emphasis is placed on SRS reviews as these documents define the business requirements and use cases. Project deliverables are subject to a formal Agency sign-off to make the deliverable a baseline version. All future changes are subject to the change control process.

Deliverable updates are committed to the repository in SVN, the project's version control system, for review and approval by the State.

4.2.5.4 Code Reviews

Code reviews are an important quality step in maintaining a consistent, high quality code base, and is an important part of our quality assurance process.

Refer to **Section 4.2.1.6: Code Review**.

4.2.5.5 System Review (Both Technical and Programmatic)

Deloitte will continue to perform both technical and programmatic system reviews on RAPIDS as needed to support changing requirements. Deloitte leverages firm specialists to review major architectural changes as necessary. Our specialists leverage their vast technical and industry experience, including lessons learned from similar projects, to make technical and programmatic recommendations for RAPIDS. Recently, a director-level architect reviewed the RAPIDS ACA-related architecture, including the Business Rules Engine (BRE), ESB, Master Data Management (MDM), and inROADS citizen portal architectures. He provided invaluable input to enhance the architecture and allow our team to confidently move into the design phase.

4.2.5.6 Test Plans

Deloitte will verify system changes are constructed in accordance with approved State requirements. Deloitte's approach is based on the development of test cases, test scenarios, and test scripts, which are traceable back to system requirements.

Deloitte follows test planning and execution steps at three levels: unit testing, integration testing, and user acceptance testing. Developers use a standardized checklist of unit testing requirements while performing unit tests. The integration testing process is managed and conducted by Deloitte. Our test plan results in a rich set of test cases specifically designed to test the breadth and depth of functionality. After integration testing is complete, Deloitte provides the tested components and communicates known issues to the State track leads so that user acceptance testing is completed effectively. While the State creates the test cases and performs testing, the Deloitte team reviews test cases and gives support to the UAT team as requested.

Deloitte creates test plans for INT and UAT testing. The plan provides a detailed roadmap and timeline for all of the testing activities from test planning to test coordination to test execution. Each test plan identifies entry criteria, exit criteria, test scope, roles and responsibilities, points of contact, ALM identifiers (for test cases), and special environment setup instructions.

4.2.6 Change Control

RFP Reference: Attachment A, page 16

- Change Control: The vendor should fully describe its proposed Change Management Plan.

Given the high level of complexity in the DHHR enterprise, Deloitte recognizes that changes to users' perspectives and understanding will require significant attention, time, and thoughtfulness. Our time-tested approach works so these needs are addressed in every phase of the change management process. The strategy enables the Agency to react to new requirements and services, adapt to changes in policy and handle routine system maintenance without interruption to standard day-to-day operation. This translates into a robust, flexible solution that will address your needs while continuing to maintain the high level of support to which the Agency is accustomed.

Change Management Plan

The need to make changes to a component of the DHHR enterprise solution may come from many different sources, including defects reported from the field, enhancements suggested by our specialized worker networks, and changes required by policy. The Deloitte Team uses our experience with DHHR and our network of HHS clients to assist in proactively identifying changes that will benefit the Agency. A defect is identified when the system is not meeting the specified requirements, and is resolved under maintenance and operations. Enhancements are another type of change that are modifications to the system in order to improve a process or help meet the objectives of the Agency.

Although we follow a unified process for all system changes, there are slight process differences that depend on whether the change is a defect correction, minor enhancement, or a large enhancement. RAPIDS project members from the state team will be responsible for the initial definition of a required system change. The initiation of the change may be due to various factors including policy change and field requested enhancements. Documentation of the change request is completed in the RAPIDS Application Life cycle Management (ALM) tool JIRA to provide for detailed and accurate tracking of the change request. Any project stakeholder can initiate a new change request in this manner.

Once a change request is formally documented and logged in the ALM tool, the priority of the change will be determined in a weekly Production Defect and Enhancement Triage Meeting. Larger enhancements will also require approval and prioritization by the Change Control Board (CCB). The impact of the change on client benefits,

as well as on worker efficiency will be considered when determining the priority of a change request. The Production Defect and Enhancement Triage Meeting will include members of all subsystems from both the Deloitte and State teams for appropriate system knowledge coverage and recognition of the change's importance. Prioritization is determined based on the criticality of the change request along with consideration of other change requests that are required at the same time. Details of the prioritization process and who is responsible for the prioritization can be found in the Management Plan **Subsection 4.1, Goal 1: Management Plan.**

Changes will be tracked and documented as per industry standards and we follow a rigorous process for every change that we implement. Our change management process consists of 5 steps:

1. Identify and Create the Change Request

2. CCB Review & Approval

3. Perform Requirements and JADs

4. Implement Change

5. Close Change Request

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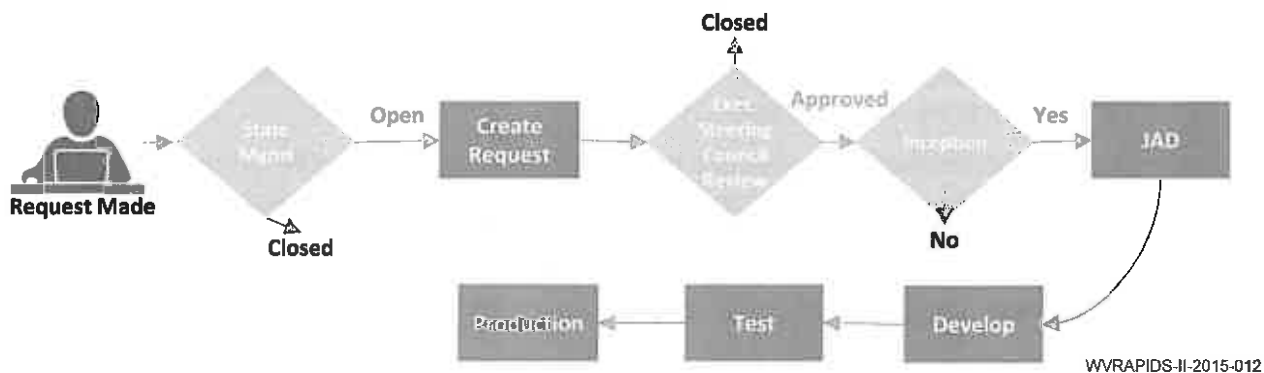
Figure 4.4.2-38. Change Control Process.

Identify and Create Change Request

Identification is the first step of our change management process. This begins with the logging of a Change Request (CR) using JIRA. These are usually raised by project stakeholders and initiate the process.

Each CR is assigned a priority level that allows Deloitte and the Agency to plan for an implementation time that is amenable to all parties. This step provides the Agency the added benefit of being able to plan for testing well ahead of time. The priority levels are as follows:

- **Critical.** The change request is addressing a problem that can negatively impact overall project outcomes, timeline or objectives and will need to be addressed promptly.

- **High.** The change request is addressing a problem that can negatively impact the project significantly (for example, cost overruns or milestone delays) and will need to be addressed as soon as possible.

- **Medium.** The change request is addressing a problem that can negatively impact the project or parts of the project. The change request should be addressed, monitored, and controlled using regular project change management processes.

- **Low.** The change request is addressing a problem with minimal negative impact and will be completed as cost and schedule permits.

The agency designated team will validate new change requests and prioritize and assign each valid CR to the appropriate team member for impact analysis on scope, budget, quality and schedule. This will then be presented to the CCB for their review and approval for implementation. During this time, each valid CR will have a status of "In Analysis." If project leadership collaboratively determines that a change request at this stage should be "Cancelled" or "Deferred," the status of the CR record will be updated accordingly and the CR will not be assigned for impact analysis. Only enhancements will be required to go through initial management and CCB approval. Defects will instead be discussed during the weekly triage meetings (refer to defect management under **Section 4.2.1: Routine Maintenance of All Environments**).

CCB Review and Approval

The CCB is a group of individuals from both Agency and Deloitte management responsible for discussing, analyzing and prioritizing changes to the existing system. Given analysis of issues that arise, they will be responsible for determining what changes are made to the system and when they will be promoted.

The impact analysis provided to them will be performed by the leads of the primary teams on the project (e.g., the technical team lead determines the technical impact; the functional team lead determines the functional impact, etc.). This analysis is compiled in the documentation.

When determining impact, both the estimated effort and the overall schedule impact will be evaluated. If a change request will impact the critical path of the project, then the cost of that change request will include both the incremental effort, plus the cost impact of maintaining other essential resources through the extended duration. The Deloitte project manager is responsible for determining the cost of change requests, based upon the impact determined by the various team members.

Each impact analysis includes:

- The project work products affected by the proposed change
- The impact of the proposed change on project size, deliverables, and requirements
- The impact of the proposed change on existing assumptions and constraints
- The impact of the proposed change on schedule, including milestones and dependencies
- The impact of the proposed change in terms of effort and cost

Once the assigned team members complete their analyses and submit it to the CCB for review and approval, the change request status will move to "Pending Approval."

Next, the information collected for a change request (CR) is reviewed as approved for implementation. Prior to bringing a completed CR to the CCB, the project managers jointly review the completed documentation. Questions or issues regarding the CR are addressed at this point, so that the documentation is complete, clear, and accurate. Once the CR documentation is complete, the Agency project manager will schedule the CR for the next CCB meeting.

The CCB will review "Pending Approval" CRs with complete analysis and justification, and determine which of the following decisions should be taken:

- Approve the CR, changing its status to "Pending Implementation"

- Defer the CR, marking its status as "Deferred"

- Reject the CR, marking its status as "Rejected"

- Request more analysis, changing status of the CR back to "In Analysis"

Perform Requirements and JADs

Change requests need to be analyzed for impact to project scope, budget, and schedule. In addition to the technical aspects, Deloitte will work with the Agency to analyze changes for clarity, accuracy and relevance to business function standpoints, minimizing turnaround times resulting from communication gaps. Once this analysis is complete, the CR will be raised in the triage, allowing the Agency and Deloitte to weigh the request criticality against current activities. Each change must be aligned with a release that still has sufficient time for all phases of the SDLC. Impacts of the new requirements are documented in the Change Request. Feasible options to address the enhancement should be summarized in the Detailed Description and Justification fields of the CR record. This can also include a description of the impact when the change request is not implemented.

After the initial requirements have been gathered, depending on the complexity of the change, Deloitte and the Agency will engage in Joint Application Development (JAD) sessions. During these meetings, stakeholders will come together and reach documented agreements on the specifics of the change. The deliverables from these sessions will be presented in the form of an SRS document. This will form the basis for the design, development, testing and eventual deployment of the change itself. This SRS document will be signed off by stakeholders during an SRS review meeting. This will typically involve changes being made in real-time during the course of the meeting, so that sign-off is received for the final product. In the event that changes require additional time, sign-off will be received with the understanding that changes will be made for all pending items.

Implement Approved Change Requests

The final CR documentation, including formal approval, is retained after CCB decisions are made. No CR will be worked on beyond the impact assessment without obtaining formal approval. Once this is received, the CR record status will be updated to "Pending Implementation."

Once a CR is approved by the CCB, the Deloitte project manager is responsible for adjusting the Work Plan to incorporate the tasks required to implement the approved change request. The Deloitte project manager is responsible for implementing the approved change by the specified due date, including changing the Project Charter/Vision if an approved CR impacts end-product scope.

The project manager communicates the status of the change requests being implemented on a regular basis. Once an approved CR is implemented, the CCB reviews the updates to confirm that the approved change was successfully implemented, and the CR can be "Closed" with no further action required, or "sent back" for further modifications to successfully implement the change.

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Close Change Requests

Once the approved CR implementation updates have been reviewed and approved by the CCB, the status of the CR gets updated to "Closed." The results of implemented (i.e., "Closed") or "Rejected" change requests are communicated to the project team and stakeholders.

Deloitte's effective approach to tracking changes gives you the ability to create, track and control changes made to the DHHR enterprise. In addition to providing you with these functions, changes go through our process to give you the flexibility to react to eventuality without sacrificing the predictability that has gone hand-in-hand with Deloitte's history of success with the Agency.

4.2.7 Program Migration

RFP Reference: Attachment A, page 15
* Program migration.

The DHHR enterprise includes multiple business applications and enterprise assets that are supported by a significant array of infrastructure. The integrated eligibility solution alone is made up of more than 30 subsystems, which includes more than 600 screens, 300 reports and 50 system interfaces. Given the breadth of business functionality, the overall size of the solution and the ever changing federally mandated requirements, the business needs an application development and maintenance process that supported an efficient software development lifecycle with multiple parallel initiatives. As such, Deloitte adopted a program migration process based on DevOps principles and supported by tools developed to increase automation, collaboration and quality. As a result, the operations team is able to support standard monthly defect patches and enhancement releases, as well as ad-hoc emergency releases through an automated build and deployment process.

The program migration process includes multiple integrated, automated components such as defect and change request tracking, build and deployment, smoke testing, and regression testing. Additionally, the operations team uses administrative dashboards (eRASU and Cockpit) to schedule, manage, and track builds throughout the release cycle. By integrating its defect and change request tracking with automated build and test utilities, the engagement is able to support selective source propagation, which means that the tools are able to selectively propagate and build only those components tied to tested defect fixes or enhancements; preventing untested components from being migrated to higher environments.

Cockpit is an in-house, web-based application that is used to manage program migrations for web-based applications. It is used to request, track and manage builds. Cockpit interacts with other ALM tools to attach components to PCR's, identify program dependencies, and manage application properties and more. Automated scripts are used for build and deployment. The build scripts selectively propagate files from a source branch to a target branch based on the type of build and the respective component's status. The build scripts check out the appropriate components, execute the build and deploy the resulting packages to target server regions. The build process communicates the status of the build to stakeholders. Track Managers coordinate with the operations team to manage the builds. The following diagram depicts the build and deployment process across server regions.
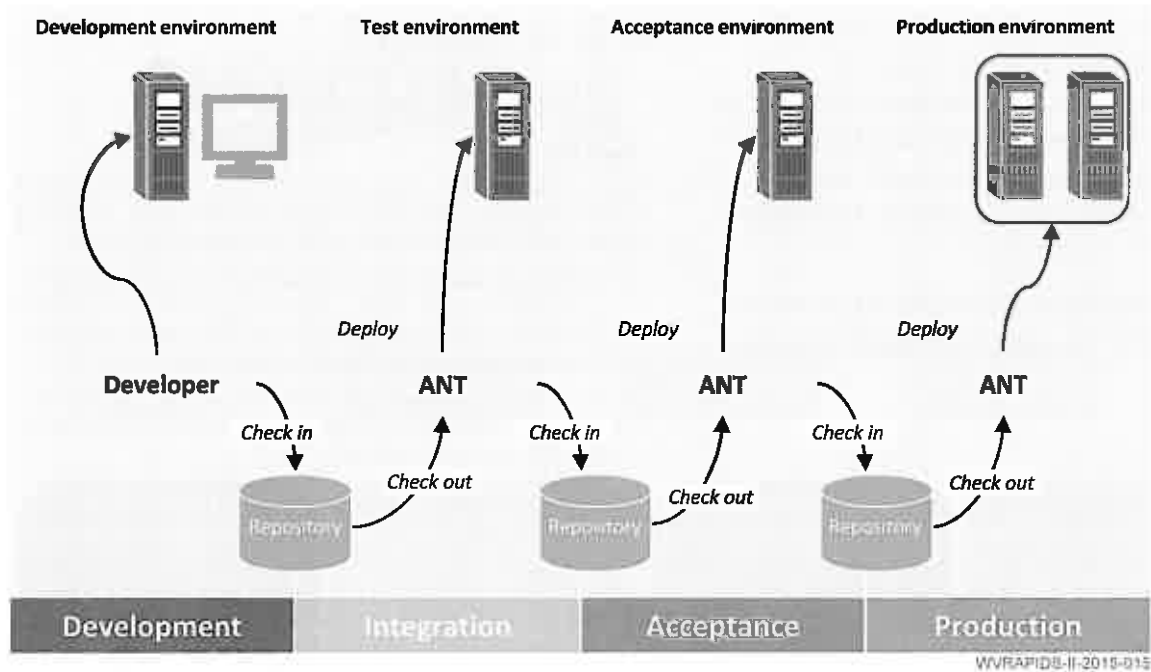
Figure 4.4.2-39. Program Migration Flow.

eRASU is an existing in-house developed migration tool for migrating legacy, mainframe components. The tool interacts with the defect tracking system to fetch PCR's and the attached components for program migrations. Only those components that match the targeted environment are compiled and deployed. The tool also promotes the components to appropriate branches in the repository.

4.2.8 System Management

RFP Reference: Attachment A, page 15
- System management.

The system management team assumes responsibility for the monitoring and support of the online environment during hours of online availability. The operations team works with DHHR staff to review and setup the batch schedule, identify and provide input/output needs for the batch cycle monitoring and provide documentation related to the batch process.

In addition to the many quality checks in place to facilitate smooth batch operations, additional checks are put in place after the batch execution for critical programs to validate accuracy. The system management team also performs regular validation of batch output against expected results. This step identifies batch exceptions,

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increased run-times and data accuracy problem once each batch process is completed. This is a critical step performed by the batch monitor as a responsibility of the operations support, and the batch issue management process is used for anomalies identified.

The following figure depicts the key activities and tasks for the system management team.

▷ ▮ ◁ **PROJECT SPOTLIGHT**

Our successful system management efforts in Texas helped HHSC improve timeliness from 70% to more than 98% today and reduce payment error rates to 2%, below the national average of 4%.

- Deloitte performed system management activities during the statewide rollout of TIERS, supporting stability and improving operations in the midst of complex enhancements and other technical upgrades (e.g. Oracle 10g to 11g).

- Maintained more than 10 million lines of code, 220 interfaces and supported sub-second response times across 130 million monthly online transactions.
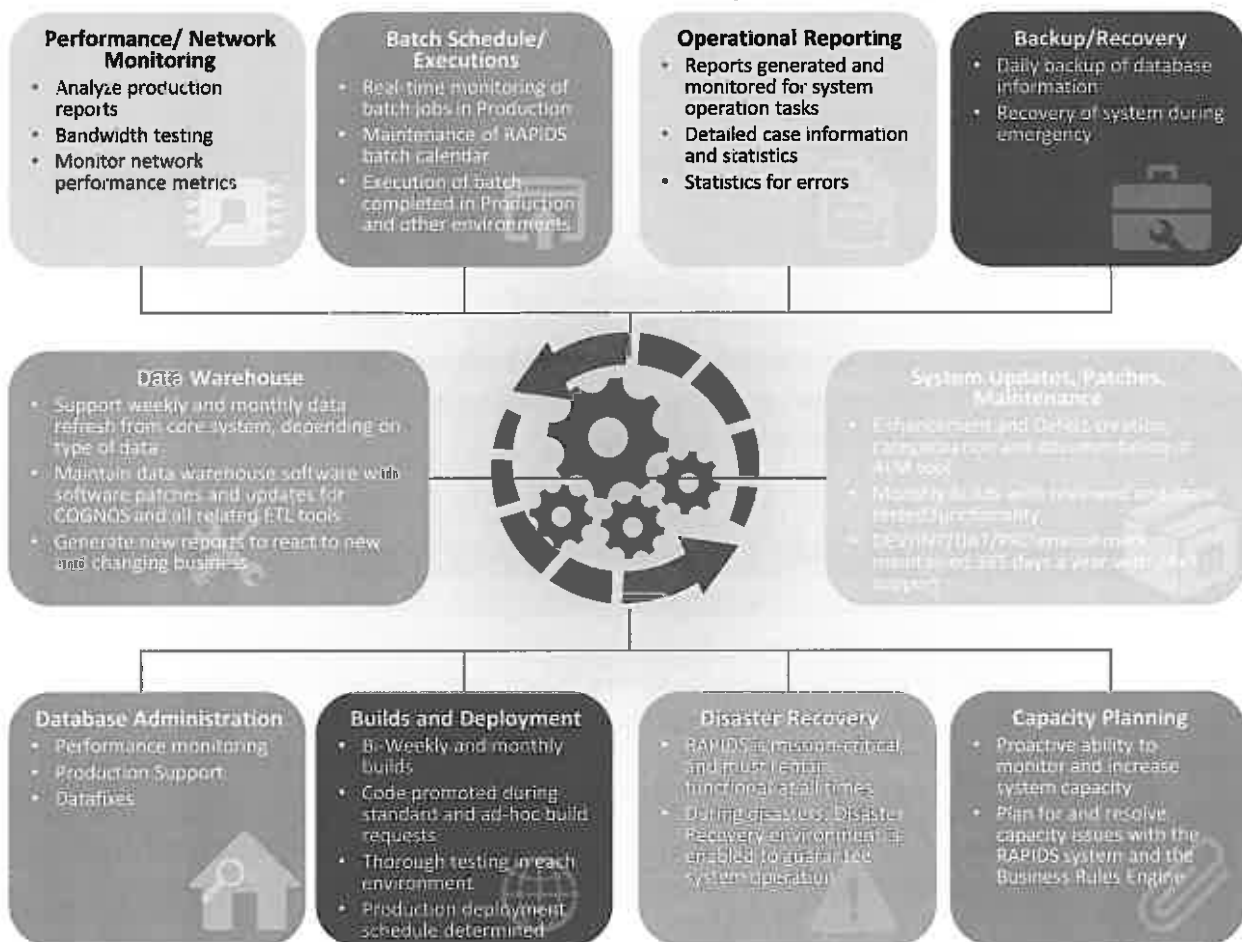
Figure 4.4.2-40. System Management Activities.

4.2.8.1 Performance/Network Monitoring

Deloitte regularly monitors the performance of the business applications and the related infrastructure. When performance degradation is reported the team conducts an additional analysis of the process in question to determine if there is an application problem or if the performance is being impacted by a supporting asset, such as the network. We continue to identify and implement performance tuning initiatives for both online and batch processed by conducting performance testing as well as tracking performance concerns through the PCR resolution process.

Deloitte creates a procedure that provides guidelines for each step of the process. A strategic and systematic approach enables the team to meet the performance requirements desired by the Agency.

Deloitte's System Performance Process

- **Response Time Monitoring and Problem Resolution.** This process provides automated and manual steps to monitor and manage end user response time. Transactions identified as exceeding allowable thresholds are promptly investigated and a mitigation plan is formulated. Deloitte works with DHHR to define a mutually agreeable action plan to address the root cause.

- **Load and Performance Testing and Tuning Initiatives.** This process provides the foundation for automated load testing of applications. Depending on the nature of functional changes or performance tuning initiatives, each scheduled release is exercised under simulated load to a variety of anticipated business scenarios at anticipated production levels. Thorough performance tests are conducted, results analyzed, and issues addressed before production deployment.

Figure 4.4.2-41. Deloitte's System Performance Process.

Deloitte brings its system performance methodology to apply performance improvement methods throughout the life of the project. The following table reflects the core components of our system performance methodology.

Performance Function	Description
Application Performance Process	• Understanding overall system performance objectives and service level standards. • Designing and writing effective application code. • Providing an effectively configured and sized technical infrastructure. • Properly testing the application's online and batch components, under expected business volumes. • Enabling a feedback process to the development team to revise application components that do not meet performance objectives.
Performance Engineering	• Before an application is tested for performance, we must design effective performance characteristics into the application. • Application development templates need to include effective practices and guidelines that help to increase performance. • Numerous technical considerations need to be addressed, including effective SQL coding, database indexing techniques, high-quality lock management, and setting appropriate subsystem parameters in the areas of connection and thread management.
Testing Tools	• Deloitte has knowledge to utilize industry leading performance testing tools such as JMeter, Zephyr, HP Load Runner, SOAPUI, Emprix, etc., to conduct online, Web services, and IVR load testing.

Figure 4.4.2-42. Core Components of our System Performance Methodology.

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For additional information on performance monitoring refer to Mandatory Requirements **Subsection 5.8: System Monitoring and Performance** and **4.2.13 Network Monitoring Strategies**
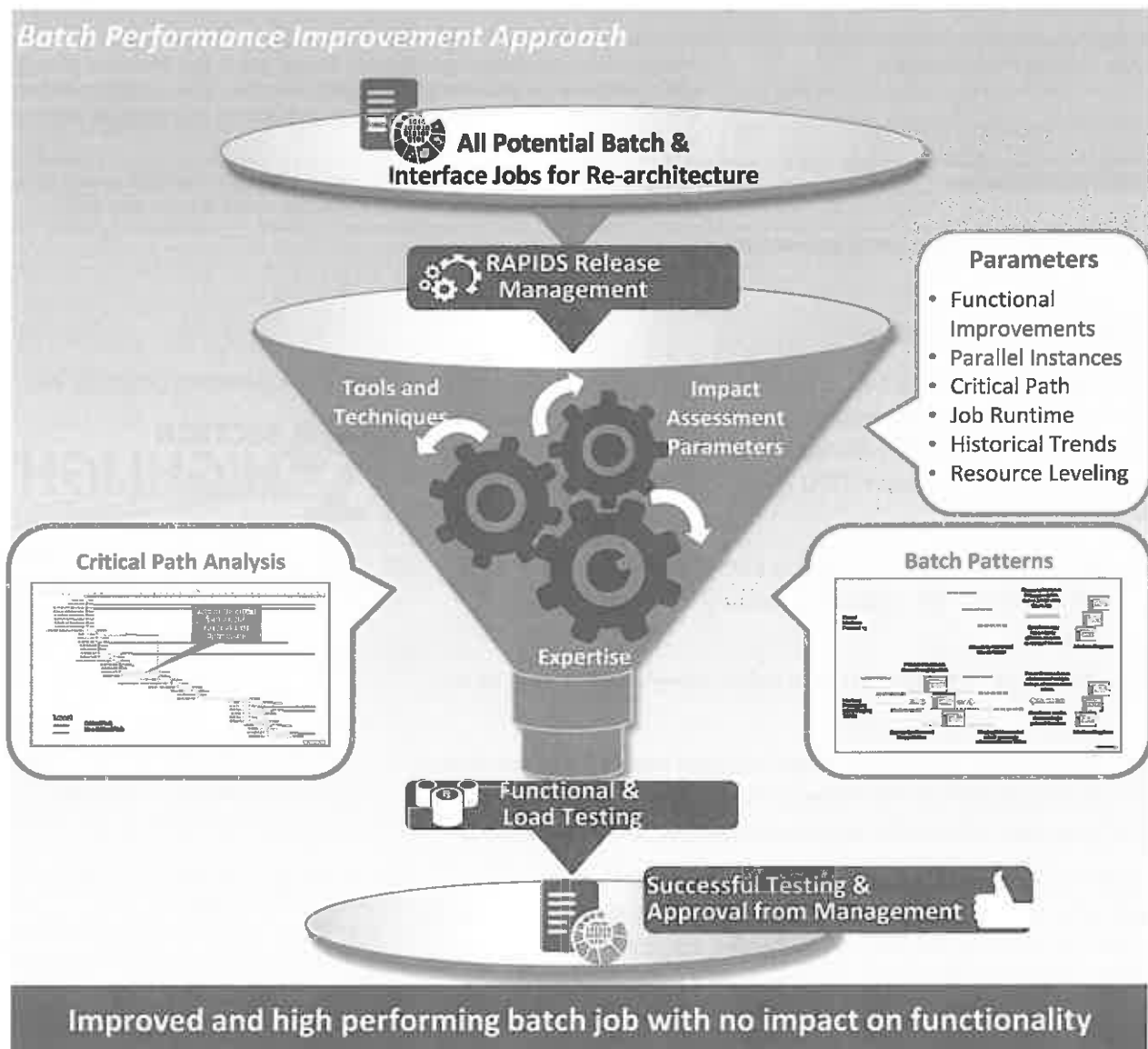
4.2.8.2 Batch Schedule/Executions

The operations team prepares the draft batch schedule for RAPIDS and reviews the schedule with DHHR staff. The team also identifies and provides input/output needs for the batch cycle monitoring, and provides documentation on the batch process. Our operations staff process special requests for running batch cycles in the production environment by reviewing the batch schedule and rescheduling the non-critical cycles to different days. Batch jobs executed during prime time are charged at prime rates which are expensive to the Agency. Deloitte has taken proactive measures by integrating this into the batch approval process. No batch job is allowed to be executed during prime time hours (8 a.m. to 5 p.m.) without the written approval of the Agency Project Management and Deloitte Project Management. Regular batch cycles are published on a monthly basis by the batch scheduler, confirming full visibility of the batch schedule to the Agency. Only approved batches are allowed to be executed during the batch cycle. This is accomplished by the weekly batch monitor. To verify that batch jobs are run after 5 p.m., daily batch reports and batch billing reports are monitored. These will indicate if any batch was executed during unauthorized hours and without proper approval.

In addition to the many quality checks in place to facilitate smooth batch operations, additional checks are put in place after the batch execution for critical programs to validate accuracy. On a regular basis, we also perform validation of batch output against expected results. This step identifies batch exceptions, increased run-times, and data accuracy problems once each batch process is completed. This is a critical step performed by the batch team as a responsibility of the batch support, and the batch issue management process is used for anomalies identified.

The success of batch operations is much more than simply maintaining status quo. Our experience with managing batch operations for states such as Michigan, Pennsylvania, West Virginia and Wisconsin helped develop a broad approach that allows us to provide the ability to build a scalable platform that can be extended to meet the future needs and demands of the DHHR enterprise. Deloitte's use of tools and processes to track and record the performance of batch jobs using batch logs, and in real-time, allows us to identify changes to improve the execution of batch processes further and target required programmatic enhancements for upcoming releases.

In the following figure, we provide an overview of our vision for performance improvements within the batch jobs and processes to improve productivity and meet the Agency's growing business needs.

Batch Performance Improvement Approach

All Potential Batch &
Interface Jobs for Re-architecture

RAPIDS Release
Management

Parameters
- Functional Improvements
- Parallel Instances
- Critical Path
- Job Runtime
- Historical Trends
- Resource Leveling

Tools and Techniques

Impact Assessment Parameters

Critical Path Analysis

Batch Patterns

Expertise

Functional & Load Testing

Successful Testing & Approval from Management

Improved and high performing batch job with no impact on functionality

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Figure 4.4.2-43. Batch Process Improvement Approach.
Deloitte has a mature process for identifying potential batch processes which need performance tuning and for identifying and implementing improvements.

The following table describes the high-level tasks we undertake as part of batch process improvement.

Process Improvement Task	How This Benefits DHHR
Identify Process Improvement Parameters	Establish the approach structure by identifying the overall goals of the exercise: identify and optimize inefficient processes, reduce manual intervention, minimize program exceptions. This allows Deloitte and the Agency to measure the improvements once the exercise is complete.

Process Improvement Task	How This Benefits DHHR
Perform Critical Path Analysis	Analyze batch programs and identify critical batch and interface processes and prioritize jobs according to the batch window. This results in a clear understanding of the batch processes, their inputs and outputs, and their criticality to RAPIDS operations.
Identify Batch Patterns	Analyze historic batch run-times to more efficiently manage cycles and accurately identify batch windows to handle unscheduled requests.

Figure 4.4.2-44. Batch Process Improvement.

Cost-Effective Operations

Cost-effective operations are an important ingredient in a well-run maintenance and operations program. As required, Deloitte will take measures to drive the most cost-effective operation of RAPIDS which includes but is not limited to data storage costs and batch and non-batch CPU costs such as, but not limited to the following:

a.   NOT running batch jobs during primetime hours (8 a.m. to 5 p.m. EST) unless deemed necessary and approved by the State.

b.   Running SQLs through batch unless otherwise directed by the State.

c.   Reviewing data storage usage and cost such as, but not limited to, use of EXPDT/RETPD and RLSE, parameters, State-approved GDG limit, and deleting unneeded/empty datasets.

The following section highlights some additional details on our approach for executing Batch Jobs, performing SQL queries, managing data storage costs, developing cost-effective solutions, and our monitoring approach for significant cost items.

SECTION HIGHLIGHT

- Demonstrated strength in improving application running costs by continuously monitoring and reducing CPU usage.
- Successfully maintained cost-effective operations for data storage, batch and SQL execution.
- Proactively enforced and improved batch execution timings.
- Planned approach to development reduced the number of ad hoc queries executed on DB2.
- Self-enforced constraint to execute queries as batch-reduced SQL costs.
- Used non mainframe databases such as DB2 SQL Explorer to reduce development operational costs.

Batch Jobs

Batch jobs executed during prime time are charged at prime rates which are expensive to the Agency. Deloitte has taken proactive measures by integrating this into the batch approval process. No batch job is allowed to be executed during prime time hours (8 a.m. to 5 p.m.) without the written approval of the Agency Project Management and Deloitte Project Management. Regular batch cycles are published on a monthly basis by the batch scheduler, confirming full visibility of the batch schedule to the Agency. Only approved batches are allowed to be executed during the batch cycle. This is accomplished by the weekly batch monitor. To verify that batch jobs are run after 5 p.m., daily batch reports and batch billing reports are monitored. These will indicate if any batch was executed during unauthorized hours and without proper approval.

KEY BENEFITS

Benefits of running batch jobs after prime time hours

- Use prime time hours for real-time online application users
- Encourage optimization of source transactions

SQL Queries

Ad hoc SQLs run during the day are charged at the full teleprocessing rate which is substantially higher than the nightly batch rate. Ad hoc SQLs will therefore be executed in batch unless written approval has been obtained from Agency Project Management. Even when approval has been sought, Deloitte will take steps to prevent excessive usage, proactively:

- Setting Resource limits (RLIMITS) so as to fail processing if the request is very resource and CPU time intensive

- Access restrictions to Platinum. Only authorized users can run ad hoc queries. Everyone else has to request for a batch run to their resource intensive queries

Data Storage

The RAPIDS team will follow a regular maintenance plan for historical data and data sets. The following steps are taken by Deloitte to manage storage costs and clutter:

- **Delete/purge Datasets that are No Longer in Use.** The RAPIDS development team will programmatically confirm that the expiry date (EXPDT), retention periods (RETP), and release (RLSE) parameters are set on datasets so that they can be purged from the system automatically. Additionally, generation dataset (GDG) will be programmatically configured to the GDG limit as imposed by the State.

- **Archive and Compress Data in DB2 Tables.** The Deloitte team has implemented the archival mechanism on its largest tables. Data older than a defined parameter of years will be archived to tape in a compressed format. This has the following benefits:

  - Reduction in database storage costs due to compression.

  - Improved mainframe response times and CPU transaction times due to the reduction in the number of rows of data that need to be scanned in the database table.

- **Proactive Cleanup of Data.** Deloitte will collaborate with Agency technical staff periodically to eliminate datasets that should not be retained.

- **DB2 SQL Explorer.** The RAPIDS and eRAPIDS teams will use DB2 SQL Explorer during development thus reducing a lot of SQL based CPU costs.

Cost-Effective Measures and Monitoring

The following table details the key areas of cost concern, our method of tracking cost in that area, and preventative actions that the Deloitte operations team will take to prevent high costs related to the cost area.

Cost-effective Measures		
Key Area of Cost Concern	Check and Monitors	Preventive Actions Taken
eRAPIDS CPU Costs	eRAPIDS Daily Production statistics report and Daily Boomerang report	• Set Resource limits (RLIMITS) • Improve Code Efficiency • Mandatory code and DB2 SQL reviews/tuning • Efficient design • Usage of DB2 SQL Explorer for development • Use Native Stored Procedure if applicable for better performance. • After every major initiative, perform a performance test

Cost-effective Measures		
Key Area of Cost Concern	Check and Monitors	Preventive Actions Taken
RAPIDS Online CPU Costs	TMON/CICS reports	• Set Resource limits (RLIMITS) • Improve Code Efficiency • Mandatory code and DB2 reviews • Efficient design • Usage of DB2 SQL Explorer for development • After every major initiative, perform a performance test
Batch CPU costs	Batch cost report	• Published batch calendar that has been approved by Deloitte Batch monitor/scheduler. Only jobs that are approved are executed • Set Resource limits (RLIMITS) • Improve Code Efficiency • Mandatory code and DB2 reviews • Efficient design • Usage of DB2 SQL Explorer for development • After every major initiative, perform a performance test
Ad hoc Querying	Daily and Weekly cost and CPU usage reports	• Set Resource limits (RLIMITS) • Self-imposed • Access restriction to Platinum • These SQL's must be submitted via JCL's.
Data Storage Costs	• Storage Cost reports • Proactive monitoring	• Data Archival • Quarterly cleanup. • EXPDT/RETP and RLSE, parameters • Usage of GDG Limits

Figure 4.4.2-45. Effective Measures.
Deloitte is aware of the costs that the Agency incurs as result of using the State's Data Center facilities. Our experienced team has demonstrated its ability to control costs in these key areas.

4.2.8.3 Operational Reporting

Effective communication is essential for successful project delivery, for keeping stakeholders engaged on project activities and for setting expectations with the project team. Timely delivery of operational reports are a keys part of the established communications strategy and includes metrics for both business operations as well as system management. Below are some examples of existing operational reports:

• Daily batch reports listing the batch status, the number of new cases processed, the number of notices sent, and the benefits issued for the day

• Monthly status reports outlining the project artifacts including but not limited to benefit issuance, caseload statistics, system usage statistics, interface statistics

• Monthly system performance statistics to RAPIDS management team

• Quarterly system statistics to technology team

- Execution of standard daily / weekly / monthly / yearly Mobius & Data Warehouse reports for county workers, supervisors and management team meeting the federal and state reporting requirements

- Monthly generation of reports showing response times for various services and KPIs

4.2.8.4 Backup / Recovery

Deloitte's approach to providing functional responsibility for Disaster Recovery and Business Continuity Planning builds upon leading industry practices drawn from our experience in West Virginia and from experiences serving similar states with projects of similar size and scope. We understand the State's need to sustain critical business operations even during catastrophic conditions. Solutions such as RAPIDS require special consideration in terms of recovery time objectives that focus on supporting the public health and well-being.

DID YOU KNOW?

Deloitte brings experience in implementing successful business continuity and disaster recovery plans from disaster susceptible states such as Florida and Louisiana.

We understand that during a disaster, all RAPIDS-maintained modules will be one part of the overall business continuity action plan that the State will need to consider and execute. There are several possible external events that can make the systems susceptible to an outage. These can include, but are not limited to:

- **System Failures.** Hardware failure of critical servers or disk failures

- **Natural Disasters.** Catastrophic events such as earthquakes, tornadoes, or fire

- **Man-made Disaster.** Human errors, fire, theft or sabotage, electrical power outages

- **Electronic Warfare.** Security breaches, hackers, computer viruses

The mitigation strategies for each of the external events identified above will vary and are driven by acceptable downtime limits (the length of time the system is unavailable) and budget constraints. Deloitte will work with the State to determine and agree on these criteria, and subsequently include them in the RAPIDS system component of the Agency's Disaster Recovery and Business Continuity Plans.

4.2.8.5 Data Warehouse

The RAFT data warehouse is an integral part of the reporting architecture of RAPIDS and provides the Agency with the ability to report beyond simple transactional statistics. The availability of the data warehouse and the quality of its extract processes are vital to producing accurate reports in a timely manner, thereby enabling more informed business decisions. On a periodic basis, Deloitte proposes to continue to populate the data warehouse with the data elements necessary to support reports which are created with Cognos. New data elements will be added to the data warehouse as part of the Software Modification Pool (SMP) initiatives, in order to support new reporting

SECTION HIGHLIGHT

- The Deloitte Team is intimately familiar with the RAPIDS application, including the data warehouse and the process of extracting data for the Cognos reports.
- The Deloitte RAPIDS development and maintenance team created the RAPIDS transactional data model and the data warehouse data model

requirements. These new data element loads will be operationalized by the Deloitte maintenance and operations team as recurring ETL batch data loads.

What is RAFT?

The RAFT reporting system is an integrated eligibility data warehouse and analytic platform that extracts, transforms, and loads individual, case, eligibility, and benefit information from RAPIDS, other Agency systems, and external systems. The RAFT data warehouse has evolved for the Agency over the years, empowering decision makers to take a multidimensional look at the business of integrated eligibility services delivery. As such, it is a valuable decision-support tool that has been leveraged by the Agency and has potential for new reporting capabilities to better support the Agency in the future.

Because the transactional data stored in RAPIDS is not well organized for reporting and also because reporting could adversely affect the performance for online RAPIDS users, the data warehouse extracts, transforms, and loads (ETL) the transactional data into the data warehouse database to support reporting. The ETL process has been rigorously tested to validate that the necessary data elements have been populated in the data warehouse correctly.

DID YOU KNOW?

Deloitte's deep technical bench strength makes Data Warehouse a reality

- Deloitte was able to augment our RAPIDS staff with experienced Data Warehouse practitioners with COGNOS experience who joined the main project team and were instrumental in designing and implementing the RAPIDS Data Warehouse on time.

Data Replenishment

Since RAFT does not access data directly from RAPIDS or other transactional systems, its data must be periodically refreshed with more recent data. The first step in the process is the extraction of the data elements from the source system. For RAPIDS, the primary source of information, these data elements are extracted from the mainframe and stored as mainframe text files. The ETL process retrieves the mainframe extract files using secure file transfer protocol, and then transforms and loads the extracts into Data Warehouse staging table. The data from staging tables is massaged, aggregated, grouped, and finally stored in the Data Warehouse in final form to support the Cognos reporting.

The Deloitte team will execute and monitor the ETL load processes. The following table shows the current data extracts and load frequencies.

Frequency	RAPIDS/MMS Extract	Type of Data	Data Load
Monthly	Last business day of each month	Eligibility, benefit allocations, caseload, worker/supervisor, customer data	1st business day of each month
Monthly	1st business day of each month	Work programs and presumptive eligibility data	2nd business day of each month
Monthly	2nd and 15th business days of each month	Data exchange alerts monthly data	3rd business day of each month
Monthly	After 15th of each month	Medicaid expenditure data	After confirmation from MIS DBA team
Weekly	Every Friday	Work program, application aging, Worker activity, SNAP error, JP Morgan EBT transactions	Every Monday
Weekly	Every Wednesday	Data exchange alerts	Every Thursday

Figure 4.4.2-46. Executing and Monitoring the ETL process.

Current Data warehouse loads and frequencies.

Software Upgrades

The data warehouse ETL process relies heavily on a variety of software tools. Without these warehouse targeted tools, processing and manipulating massive volumes of data would be impossible. The data warehouse software tools require periodic patching and upgrading, which are key steps for the system to run with good performance and to close the gaps in security. Deloitte will work closely with the WV-OT on upgrading and patching the necessary software to run RAFT reports efficiently and securely. The following table shows some of the software tools used for the data warehouse system.

Tool	Purpose	Description
The Agency Mainframe	Data Source	Transactional database resides here, main extraction and scheduling done using JCL and Control-M
Oracle 11g RDBMS	Data Warehouse Database Management System	Host data warehouse data for querying, reporting and analysis, provides the platform for ETL
Cognos Software	BI Engine, Web Server, BI/DB Tracking	Main engine behind the Cognos BI package, serves web pages and reporting
Oracle Ware House Builder (OWB)	ETL tool	Developer tool for creating ETL programs for programmer analysts supporting the RAFT data warehouse

Figure 4.4.2-47. Data Warehouse Tools.
Tools to Support RAFT Data Warehouse

Meeting New Business Requirement

The RAFT team is engaged via SMP initiatives to support new reporting requirements. In a recent example, the Deloitte team successfully implemented an Application Aging Report to track all the pending applications by status, region, county, supervisor, and worker to be refreshed on weekly basis. This report is proving to be beneficial to the regional program managers and supervisors by providing customized views of the pending applications, and helping them track their progress each week. Deloitte will continue work closely with state team to address the changing needs of the application and reporting enhancements via SMP initiatives.

4.2.8.6 System Software Updates/Patches, Maintenance

The system software components that support the DHHR enterprise require periodic updates and upgrades, such as manufacturer issued patches for software products that need to be applied on a timely basis to keep products operating at an optimal level. These changes are driven by a variety of sources, including upgrades to COTS products, upgrades and patches to the operating systems, database management systems, and hardware platform changes.

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Figure 4.4.2-48. Infrastructure Upgrade Support Process.
Deloitte's process for supporting major system upgrades involves coordinated scheduling, testing, and implementation support.

Continuous improvements to the solution components (COTS, H/W and S/W) are an integral part of keeping the system operational for the entire life of the system. When server upgrades, patches, or hot fixes are needed, we analyze release notes and provide DHHR with an assessment of the impact of applying the upgrade. If additional application modifications or software configuration changes are required, we coordinate with DHHR to incorporate changes in a prioritized release with the help of a clearly defined Change Control process. We conduct applicable regression tests to confirm that none of these changes negatively impact the stability of the application.

Maintain Environments

Maintenance of large systems requires different maintenance and enhancement releases to be developed in parallel to meet aggressive timelines and provide flexible release schedules. Following are the environments currently supported by the Deloitte team:

Environment	Description
M&O Development	Developer use this environment to code and unit test the application
M&O Integration Test	Testing team & Deloitte track leads use this environment for testing the full application
M&O User Acceptance Test	DHHR team uses this environment to perform user acceptance testing before promoting the application to production
Enhancement Development	Allows parallel development of multiple enhancements
Enhancement Integration Test	Testing team & Deloitte track leads use this environment for testing the full application for specific enhancements
Enhancement User Acceptance Test	DHHR team uses this environment to perform user acceptance testing before promoting the application to production
Smoke test	Operations team uses this environment as a staging environment before deploying the code base to production
Training	System trainers use this environment for training DHHR staff, production code will be deployed after scheduled software release
Production	Used by DHHR staff to provide services to citizens of West Virginia

Figure 4.4.2-49. RAPIDS Environments.

Deloitte will provide support to maintain the RAPIDS Production system availability window of 7 a.m. to 7 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required for the Agency staff to

support the core business. System availability can be impacted by outages or downtime for critical systems that underlie the solution, including mainframes, servers, DB2, Oracle, ESB, CICS, and network availability.

The following table describes our production proven approach to meeting the maintenance of multiple environments:

Technical/Environment Maintenance Requirement	Deloitte Approach
Perform Upgrades or patches of application server, operating system, DBMS, or other system software	• Monitor, identify and validate the need for the patch or upgrade • Perform impact analysis of the patch or upgrade to the overall system and the potential impact of not accepting the patch or upgrade and determine a priority for the update in collaboration with DHHR • Develop a plan and determine the release • Install and test the patch or upgrade in the test environment • Seek approval from the CCB • Implement the patch or upgrade and validate the system components
Software modifications and upgrades necessary because of expiring Contractor support	• Track and monitor third party vendor software licenses and expiration dates • Determine if and when third party contractor discontinues the support for the components • Perform impact analysis and determine availability of replacement components or need for custom solutions, in addition to changes to the application software. • Collaborate with DHHR to prioritize • Develop a plan and determine the release • Install replacement software and/or application changes • Install and test the patch or upgrade in the test environment • Seek approval from CCB • Implement the patch or upgrade and validate the system components
Hardware, database, or application conversions that do not modify user functionality	• Monitor the storage devices capacity numbers and identify the need for moving files. • Perform Impact analysis of the move to the overall system and determine a priority for the change in collaboration with DHHR • Develop a plan and determine the release. Collaborate with DHHR end user communities of system outage needed for longer duration than normal release down times. • Install and test the change in the test environment • Seek approval from CCB • Implement the change and validate the system components
Hardware swaps	Refer to disaster recovery plan under Section 4.2.8.9: Disaster Recovery
One-time loads or reformats of user data (due to upgrades)	• Identify and validate the need for one time loads or file reformats • Perform Impact analysis of the new format to the overall system • Include the necessary activities for the format change or load and any corresponding changes to the application in the upgrade plan. • Install and test the change in the test environment as part of the upgrade • Seek approval from CCB • Implement the change and validate the system components

Technical/Environment Maintenance Requirement	Deloitte Approach
Disaster Recovery Plan activities	• Refer to disaster recovery plan under **Section 4.2.8.9: Disaster Recovery**
Schedule Technical/Environment Maintenance Releases	• Identify, analyze, categorize and prioritize the need for upgrades and patches. • Determine an appropriate release date and add the items to the technical/environment maintenance schedule
Schedule Report Distribution Change Releases	• Identify the need and gather the report distribution change needs • Update the report distribution parameters in the system with modified values.

Figure 4.4.2-50. Approach to Technical Environment Maintenance Requirement.

System Availability

Deloitte will provide support to maintain the RAPIDS system availability window of 7 a.m. to 7 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required for the Agency staff to support the core business. System availability can be impacted by outages or downtime for critical systems that underlie the solution, including mainframes, servers, DB2, Oracle, ESB, CICS, and network availability.

We will maintain RAPIDS online availability from 7 a.m. to 7 p.m. through proactive monitoring of RAPIDS processes, and responding promptly to warning signs and taking corrective action, often before users are impacted. The RAPIDS online application has been available more than 99 percent of the time during the past 17 years due to successful collaboration between our technical team and the Agency's technical team. We will continue this successful collaboration and perform the necessary dependent tasks such as application/migration fixes, batch monitoring, emergency maintenance, thereby resulting in high uptime for RAPIDS. We have addressed multiple complex scenarios affecting the availability of the RAPIDS application during the online window by having structured and documented plans to deal with these issues. Additionally, we have staffed the critical areas of batch and online operations with experienced resources who can provide 24x7 support.

SECTION HIGHLIGHT

- Proven emergency maintenance process making the application available during the online window
- Robust migration process, confirming application files and dependencies are migrated, reducing the possibility of fatal errors in the application
- Success in completing batch 2-4 hours prior to the RAPIDS online window
- Proactive monitoring and reporting vs. reactive approach allows for better insight into potential issues, thereby allowing Deloitte to take planned actions in such a way as to avoid any outages in the online availability
- An approach that makes the difference:
  - Highly collaborative
  - Qualified team
  - Effective communications

Exception Situations

Deloitte is also aware that there may be exception situations when critical batch cycles, such as Adverse Action (ADA01), BI Pull down (BIPD/BIP01), and weekly release of software to production are scheduled. Such exceptions for critical batch cycles or system upgrades will be approved by the Agency and communicated well in advance to the system end users. During exception situations, Deloitte will collaborate with Agency Project Management to assess if the RAPIDS application needs to be made

unavailable earlier than 7 p.m. On agreement and approval from Agency Project Management, exception time frames are reflected on the batch calendar as seen in Figure 4.4.2-51.

Sample of RAPIDS Production Batch Schedule

West Virginia
RAPIDS

September 2015 - RAPIDS Production Batch Schedule

	MON	TUE	WED	THU	FRI	SAT	SUN
Weekly Assignments DC Batch: Kumar Daysub: Khalid Parm.Review: Khalid Batch Operation: Noor DBA on call: Raj Prd.Validation: Klay		**1** RAPIDS down at 7:00 P.M. QUIES 0:05 MBI3* 0:10 RTDLY&DLY01 2:00 MON01 2:30 EOC 1:30 RPWK2 0:30 RPMN1 (@5 PM) 2:00 Full Bkup(DBF01) 2:00 Est. runtime 10:45 Total avb. window 10:30 Time avb.for JR ######	**2** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 EOC 1:30 BISPL,WPSPL* 0:15 QCMON 0:05 CNPR1 0:05 DWWK1(@5PM) 0:10 RPMN2 (@5 PM) 2:00 Full Bkup(DBF01) 2:00 Est. runtime 8:10 Total avb. window 10:30 Time avb.for JR n/a	**3** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 EOC 1:30 RPMN3 (@5 PM) 2:00 Full Bkup(DBF01) 2:00 Est. runtime 7:35 Total avb. window 10:30 Time avb.for JR 2:55	**4** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 BMS01 1:15 WEK01 1:15 EOC,TRN01 1:30 FCT02 0:05 DWMN2 (@5pm) 1:30 Full Bkup(DBF01) 2:00 Est. runtime 9:40 Total avb. window 10:30 Time avb.for JR n/a	**5** RAPIDS UP 7:00 to 5:50	**6**
Weekly Assignments DC Batch: Tiwari Daysub: Khalid Parm.Review: Khalid Batch Operation: Noor DBA on call: Rafi Prd.Validation: Klay	**7** Holiday Labor Day HOLIDAY	**8** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 EOC 1:30 RPWK2 0:30 DXARC 1:00 PRMON 0:30 Full Bkup(DBF01) 2:00 Est. runtime 7:35 Total avb. window 10:30 Time avb.for JR 2:55	**9** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 EOC 1:30 BISPL,WPSPL* 0:15 RPCHP 1:30 DWWK1(@5PM) 0:10 Full Bkup(DBF01) 2:00 Est. runtime 7:30 Total avb. window 10:30 Time avb.for JR 3:00	**10** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 WPMN1 0:05 EOC 1:30 Full Bkup(DBF01) 2:00 Est. runtime 5:40 Total avb. window 10:30 Time avb.for JR 4:50	**11** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 FCT03 0:25 WEK01 1:15 PRFMS 0:20 EOC,TRN01 1:30 FCT02 0:05 DWMN2 (@5pm) 1:30 Full Bkup(DBF01) 2:00 Est. runtime 9:10 Total avb. window 10:30 Time avb.for JR 1:20	**12** RAPIDS UP 7:00 to 5:50	**13**
Weekly Assignments DC Batch: Nag Daysub: Khalid Parm.Review: Khalid Batch Operation: Noor DBA on call: Raj Prd.Validation: Klay	**14** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 CSIMN 0:10 BIPFC* 0:05 EOC 1:30 Full Bkup(DBF01) 2:00 Est. runtime 5:50 Total avb. window 10:30 Time avb.for JR 4:40	**15** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 EOC 1:30 RPWK2 0:30 Full Bkup(DBF01) 2:00 Est. runtime 6:05 Total avb. window 10:30 Time avb.for JR 4:25	**16** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 BIPHC* 0:05 EOC 1:30 BISPL,WPSPL* 0:15 PRADV 0:20 DWWK1(@5PM) 0:10 Full Bkup(DBF01) 2:00 Est. runtime 6:25 Total avb. window 10:30 Time avb.for JR 4:05	**17** RAPIDS down at 5:50 P.M. QUIES 0:05 RTDLY&DLY01 2:00 ADA01 2:00 EOC 1:30 Release 15.9 MI Hold Request* Full Bkup(DBF01) 2:00 Est. runtime 7:35 Total avb. window 11:30 Time avb.for JR 3:55	**18** RAPIDS down at 7:00 P.M. QUIES 0:05 RTDLY&DLY01 2:00 WEK01 1:15 PRFMS 0:20 EOC,TRN01 1:30 FCT02 0:05 DWMN2 (@5pm) 1:30 Full Bkup(DBF01) 2:00 Est. runtime 8:45 Total avb. window 10:30 Time avb.for JR 1:45	**19** RAPIDS DOWN MIS & DB2 Maintenance	**20**

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Figure 4.4.2-51. Monthly Batch Calendar for September 2015.
Shows RAPIDS will not be available after 5:50 p.m. on Thursday, September 17 to support "Adverse" action process and available on Saturday September 5 and September 12 between 7 a.m. to 5:50 p.m.

WV Department of Health and Human Resources
Management Informatioln Services RAPIDS Project
CRFP-0511-HHR1600000001

West Virginia
RAPIDS

Deloitte's proactive approach towards online availability planning, monitoring and reporting, problem escalation and resolution, and ability to promptly turn around fixes bringing batch to a successful conclusion results in high availability of the online application. Our structured approach and history of high uptime should provide confidence to the State in our ability to manage the operations of the dependent tasks necessary to maintain online availability.

DID YOU KNOW?

- Our systems in Pennsylvania (DPW Suite), Wisconsin (CARES), Florida (ACCESS), New Hampshire (HEIGHTS), and Texas (TIERs) all exceed their availability requirements, with an average of 99 + percent system availability.

- CARES, a State eligibility system similar to RAPIDS, boasts life-to-date system availability of 99 + percent, dating back to June, 1994.

Proactively Monitor

The technical team will designate individuals directly responsible for monitoring the status of RAPIDS. These individuals check the status of the application daily before the 7am window and continue to check the system proactively during the day. The following checks are performed:

- Health check on DB2. Comprehensive check to determine if DB2 and the critical tables are available

- Check to see the RAPIDS online application is online and available

- Monitor the system logs frequently for application transaction errors

In addition to the technical team, the help desk will be informed by the workers on the applications status in case issues are experienced in the field. The following chart shows our continued effort to maintain high availability.

Sample of Total Fatal Errors Versus Percentage Up Time
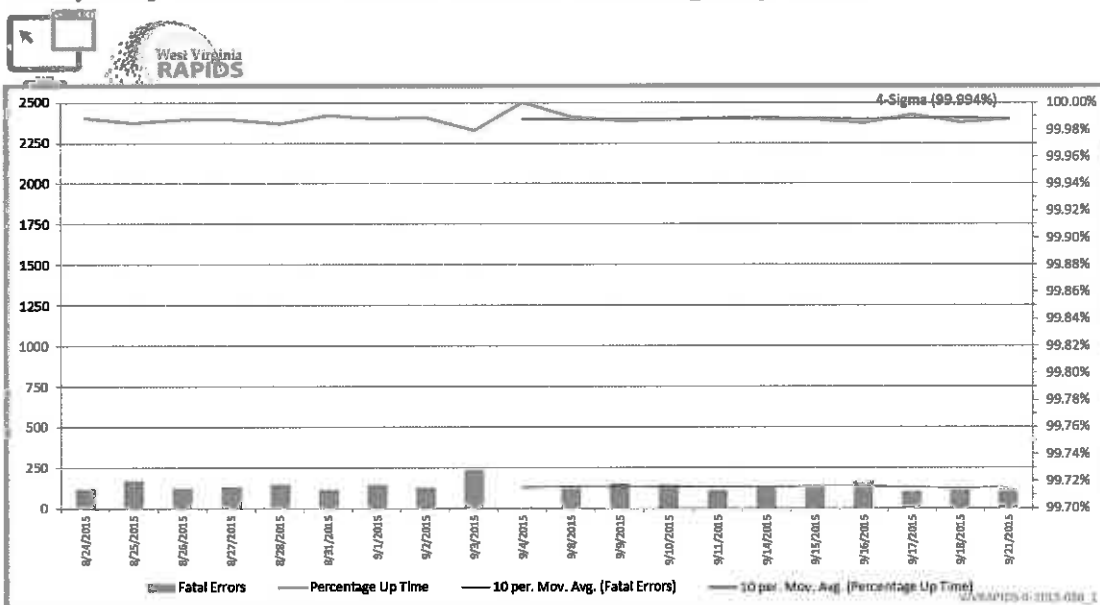
Figure 4.4.2-52. Trend of system availability.
Shows that RAPIDS was available above 99.96 percent of the time.

Respond to Outages

There are three major factors that affect RAPIDS availability during the online window. Deloitte has a predefined plan that allows us to respond promptly to these situations.

Cause	Effect
Infrastructure Non Availability	• Network may not be available, as a result the users may not be able to connect to RAPIDS • DB2 may not be available, as a result RAPIDS application will fail to start • Oracle (ESB, Web logic, DB) may not be available, as a result the RAPIDS application will fail to start • Load Balance may not be available, as a result the RAPIDS application will fail to start • Oracle may not be available, as a result the RAPIDS application will fail to start • UNIX may not be available, as a result the RAPIDS application will fail to start • CICS may not be available, as a result the RAPIDS application will fail to start • User may have Desktop errors preventing them from using RAPIDS
Batch Errors	• Critical batch cycles may overrun into online availability thereby limiting the ability to bring RAPIDS online • Batch errors that leave the database in an invalid state may cause fatal errors in the application during the online window
Fatal Application Errors	• Application errors may cause delivery of welfare services to come to a standstill if a worker cannot execute basic transactions

Figure 4.4.2-53. Factors Affecting RAPIDS.
Online Windows. Deloitte has substantial insight into potential causes for downtime and has successfully addressed these causes resulting in minimized RAPIDS downtime.

Infrastructure Non-availability

Although infrastructure availability is not something that the Deloitte team is responsible for, we recognize that we are on the front lines and are often made aware of outages before those monitoring the infrastructure are aware. As a result, we have a process in place to promptly notify the OMIS and the Office of Technology of infrastructure outages as soon as we learn of the problem to engage those that can fix the problem as promptly as possible. Deloitte then works with the State to facilitate RAPIDS availability as soon as the infrastructure issue is resolved. Please refer to **Section 4.2.2: Emergency Maintenance** for more details.

Batch Errors

If there are batch errors and the database is left in an invalid state, the application may not be able to start the next day. Deloitte has a history in turning around and fixing issues caused by batch errors well before the next online window begins. This is made possible by the robust escalation process followed by the Deloitte team. Please refer to **Section 4.2.2: Emergency Maintenance** for more details.

Fatal Application Errors

If there are fatal application errors during the operation of the application online, the worker may not be able to proceed. Depending on the scenario under which the fatal error occurs, an impact analysis is done and problem report is created to track the issue. If the fatal error occurs during the online window and stops worker activity, the State is notified promptly so that a communication around status or work-around may be sent out to the field.

4.2.8.7 Database Administration

Our Database administration activities include design support for new development, in addition to production support, which focuses on enhancing application and database server performance. In addition to database design and operation activities, our team plays an active role in performance tuning. We recognize the importance of database management to maintain integrity, security, and overall data processing. We monitor the integrity of the data while implementing changes to environment(s) and work with the Agency to define an information life cycle management (ILM) strategy that addresses the governance, management, system availability and recovery of in-scope applications.

For additional information refer to **Section 4.2.9: Database Administration.**

4.2.8.8 Builds and Deployment

Refer to **Section 4.2.7: Program Migration.**

4.2.8.9 Disaster Recovery

Deloitte will work with stakeholders to establish backup and retention policies and procedures for data, supplies, hardware, software, and network required by the RAPIDS solution. These include backup plans and schedules for initiating and executing backups, off-site/on-site storage, retention periods, and encryption standards. We will facilitate the operating effectiveness of these backup procedures so that, when required, backups can be retrieved and restored in accordance with defined recovery objectives.

Deloitte has developed the Disaster Recovery plans for RAPIDS maintained modules and will continue to work with the State to identify and continue to improve this disaster recovery process. The WV-OT

SECTION HIGHLIGHT

- Deloitte has participated in more than 10 Disaster Recovery exercises organized by WV-OT and successfully recovered RAPIDS databases and application.

- Our 100 percent success rate is a testament to the robustness and reliability of Deloitte's disaster recovery processes.

data center conducts a yearly disaster recovery test. All the agencies that use data center's mainframe are encouraged to participate in this process. RAPIDS has participated in this process of recovering the database and application. We intend to work with the State to increase the scope of the disaster recovery exercise to include critical systems including eRAPIDS and other non-mainframe components as described in the following section. This updated disaster recovery document will be used during that test, and lessons learned will be used to update this document.

DR-Related Systems

The following figure details the different components/sub-systems in the RAPIDS environment that have been identified by DHHR as most critical for business continuity, and would be the priority in the event of a disaster scenario. The noncritical systems are also listed in a default order. Note that the recovery order may be reevaluated based on the need of a specific disaster recovery event, so the order shown in the following figure is only a guideline.

System	Critical?	Order	Remarks
Legacy RAPIDS	Yes	1	This is the core RAPIDS application and includes the RAPIDS database, the CICS components, Batches, Mobius reports, etc.
DB2 Database	Yes	1	The DB2 Database is used as the content store for the eRAPIDS application. WV-OT performs the system recovery, and RAPIDS is responsible for database and application backup and recovery.
eRAPIDS	Yes	1	This is also part of the core application suite and contains the worker facing portal, the business rules engine, etc.
Oracle Database	Yes	2	The Oracle DB is used by ESB, MDM, Adobe, and inROADS.
inROADS	Yes	2	inROADS is the self-service portal. If the portal is down, citizens can come to the county office to process their applications.
Enterprise Service Bus (ESB)	Yes	3	The ESB hosts interfaces connecting eRAPIDS with external systems such as the Federal Data Hub, FACTS, and OSCAR.
Adobe	Yes	3	Adobe is used to publish client notices and issuance of client notices. Although not critical initially, this component needs to be available shortly after the critical systems if the outage is planned for an extended period.
Master Data Management (MDM)	No	4	MDM is the enterprise data store for Individual, Provider and Employer data. The availability of MDM is not critical to the routine business processes of RAPIDS.
Subversion & Build Environment	No	4	The Subversion is the repository for the source code and documentation and is critical shortly after operational system recovery if the outage is planned for an extended period.
RAFT	No	4	RAFT (Reporting Analysis Formatting Tool) is RAPIDS Data Warehouse designed to maintain an ever growing repository of RAPIDS data that affords project staff the ability to promptly design, produce and distribute reports to satisfy inquiries and support initiatives within the various bureaus of the Agency.

Figure 4.4.2-54. DR-Related Process.

Backup and Recovery Procedures

In order to recover from a DR event, effective production backups must be made of the data supporting RAPIDS, inROADS, RAFT, ESB, and MDM.

These primarily reside in mainframe DB2 instance or in Oracle instances. The Deloitte team will continue to follow the approved backup procedures so that the Agency's critical application data is backed up. The Deloitte DBA team will follow the existing process and manage the backups of RAPIDS application DB2 tablespaces. We assume that the OMIS DBA team will continue to manage the backups of Oracle instances.

In addition to recovery of production data, it is also critical that the Agency be able to recover important IT assets including source code, scripts, documentation, ALM system, and data. This information is included in our backup plans to maintain recoverability of not only the production systems, but the support team's ability to continue to maintain the solutions.

Team Composition and Responsibilities

The following is our understanding of the recovery-related functional responsibilities during DR exercises and in the event of an actual disaster.

WV-OT is responsible for recovery of hardware servers including mainframe, system software and establishing network connectivity, reissuing of SSL certificates, repointing of DNS entries and providing access to authorized RAPIDS administration team.

DHHR OMIS is responsible for the Oracle Database Recovery process. Based on the priority, OMIS will first recover inROADS database (INRPRD). The other databases SOAPRD (ESB), ADBPRD (Adobe), MDMPRD (MDM), and OWBPRDWH (RAFT) must be brought online before their respective noncritical system recovery is completed.

The Deloitte team will coordinate system recovery efforts with DHHR OMIS and WV-OT. Deloitte will also perform DB2 tablespace recovery, application software eRAPIDS, inROADS, ESB, MDM, and developer workstations.

4.2.8.10 Capacity Planning

One of the key aspects of our strategy is proactively preparing and planning for growth. Doing so avoids space problems with expanding files and the database capacity. Recommendations are provided in terms of capacity planning, forecasting, and how best to prepare and mitigate risks. The capacity plan updated on a quarterly basis and when new functional enhancement is undertaken. A sample capacity plan is displayed in the following figure.

Figure 4.4.2-55. Sample Capacity Plan.
Allows for planning for expanding database and files to avoid problems with expanding files and data in Production.

4.2.9 Database Administration

Deloitte's Database Administrators are IBM certified DB2 DBAs and they have a broad understanding of the RAPIDS data model, as well as the technical environment. Our DBAs proactively monitor system performance via data metrics, as well as proactively performing code reviews to establish and enforce stringent guidelines for the development team. They rigorously review TMON DB2 reports and enforce only efficient SQL and code structures to execute on the mainframe with a deep commitment to controlling Agency costs. In addition to performing routine back-ups and assessing data storage requirements, the DBAs also work collaboratively with the Agency's DBAs to optimize application databases for high performance. Deloitte will also, upon request by the State, schedule additional database backups, reorgs, runstats and other database utilities. These processes will be run on both our DB2 ZOS mainframe database, as well as the Oracle databases used on our Red Hat Linux servers. The team has experience in successfully participating in over 10 disaster recovery exercises conducted by the Office of Technology.

Our approach to database administration can be broken down into 4 major categories. We describe key database administration activities in the following figure.

Database Management Activities	Deloitte Delivers Database Management Processes
Database Design Support	• Support database design and the management of the data dictionary • Review logical and physical database designs • Assist in developing database related standards and leading practices
Database Operations Support	• Manage test data population and refresh in the various test environments • Support the Agency in planning and executing database upgrades • Assist in the database backup and disaster recovery processes • Develop database related processes or maintenance utilities
Performance Support	• Execute query performance tuning and proactive database monitoring • Perform SQL code reviews and open system batch process execution reviews • Monitor database performance; identify and implement tuning opportunities
ILM Support	• Assist in researching, defining, and implementing an Information Life Cycle Management (ILM) strategy

Figure 4.4.2-56. Key Database Management Activities.

Database Design Support

A well-documented design is crucial for the success of a project of a size and complexity similar to RAPIDS. Our design deliverables provide an accurate, business-oriented description of the actual system. To further support quality, we schedule reviews of both logical and physical design deliverables, to minimize the risk of concepts being "lost in translation."

We use a diverse set of tools to help us deliver design documents to you, as the table below demonstrates. These tools were selected due to their unique mix of being user-friendly and efficient.

Process	Tools
Database Design – physical and logical model creation	• **ERwin** Client desktop tool that is used to create and maintain logical and physical data models.
Data Dictionary Management – adherence to naming standards.	• **SQL Developer** Oracle utility that provides a conduit to execute native SQL against an Oracle database.
Review logical and physical database designs.	• **Data Studio** IBM client provides an integrated development environment for instance and database administration
Assist in developing database related standards and leading practices.	• **Oracle Enterprise Manager** Oracle supplied tool used to manage objects, structures and configurations within the database.
	• **PLATINUM FOR DB2 for z/OS 10** IBM tool for DB2 database analysis and query DB2 catalog

Figure 4.4.2-57. Design Tools.

Database Operations Support

The second category of database administration is operations support. Our database administrators are able to provide realistic data for testing new RAPIDS enhancements prior to deployment, which improves the quality of the release. This form of support facilitates standard data testing, as well as load testing, while minimizing the associated risks for implementation.

Additionally, what was cutting edge yesterday often becomes obsolete today. Therefore, we provide you with upgrade support, allowing your systems to stay up-to-date without the risk of jumping into untested waters. Our database administrators provide guidance through both planning and executing these upgrades, as well as help analyze the impact these upgrades could have upon enterprise systems.

The final facet of our approach to operations support is our ability to develop maintenance processes and utilities, which lead to improved data security and application performance. Additionally, having these processes in place allows us to identify possible issues before they become problems, adding to the predictability and maintainability of our solution.

The following table illustrates the tools that we use to support your database.

Process	Tools
Data Management. Managing test data through the various environments to support project initiatives	• **SQL Developer.** Oracle utility that provides a conduit to execute native SQL against an Oracle database and migration of data.
Upgrade Support. Support in planning and execution of database upgrades	• **Data Studio** IBM client provides an integrated development environment for instance and database administration, routine and Java application development
Assist in the Database Backup/Recovery and Disaster Recovery processes.	• **Oracle Enterprise Manager** Oracle supplied tool used to manage objects, structures and configurations within the database.
Develop database related maintenance processes and/or utilities.	• **PLATINUM FOR DB2 for z/OS 10** IBM tool for database administration, query DB2 catalog, migrate DB2 objects, DB2 utility executions

Figure 4.4.2-58. Database Operations Support Tools.

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In addition to our processes above, our DBA team performs monthly database maintenance as per the schedule agreed by the State. This maintenance includes utilities such as Reorg, Runstats, Rebind package, and Modify. Our DBA team also uses unload utilities as part of the data warehouse ETL process to extract data from the mainframe DB2 database. Deloitte schedules these utilities to execute as batch jobs which are charged at a discount rate when executed after 5 p.m. Daily DB2 database backups and monthly database maintenance are scheduled on the RAPIDS batch calendar.

Performance Support

Data intensive systems require skilled DBAs to tune SQL and database configurations to optimize performance. This begins with our philosophy of analyzing each query before it moves into the production environment. By taking a proactive approach, we reduce the risk of system performance degradation while also reducing the amount of time spent debugging production issues.

Additionally, OLTP Query Performance Tuning is executed in conjunction with SQL procedure reviews so interactions between the system and the database are efficient and up to industry standards. We also follow similar procedures to assess our batch queries, which reduce operational costs.

Finally, we monitor database performance regularly, allowing us to detect and resolve problems in a timely manner, well before it becomes an issue.

The following table illustrates the tools we use to meet these goals.

Process	Tools
Performance. Query performance tuning/proactive monitoring	• **TMON for DB2.** Monitoring and Management of IBM DB2 on z/OS with SQL analyzer
Perform OLTP Query Performance tuning.	• **SQL Developer.** Oracle utility that provides a conduit to execute native SQL against an Oracle database and Explain and tune SQLs for cost estimation.
Perform SQL procedure code reviews to determine code is efficient and adheres to leading practices.	• **Data Studio IBM** client provides an integrated development environment for instance and database administration and query tuning using visual explain to tune SQLs and stored procedures.
Review and optimize Batch queries and processes.	
Monitor database performance; identify and implement tuning opportunities.	• **Oracle Enterprise Manager** Oracle supplied tool used to manage objects, structures and configurations within the database.
	• **PLATINUM FOR DB2 for z/OS 10.** IBM tool for database administration, query tuning and packages and plan management.

Figure 4.4.2-59. Performance Monitoring Tools.

Information Life Cycle Management (ILM) Support

The final facet of our approach to database administration is ILM support. With the approval from DHHR, the DBA team utilizes a number of batch processes to purge old, unused data, to maintain relevant data is stored to improve the application performance. The DBA team also perform consistent research and analysis in order to determine what new data can be purged. This keeps response times minimal and system performance at its peak.

The following table defines the tools used to accomplish these tasks.

Process	Tools
Assist in researching, defining, and implementing an Information Life Cycle Strategy.	• **PLATINUM FOR DB2 for z/OS 10.** IBM tool for database administration, load and unload utilities for archival of data. • **Batch Purge Processes.** Scheduled batch jobs that physically purge and/or archive data based on business requirements.

Figure 4.4.2-60. Database Management Tools.

4.2.10 Staff Support

RFP Reference: Attachment A, page 15
- Staff support: The vendor should fully describe the staff support for conferences, maintenance meetings, telephone conferences, etc.

Deloitte staff support conferences, maintenance meetings, telephone conferences, and other meetings as deemed required for the DHHR enterprise solutions. Deloitte will send the appropriate management and track lead support based on the purpose of the meeting and the anticipated audience. If participants of a meeting are not able to be onsite, Deloitte will provide details for phone and web conferences as required via our phone conferencing tool and our web meeting tool.

4.2.11 System Security

RFP Reference: Attachment A, page 15
- System security.

Deloitte works with the agency to integrate and execute agreed upon security & privacy activities within the SDLC. Our activities are focused on designing, developing and deploying DHHR enterprise applications to meet applicable Federal and State privacy and confidentiality statutes or regulations.

Authentication

Authentication is the process of identifying an individual or a system that is accessing one of the components of the DHHR enterprise. For example, in eRAPIDS, workers use their RACF ID to access the application and the application validates the RACF by opening a DB2 database connection using the worker provided credentials. Authentication failures and user session details are logged for future reference or audits.

Authorization

Upon successful authentication, the user's, or system's, access rights (granted or denied) are assessed based on defined authorization rules. For example, the Enterprise Service Bus (ESB) security policies are used to grant or deny enterprise applications access to specific enterprise services. In eRAPIDS, security profiles are used to grant page level access and caseloads are used to grant data access.

Data Security

The following is an overview of the data security procedures proposed to protect confidential data in the DHHR entries applications.

- PII Data is available only on production systems. When data is required in a lower environment, it will be downloaded using eRASU, or a similar tool, which masks the PII data (e.g., SSN, name, address, date of birth, etc.) as part of the transfer to non-production regions.

- FTI Data is encrypted using FIPS compliant algorithms and stored in separate database schemas according to IRS-1075 guidelines. FTI data is handled only FTI trained personnel.

- Data Audit – Modifications to critical data are persisted in application audit tables.

Network Security

Production applications are accessed over secure transport using SSL certificates. External traffic is routed through web servers secured within the DMZ. IP based restrictions are enforced for critical systems, such as Federal Data Hub. Network and its security are managed by WV OT Network team.

Infrastructure Security

Infrastructure assets such as servers, load balancers, SANS, etc., are hosted and managed by the WV OT Server Team. System software patches and upgrades are handled by both Deloitte and WV OT teams based on a coordinated schedule.

Security Training

Project staff complete the following Agency mandated security training:

- Annual Security Training

- Privacy Rocks Training

- Earning and Maintaining Citizen Trust training

Personnel who are authorized to handle FTI data also complete annual FTI training before accessing FTI data.

Security Audits

The IRS conducts yearly audits on handling IRS/FTI data. The audit is based on IRS 1075 publication. The Deloitte technical team participates in the interview process with auditors and provides the required data to complete the audit. The Agency's MIS and OT teams perform monthly scans of servers for vulnerabilities using products by Nesses. The Deloitte technology team works with Agency teams to prioritize and address issues identified on a monthly basis.

4.2.12 Tracking

RFP Reference : Attachment A, page 15

- Tracking: The vendor should describe its plan for a system that would allow for conversion of all current and historical data from the current tracking systems.

An efficient Application Lifecycle Management (ALM) tool enables efficient software development, issue tracking, defect management, testing and deployment management. Perhaps even more important, the ALM tool enables transparency and fosters collaboration. The RAPIDS program has been using the Application Tracking System (ATS) for these purposes for over 15 years. The RAPIDS project will be using JIRA as their ALM tool. As part of the implementation, we will work with the DHHR team to convert current data / historical data from ATS to the JIRA.

Data conversion is a standard process when conducting a system migration. Deloitte has successfully carried out data conversions in multiple projects and understands the complexities involved in implementing such activities. Below is an overview of approaches that Deloitte proposes for this initiative.

- **ETL PowerCenter.** Informatica PowerCenter is a widely used extraction, transformation and loading (ETL) tool used in building enterprise data warehouses. PowerCenter aids in extracting data from a source, transforming it as per the business requirements and loading it into a target database.

Source 1
Source 2
Source 3

ETL Server

Target Database

WVRAPIDS-II-2015-080
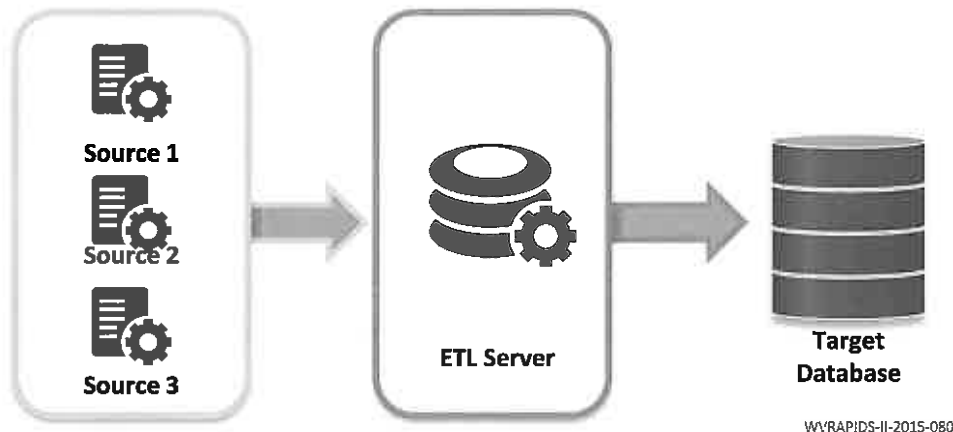
Figure 4.4.2-61. Data migration using ETL tool.

- **CVS/XML Format.** If the new tracking system does not support any of the other tools then the data can be transformed into CSV (Comma Separated Values) or XML format and then imported in to the new target system. The current projects and fields need to be mapped and formatted to either CSV or XML format.

Map projects and fields

Source database

Calls
Issues
PCRs

Utility
Use source data & transform for target system

Migrate data in target database
CSV/XML Format

New Issue Tracking System Database

Target

WVRAPIDS-II-2015-021
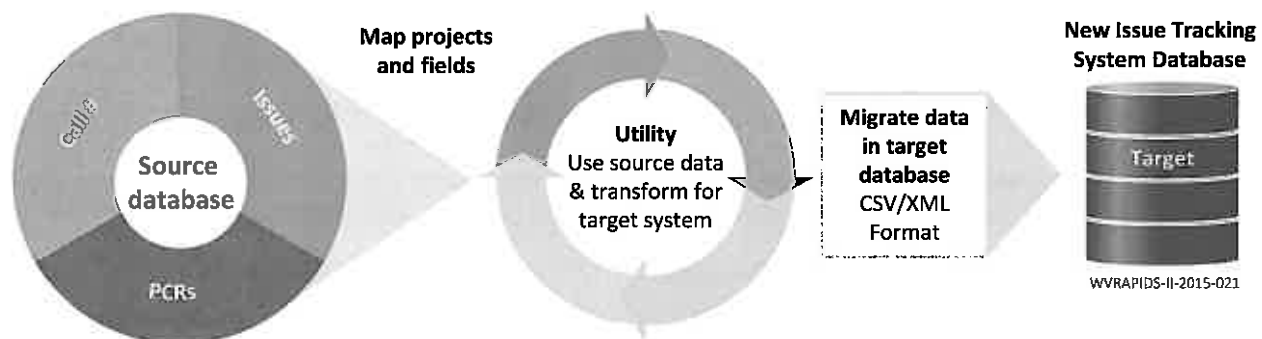
Figure 4.4.2-62. Data migration using csv/xml format.

- **Code generator.** A custom utility framework code can be written to read the current and historical data from ATS, format the data and save it in the new tracking system.

The existing Issues, Deliverables, PCRs and Call # along with their notes and attachments will be mapped to the new tracking system fields. Handling of the special characters, multi-selects, attachments will vary based on the new tracking system selected.

4.2.13 Network Monitoring Strategies

The performance of modern, web-based solutions are dependent on the speed and throughput of the Agency's telecommunications network. When the network is overloaded, transactions slow down, work output suffers and user confidence is degraded. Although Deloitte is not the network provider and has no means to increase network performance, we do track and report on page load times at each County office and make recommendations to the Agency when there appears to be a network performance issue. When a user reports a specific performance problem we first verify that the application components are performing within established benchmarks and, if so, work with the Agency and the worker to determine if the problem is related to the particular office, user's machine or the network. When there appears to be a network issue we escalate the problem to the appropriate MIS point of contact.

SECTION HIGHLIGHT

Deloitte's approach for network performance improvements has the following benefits

- Proactive system and network monitoring strategies to identify system bottlenecks
- Periodic band width testing for problematic counties and well defined network performance improvement initiatives

In the figure below, we depict the tuning plan for resolving issues identified through network monitoring strategies that has been used consistently to maintain and improve system performance. We continue to identify and implement network tuning initiatives for batch and online system by periodically monitoring network performance for counties that report outages as well as tracking these issues through the ticket resolution and help desk process.

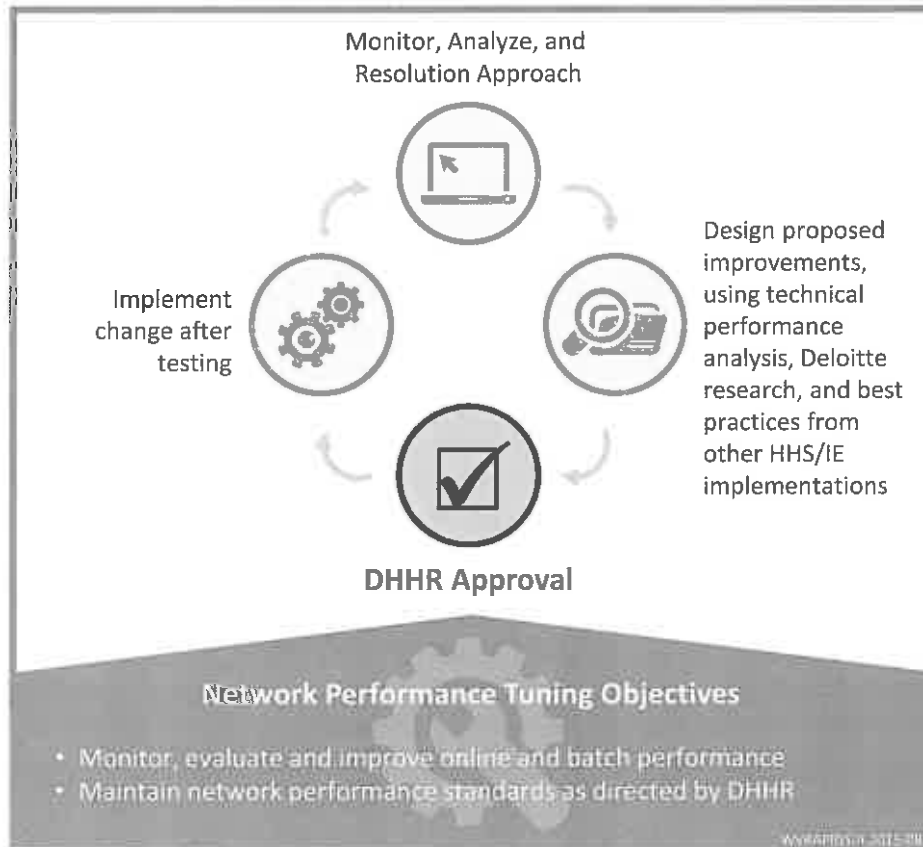## Tuning Plan for Resolving Issues

Figure 4.4.2-63. Tuning plan for resolving issues.

A strategic and systematic approach enables Deloitte to meet and exceed the network performance requirements desired by the Agency. The following table highlights our system network monitoring process.

Deloitte's System Network Monitoring Process
Response Time Monitoring and Problem Resolution. This process provides automated and manual steps to monitor and manage end user response time. Transactions identified as exceeding allowable thresholds are quickly investigated and a mitigation plan formulated. Deloitte works with the Agency to define a mutually agreeable action plan to address the root cause.
Tracking and resolving issues. This process emphasizes on tracking the issue raised due to network outages. Depending on the criticality of the issue and nature of the functional change, Deloitte will accordingly work on resolving the issue after Agency's approval. Thorough performance and functional regression tests are conducted, results analyzed, and issues addressed before production deployment. The tracking mechanism not only helps in understanding the depth of the problem but also initiates additional tuning initiatives.

Figure 4.4.2-64. Network Monitoring Process.

Currently, network related issues are identified in two ways. One way is the helpdesk team receiving multiple complaints/calls from different users of the same county, and the other way is a dedicated production monitoring

team receiving automated emails with details of the system fatals occurring in the same county. The Deloitte team performs multiple ping tests to the problematic county to determine the network bandwidth. If the network performance is slower than regular system performance, we will raise tickets to the Agency OT team to resolve the issue accordingly.

Also we have introduced boomerang statistics, a unique way of monitoring and analyzing field activities and gathering various statistics when the application is accessed. This helps us to identify system bottlenecks in advance so that we can work with the Agency to resolve those issues based on the priority level. Boomerang collects transaction data, which we later mine and transform into meaningful reports. These reports are collectively analyzed by Deloitte and the Agency.

Following are the snapshots of these statistics:

- **Average Page Response Time by County.** The following graph shows a high level snap shot of average time taken by each county to load a page in the eRAPIDS worker portal. This enables Deloitte to focus on the counties that have high average page response times and accordingly conduct multiple network related tests on them. The Deloitte team proactively initiates tracking and resolution mechanisms to fix the issue.

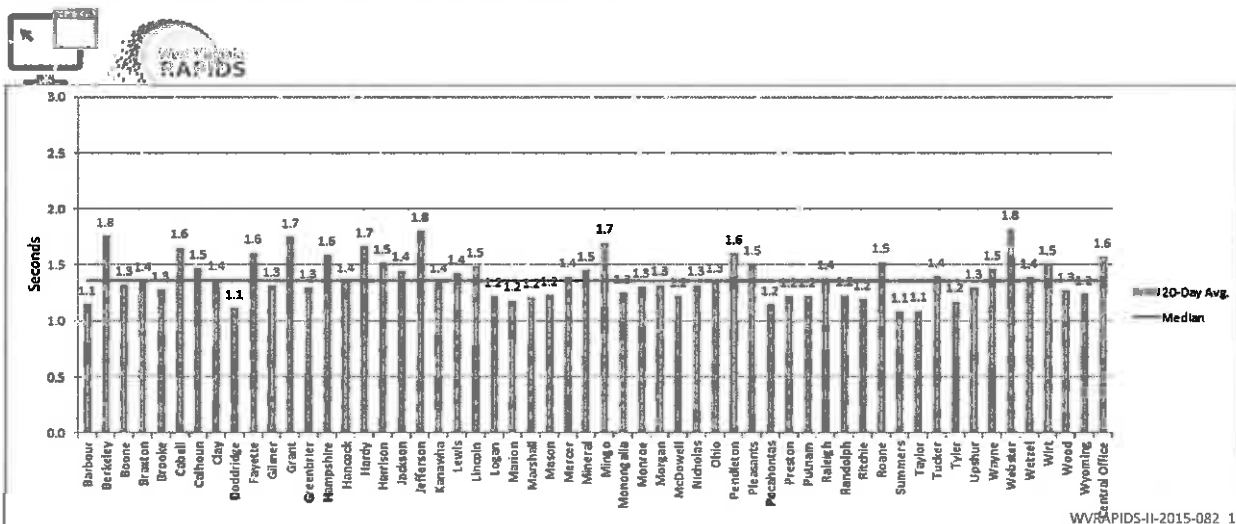## Average Page Response Time by County

Figure 4.4.2-65. Average Page Response Times.

- **Total transactions/commits per day.** Following is another example of how Deloitte will monitor network performance. In this graph, we show total transactions (commits) per day and this will trigger the team if there is any abnormal number of commit counts.

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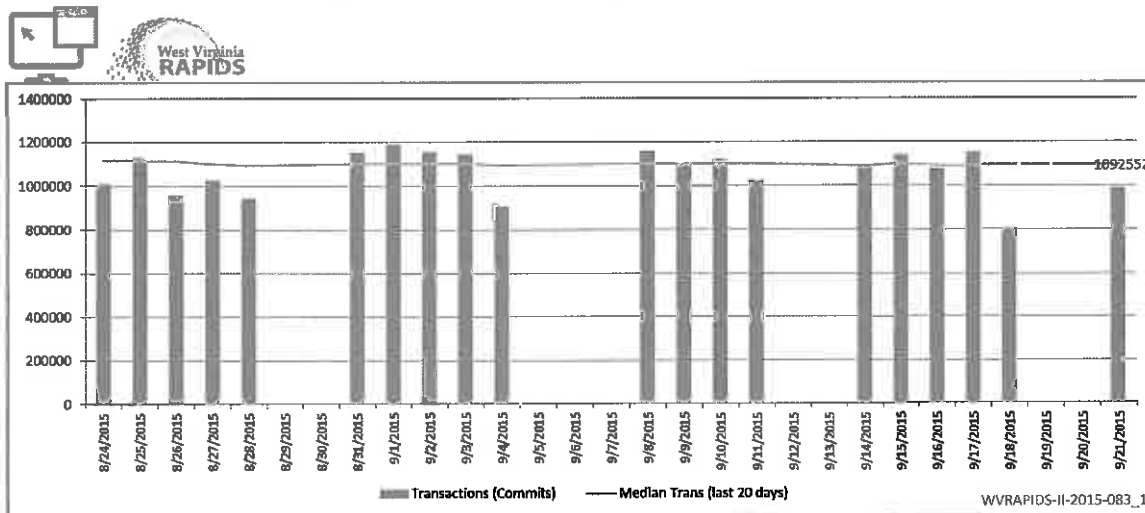## Sample Transactions (Commits) Per Day

Figure 4.4.2-66. Transactions Per Day.

The network monitoring strategy can be improved and made more efficient with the acquisition of additional tools. In order to measure and monitor system performance for SLA compliance Deloitte suggests a set of tools that provide a deep level of monitoring across a range of solution components. As an example, projects of a similar size and scope have demonstrated positive results with New Relic. New Relic is a cloud application monitoring (APM) and infrastructure monitoring solution that allows managers to promptly pinpoint errors and performance issues within your application in the production environment. New Relic is already being used to support other critical projects in monitoring their network, including CMS and the Healthcare.gov fix-it team. The following figure highlights a few of the benefits.

Key Benefits	Key Benefits
Real-User Monitoring	Application code-level monitoring and statistics
Root cause and drill-down analysis	Transaction response times at a per method level of detail
Transaction tracing	SQL transaction times and SQL traces
Unified Dashboards	Server health statistics including CPU, Memory, and Disk Usage

Figure 4.4.2-67. New Relic tool key benefits.

The following is an example of the New Relic application transaction monitoring dashboard.

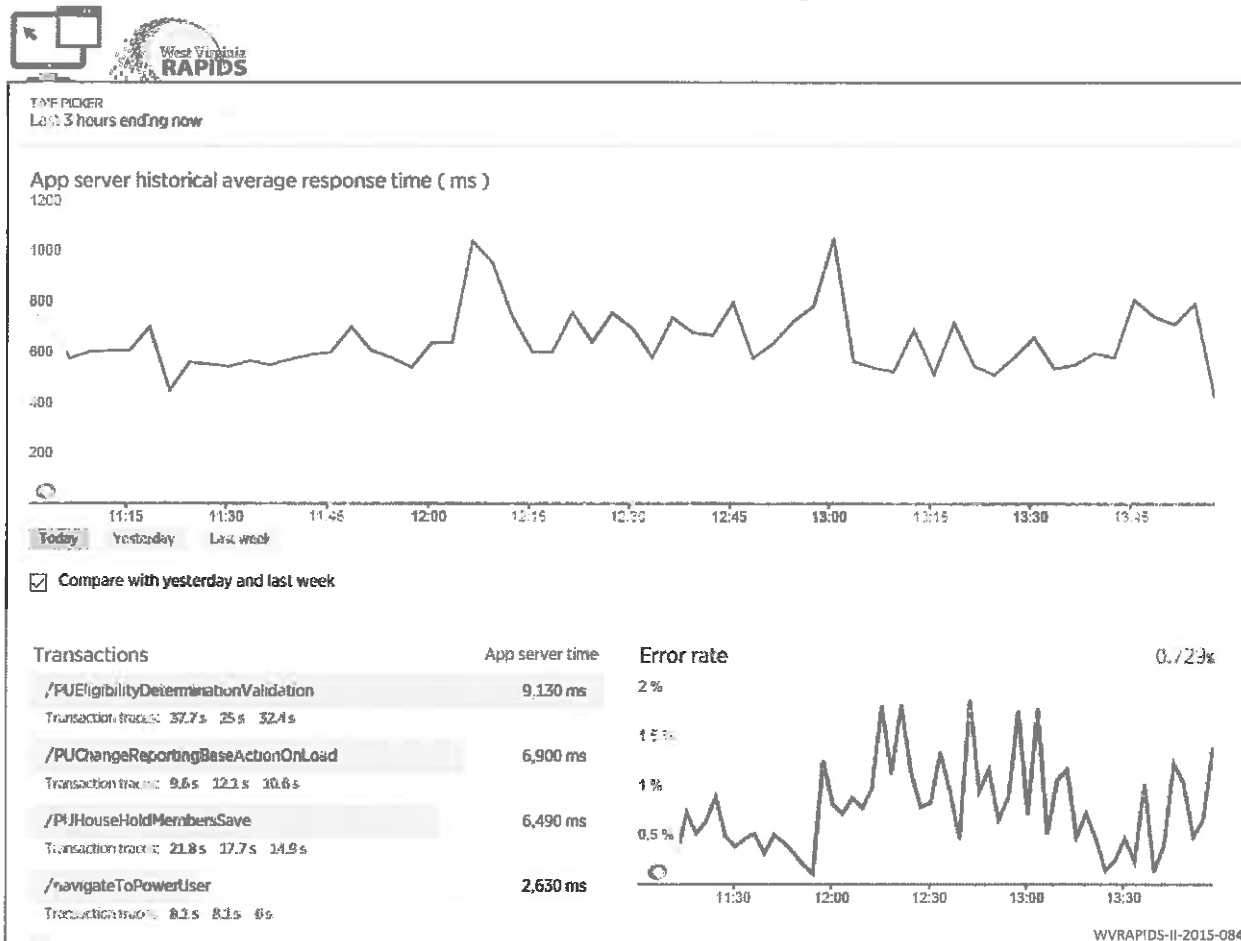## Snapshot of the Application Transaction Monitoring Dashboard

Figure 4.4.2-68. Transaction Monitoring Dashboard.

The proposed network monitoring toolkit provides the Agency a high value, low cost approach to monitor DHHR enterprise assets and stabilize system performance.

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Attachment B: Mandatory Specification Checklist

As per Attachment B: Mandatory Specifications Checklist, our proposal has been organized into the following sections and subsections:

- Section 4, Subsection 5.0, Mandatory Requirements

  - 4.5.1, Facilities and Space Requirements

  - 4.5.2, Office Furniture and General Office Equipment Requirements

  - 4.5.3 through 4.5.13, Project Responsibilities

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Section 4, Subsection 5.0: (Mandatory Requirements)

RFP Reference: RFP page 70

Section 4, Subsection 5.0: (Mandatory Requirements)

The following mandatory requirements must be met by the vendor as a part of the submitted proposal. Failure on the part of the vendor to meet any of the mandatory specifications shall result in the disqualification of the proposal. The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the Purchasing Division. For Mandatories that require a future action, Vendor should respond in Attachment B with an agreement or attestation that they will meet the mandate; for Mandatories that require documentation, vendors must include that documentation with their Technical Proposal.

Vendor Response:

Deloitte has read, understands, and meets the mandatory requirements detailed in the following sections. We understand that failure on the part of the vendor to meet any of the mandatory specifications shall result in the disqualification of the proposal. The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Deloitte understands that decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the Purchasing Division. For Mandatories that require a future action, Vendor should respond in Attachment B (this document) with an agreement or attestation that we meet the mandate; for Mandatories that require documentation, we include that documentation with the Technical Proposal

Each of the below subsections, confirms Deloitte's agreement with the mandatory requirements.

Subsection 5.1: (Facilities and Space Requirements)

Subsection 5.1: (Facilities and Space Requirements)

(All costs to be included in Attachment C, Schedule A of the Pricing Page) The vendor must provide agreement to establish (or proof of having established), subject to Agency approval, an office to house the RAPIDS Project within a 10-mile radius of 350 Capitol Street, Charleston, West Virginia. This facility must provide security and adequate space to accommodate the required on-site vendor personnel, as well as 25 Agency staff which will be co-located with the vendor. Included in the space should be a minimum of five private offices for Agency staff, a reception area, a kitchen, adequate storage facilities, network server room, water fountains, system for hot and cold filtered water, and adequate restroom facilities. Proposed layouts for the facility, including specifications relating to space, leasehold improvements, and support equipment, shall be reviewed and approved by the Agency prior to execution of the office lease.

The vendor shall be responsible for all costs related to the rental and operation of such facility, including, but not limited to, leasehold improvements; utilities; office/building security; telephones with voice mail and caller ID; a toll-free line for the Help Desk telephones with roll over and messaging capabilities; office equipment (two fax machines and a networked color copier with scanning capabilities); general office supplies; storage, janitorial services and supplies; and any necessary facility insurance. The vendor will be required to use the Agency's e-mail system.

The Agency shall have the option to substitute State space or to accept vendor space for any site. The facility must be operational within 60 calendar days of purchase order issuance.

Vendor Response:

Deloitte is currently co-located with Agency staff at the current RAPIDS project site at 1012 Kanawha Blvd., Charleston, WV 25301. Proof of our occupancy is provided in Appendix A of this proposal. The current project site is within a three-mile radius from the Agency's headquarters located at 350 Capitol Street, Charleston. This close proximity has facilitated effective collaboration between the Agency's business and technical teams and Deloitte's RAPIDS team for several years. Deloitte proposes and agrees to extend our use of this 15,178 square foot facility as the RAPIDS project site. This site meets all of the Agency's requirements for security, space, conference rooms, help desk area, parking and other operational requirements per the RFP. Specifically, the facility will provide space to accommodate the required on-site vendor personnel, as well as 25 Agency staff, including five private offices for Agency staff, a reception area, a kitchen, adequate storage facilities, network server room, water fountains, system for hot and cold filtered water, and adequate restroom facilities. Deloitte proposes to renovate and update the facility at the start of the contract to improve the facility and to exceed some of the requirements such as providing an electronic card security system.

Deloitte accepts the responsibility for costs related to the rental and operation of such facility, including leasehold improvements; utilities; office/building security; telephones with voice mail and caller ID; a toll-free line for the Help Desk telephones with roll over and messaging capabilities; office equipment (two fax machines and a networked color copier with scanning capabilities); general office supplies; storage, janitorial services and supplies; and the required facility insurance. For email communications the Deloitte Team will use the Agency's email system, supplemented with Deloitte's email system where advantageous, for example to schedule Web-enabled conferencing using the web conferencing services which are integrated into our email system.

Deloitte's administrative professionals enable effective management of the current RAPIDS facility and equipment. Understanding that the existing facility will be required to serve the needs and demands of RAPIDS project, Agency staff, and Deloitte staff through the contract period, Deloitte is committed to improving the existing facility by providing upgrades so that the facility is suitable for continued use for the duration of the proposed contract, with extensions. While undertaking a "face-lift" to the current project site, Deloitte is well aware that current maintenance and operational responsibilities need to continue without disruptions. Where possible, Deloitte will schedule office

improvement efforts during non-business hours and during weekends, and will have all improvements to the facility done within 60 calendar days of purchase order issuance.

Deloitte meets your requirements:

☑ The vendor must establish, subject to Agency approval, an office to house the RAPIDS Project within a 10-mile radius of 350 Capitol Street, Charleston, West Virginia. This facility must provide security and adequate space to accommodate the required on-site vendor personnel, as well as 25 Agency staff which will be co-located with the vendor. Included in the space should be a minimum of five private offices for Agency staff, a reception area, a kitchen, adequate storage facilities, network server room, water fountains, system for hot and cold filtered water, and adequate restroom facilities. Proposed layouts for the facility, including specifications relating to space, leasehold improvements, and support equipment, shall be reviewed and approved by the Agency prior to execution of the office lease.

☑ The vendor shall be responsible for all costs related to the rental and operation of such facility, including, but not limited to, leasehold improvements, utilities, office/building security, telephones with voice mail and caller ID, a toll-free line for the Help Desk telephones with roll over and messaging capabilities, office equipment (two fax machines and a networked color copier with scanning capabilities), general office supplies, storage, janitorial services and supplies, and any necessary facility insurance.

☑ The Agency shall have the option to substitute State space or to accept vendor space for any site. The facility must be operational within 60 calendar days of purchase order issuance.

5.1.a Conference Rooms

RFP Reference: Attachment B, page 1

a. Conference Rooms
The facility must include, at a minimum, two conference rooms to handle meetings of 20-30 people. Each room must be equipped with conference tables, chairs, visual aids (i.e., white boards), a speaker telephone with conference call capabilities, and network connections.

Vendor Response:

Deloitte's proposed project site facility includes two conference rooms adequate to handle meetings of 20 to 30 people. Each room is equipped with conference tables, chairs, visual aids (i.e., whiteboards), a projector, a speaker telephone with conference call capabilities, and a minimum of six network connections. In addition, the current facility has two additional conference rooms, affectionately referred to the "situation" room on the second floor of the facility, and the "Lumber Yard" on the fourth floor of the facility, both of which are equipped with conference tables, chairs, visual aids (whiteboards), a speaker telephone with conference call capabilities and network LAN connection capabilities.

Deloitte
MEETS
✓

Deloitte meets your requirements:

☑ At a minimum, two conference rooms to handle meetings of 20-30 people.

☑ Each [conference] room must be equipped with conference tables, chairs, visual aids (i.e., white boards), a speaker telephone with conference call capabilities, and network connections.

5.1.b Help Desk Area

RFP Reference: Attachment B, page 1

b. Help Desk Area
The facility must have a help desk area adjacent to the general work area. The help desk area must house PCs, one printer, one fax machine, and telephones, as well as associated furniture to provide a work area for the three Agency Help Desk staff. This will also include the toll free line with roll over and messaging capabilities.

Vendor Response:

Deloitte's proposed project facility supports a help desk area adjacent to the general work area. The help desk area adequately houses PCs, one printer, one fax machine, and telephones, as well as associated furniture adequate to provide a comfortable work area for the three Agency Help Desk Staff. The Help Desk area also includes a toll-free line with roll over and messaging capabilities.

Deloitte
MEETS
✓

Deloitte meets your requirements:

✓ The facility must have a help desk area adjacent to the general work area

✓ The help desk area must house PCs, one printer, one fax machine, and telephones, as well as associated furniture to provide a work area for the three Agency Help Desk staff.

✓ This [help desk area] will also include the toll free line with roll over and messaging capabilities

5.1.c Parking

RFP Reference: Attachment B, page 1

c. Parking
The vendor must make available parking, at no additional cost to the Agency, adjacent to the facility or within 150 yards of the office building for all Agency staff, as well as an additional three spaces to be used as visitor parking. Handicap parking must be made available when the need arises.

Vendor Response:

Deloitte's project site includes ample parking space, made available to the State at no additional cost to the Agency. Parking is available within the building premises and is reserved for all State staff. Our facility also has three spaces reserved for visitor parking and is provisioned to support handicap parking. Seven of the parking spots which are available to the Agency are located under the building, affording extra comfort in inclement weather.

Deloitte
MEETS
✓

Deloitte meets your requirements:

✓ The vendor must make available parking, at no additional cost to the Agency, adjacent to the facility or within 150 yards of the office building for all Agency staff, as well as an additional three spaces to be used as visitor parking

✓ Handicap parking must be made available when the need arises.

5.1.d Kitchen Facilities

d. Kitchen Facilities

This facility must have a kitchen area containing, at a minimum, a sink, a microwave, an ice maker, coffee and hot water service for all staff and a refrigerator.

Vendor Response:

Our project facility houses a separate kitchen, away from the general work area. The kitchen contains a sink, microwave, an ice maker, coffee and hot water services that is adequate for Agency and Deloitte staff, and a refrigerator. In addition, our current facility has a second kitchen located on the fourth floor, which includes a hot/cold water cooler, refrigerator/freezer, microwave, coffee/tea maker, kitchen sink, and a stove/oven.

Deloitte

MEETS ✓

Deloitte meets your requirements:

☑ This facility must have a kitchen area containing, at a minimum, a sink, a microwave, an ice maker, coffee and hot water service for all staff and a refrigerator.

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Subsection 5.2: (Office Furniture and General Office Equipment Requirements)

RFP Reference: Attachment B, page 2

Subsection 5.2: (Office Furniture and General Office Equipment Requirements)
Vendor must agree to provide a facility with furniture approved by the Agency as being in a suitably new condition. (If not already owned by the State), this equipment shall become the property of the State of West Virginia at the end of the contract. The State will be responsible for providing PCs for the Agency staff. At a minimum, each Agency staff member's cubicle or office must be equipped with the following:
Desk with drawers;
Filing Cabinet;
Table for workstation;
Touch tone telephone with outside line, voice mail and caller ID;
Speaker phone for the five managers' offices; and
Cabling for PCs

Vendor Response:

Deloitte agrees and understands that all furnishings, including furniture and general office equipment, used in vendor-provided facilities will be suitably new equipment. Many of the furnishings and equipment at the current site are already owned by the State and are in suitable condition for continued use. Where new furnishings and equipment is proposed by Deloitte (see below) and accepted by the State, this equipment shall become the property of the State of West Virginia at the end of the contract.

Deloitte
MEETS ✓

Deloitte will provide at a minimum for each Agency staff a cubicle or office with the following:

- Desk with drawers (at least one locking drawer)

- Filing cabinet

- Table for workstation

- Touch tone telephone with outside line, voicemail, caller ID, and intercom

- Speaker phone for the five managers' offices

- Cabling for PC

The specifications relating to furnishings, including furniture and general office equipment are listed in the following figure. The intent of the proposed improvements is to restore the current space to the condition of newly acquired office accommodations.

	RFP requirements	Currently on site	Proposed improvement
✓	**Adequate space for vendor and 25 agency staff**	Yes	New carpeting throughout office
✓	**Five private offices for state Agency staff**	Yes	
✓	**Reception area**	Yes	
✓	**Kitchen**	Yes	
✓	**Adequate storage facilities**	Yes	
✓	**Network server room**	Yes	
✓	**Water fountains**	Yes	

RFP requirements	Currently on site	Proposed improvement
☑ System for hot and cold filtered water	Yes	Deloitte will continue to contract for these services to meet the requirement at the proposed facility
☑ Adequate restrooms	Yes 3 Women's; 3 Men's; 1 Undesignated	
☑ Utilities	Yes - included in building rent	Requirement met with current provision of utilities (e.g. electricity, heating, garbage disposal)
☑ Office/building security	Yes – currently keyed entry doors and reception area	Proposed electronic card key for project site doors in addition to the existing security cameras that capture movement at all points of entry/exit into the office on 2nd floor.
☑ Telephones with voice mail and caller ID	Yes	
☑ Two Fax Machines	Yes	
☑ Networked color copier with scanning capability	Yes	Deloitte will continue to contract for this product to meet the requirement at the proposed facility
☑ General office supplies	Yes	Deloitte will continue to contract with appropriate suppliers for general office supplies to meet the requirement at the proposed facility
☑ Storage	Yes	
☑ Janitorial service and supplies	Yes - included in building rent	
☑ 2 conference rooms able to handle 20-30 people; including network connections	Yes	
☑ Conference room table	Yes	
☑ Conference room chairs	Yes	20 new chairs for the conference rooms, including 10 adjustable; another 30 adjustable and 30 fixed chairs in the current facility are in suitable condition for continued use
☑ Visual aids (white boards) for conference rooms	Yes	
☑ Speaker phone with conference call capabilities In each conference room	Yes	
☑ Help Desk area adjacent to the general work area, housing PCs, for 3 State Agency Help Desk staff	Yes	New carpeting throughout office (including help desk area)
☑ Printer for Help Desk area	Yes	
☑ Fax Machine for Help Desk area	Yes	
☑ Telephones for Help Desk staff	Yes	
☑ Furniture to provide a work area for 3 State Agency Help Desk staff	Yes	

RFP requirements	Currently on site	Proposed improvement
☑ Toll-free line for the Help Desk telephones with rollover and messaging capabilities	Yes	Deloitte will continue to contract for this service to meet the requirement at the proposed facility
☑ Parking within 150 yards of facility, as well as 3 visitor spaces, and handicapped parking made available with need.	Yes	Requirement met with proposed facility – parking is less than 150 yards from facility and includes 3 visitor spaces and a handicap parking space can be made available if needed
☑ Kitchen - Containing a sink, coffee and hot water service for all staff	Yes	
☑ Microwave for kitchen	Yes	
☑ Ice maker for kitchen	Yes	
☑ Refrigerator for kitchen	Yes	
☑ Office furniture and general office equipment	Yes	Replace the older cubicles with new cubicles (walling), but retaining the existing newer cubicles as suitable;
☑ Each Agency staff member's cubicles or office must be equipped with the following: desk with drawers; filing cabinet; table for workstation.	Yes	Requirement met with proposed facility upon refinishing the older wooden desks and drawers
☑ Each Agency staff member's cubicles or office must be equipped with the following: touch tone phone with outside line, voice mail, and caller ID	Yes	
☑ Speaker phone for the five manager's offices	Yes	
☑ Cabling for PC's	Yes	

Figure 4.5-1. Specifications Relating to Furnishings and General Office Equipment.
The specifications relating to furnishings, including furniture and general office equipment; the proposed improvements will restore the current space to a suitable new condition for continued use.

As described in the previous table, Deloitte has proposed reuse of most of the existing furniture and general office equipment. As indicated, we propose new carpeting as the condition of the existing carpet is a source of complaint from current staff, new cubicle walls for the older cubes to address potential future safety concerns, new secure electronic card key access to the facility to better meet Federal site security requirements, replacement of broken and damaged chairs, and refinishing of the older wooden desks.

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Deloitte meets your requirements:

☑ All furnishings, including furniture and general office equipment, used in vendor-provided facilities will be new or suitably new equipment

☑ This equipment shall become the property of the State of West Virginia at the end of the contract

☑ At a minimum, each Agency staff member's cubicle or office must be equipped with the following:
Desk with drawers;
Filing Cabinet;
Table for workstation;
Touch tone telephone with outside line, voice mail and caller ID;
Speaker phone for the five managers' offices; and
Cabling for PCs

Project Responsibilities

Project Responsibilities:

This section addresses the services the vendor must provide to keep the system operating on an ongoing basis and to implement certain routine maintenance activities. Each item should be accounted for in the Vendor's Technical Proposal.

Vendor Response:

Deloitte addresses all of the following mandatory requirements succinctly in the remainder of **Section 5**, acknowledging all mandatory requirements are met as described. In addition, more detailed responses are also available for each topic in **Section 4.2: Technical Approach.**

The following table provides the cross reference of the mandatory requirement sections to **Section 4.2**. Note that although the **Section 4.2** response provides more details, Deloitte's confirmation of the requirement remains in **Section 5.0**.

Mandatory Requirements Section	Technical Approach Section
5.3: Software Change Process and Documentation	**4.2.3: System Changes/Enhancements**
5.4: Functional Maintenance and Disaster Recovery	**4.2.8: System Management**
5.5: Data Warehouse	**4.2.8.5: Data Warehouse**
5.6: RAPIDS Software Deployment	**4.2.4: Software Releases** **4.2.7: Program Migration**
5.7: Software Testing and Quality Assurance	**4.2.5: Software Testing and Quality Assurance**
5.8: System Monitoring and Performance	**4.2.1.2: Performance Tuning** **4.2.1.7: System Monitoring and Performance** **4.2.8.1: Performance/Network Monitoring** **4.2.8.3: Operational Reporting**
5.9: RAPIDS System Availability	**4.2.8.6: System Software Updates/Patches, Maintenance (subsection "System Availability")**
5.10: Mass Change and Mass Mailing	**4.2.1.4: Mass Change**
5.11: Cost-effective RAPIDS Operation	**4.2.8.2: Batch Schedule/Executions**
5.12: State IT Procedures and Conventions	**4.2.1.6: Code Review**
5.13: Database Operations	**4.2.9: Database Administration**

Figure 4.5-2. Mandatory to Technical Approach. Mapping.
Section 5.0 to Section 4.2 Section Cross Reference.

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Subsection 5.3: Software Change Process and Documentation

RFP Reference: Attachment B, page 2

Subsection 5.3:

The vendor must analyze the need for software modifications, changes and enhancements and provide the testing and release of all RAPIDS software and software documentation. The vendor must create documentation no later than 30 calendar days from date of change, as well as maintain all system and operational documentation, as necessary.

System changes, enhancements, and their timely documentation throughout the lifecycle of the project is essential for the success of the project. Deloitte will analyze the need for software modifications, changes, and enhancements and provide the testing and release of all RAPIDS software and software documentation. The system and operational documentation related to all system changes will be created no later than 30 calendar days from the date the change is implemented.

Refer to section **4.2.3: System Changes/Enhancements** for more details concerning Deloitte's approach for Software Change and Documentation.

Deloitte meets your requirements:

- ☑ The vendor must analyze the need for software modifications, changes and enhancements and provide the testing and release of all RAPIDS software and software documentation.

- ☑ The vendor must create documentation no later than 30 calendar days from date of change, as well as maintain all system and operational documentation, as necessary.

Subsection 5.4: Functional Maintenance and Disaster Recovery

RFP Reference: Attachment B, page 2

Subsection 5.4:
The vendor must provide functional responsibility for RAPIDS maintained modules, including RAPIDS disaster recovery and periodic testing for that recovery. In addition, the vendor must provide complete functional responsibility for network and PC disaster recovery. The vendor must provide the staff necessary based on the staffing section 3.2 in order to successfully support restoring functionality to RAPIDS service in the event of a disaster. The vendor must maintain disaster recovery documentation including the post RAPIDS corrections and findings and the Office of Technology's findings, recommendations and changes.

Vendor Response:

Deloitte will provide functional responsibility for RAPIDS maintained modules, including RAPIDS disaster recovery, and will perform annualized recovery testing according to an OMIS/OT disaster recovery exercise schedule. Deloitte will provide functional responsibility by taking on the responsibility to keep the Deloitte maintained RAPIDS components and subcomponents in an operational state and conforming to specifications. This assumes that the hardware, software, and network connectivity supporting the application are provided by the State. If there is an outage disabling access to the network and PCs at the project site over an extended period, and declared by the State to be a Disaster Recovery situation, we will work with OMIS and WV-OT to leverage secure VPN access to work at a remote location. Deloitte will maintain existing disaster recovery documentation including lessons learned, post-RAPIDS disaster simulation process corrections and findings, and the OT's findings, recommendations and changes. Deloitte will provide the staff necessary based on the staffing section 3.2 in order to successfully support restoring functionality to RAPIDS service in the event of a disaster. These will include primarily the technical manager, Web application server administrator, and DBA teams. The application manager and track leads would also be involved in verifying RAPIDS is operating properly after RAPIDS is restored.

It is our assumption that State resources, including staff support, hardware, network, backups, and storage at DR site to perform disaster recovery, will be used during the disaster recovery exercises. Deloitte will work with the agency to manage backup policies and integrate the RAPIDS applications with the State's existing disaster recovery and business continuity plan.

Refer to section **4.2.8: System Management** for more information concerning Deloitte's approach to Functional Maintenance and Disaster recovery.

Refer to section **3.2: Staff Qualifications and Experience** which demonstrates we are providing the required staff based on RFP requirements.

Deloitte meets your requirements:

☑ The vendor must provide functional responsibility for RAPIDS maintained modules, including RAPIDS disaster recovery and periodic testing for that recovery.

☑ In addition, the vendor must provide complete functional responsibility for network and PC disaster recovery.

☑ The vendor must maintain disaster recovery documentation including the post RAPIDS corrections and findings and the Office of Technology's findings, recommendations and changes.

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Subsection 5.5: Data Warehouse

Subsection 5.5:
The vendor must populate the data warehouse with the data elements necessary to support reports which are created with Cognos.

Vendor Response:

Deloitte proposes to continue to populate the data warehouse with the data elements necessary to support reports which are created with Cognos. The RAFT data warehouse is an integral part of the reporting architecture of RAPIDS and provides the Agency with the ability to report beyond simple transactional statistics. The availability of the data warehouse and the quality of its extract processes are vital to producing accurate reports in a timely manner, thereby enabling more informed business decisions. New data elements will be added to the data warehouse as part of the Software Modification Pool (SMP) initiatives, in order to support new reporting requirements. These new data element loads will be operationalized by the Deloitte maintenance and operations team as recurring ETL batch data loads.

SECTION HIGHLIGHT

- The Deloitte Team is intimately familiar with the RAPIDS application, including the data warehouse and the process of extracting data for the Cognos reports.
- The Deloitte RAPIDS development and maintenance team created the RAPIDS transactional data model and the data warehouse data model

Refer to section **4.2.8.5: Data Warehouse** for more information concerning Deloitte's approach to the Data Warehouse (RAFT).

Deloitte meets your requirements:

☑ The vendor must populate the data warehouse with the data elements necessary to support reports which are created with Cognos.

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Subsection 5.6: RAPIDS Software Deployment

RFP Reference: Attachment B, page 2

Subsection 5.6:
The vendor must provide the support required to distribute new versions of the RAPIDS software.

Vendor Response:

Deloitte will provide the support required to distribute new versions of the RAPIDS software. RAPIDS updates are performed by deploying updated software components to production in mainframe and server locations,

Refer to sections **4.2.4: Software Releases** and **4.2.7: Program Migration** for more information concerning RAPIDS Software Deployment process.

Deloitte meets your requirements:

☑ The vendor must provide the support required to distribute new versions of the RAPIDS software

Subsection 5.7: Software Testing and Quality Assurance

RFP Reference: Attachment B, page 3

Subsection 5.7:

The vendor must maintain a comprehensive package of testing data and materials for use in evaluating RAPIDS. The test data and materials shall be able to accurately predict all possible conditions, plus expected results, for base test and other installations. The vendor must provide quality assurance functions. This includes, but is not limited to:

a. Database reviews,
b. Documentation reviews,
c. Code reviews,
d. System review (both technical and programmatic), and
e. Test plans.

Vendor Response:

Effective software testing and quality assurance functions are critical to the long-term success of mission-critical systems like RAPIDS. Deloitte will maintain a broad package of testing data and materials to be used in testing RAPIDS against the baseline requirements. Deloitte will reasonably predict possible business conditions as defined in the business requirements and corresponding system use cases, and develop data and materials to support the testing of these conditions. Based on Agency JAD input, the business conditions will be documented in the Software Requirement Specification (SRS). The SRS will be approved by the agency. The business conditions captured and approved in the SRS will be used by Deloitte to develop the test cases and subsequently the test data.

Deloitte will provide strong quality assurance functions related to database reviews, documentation reviews, code reviews, system reviews (both technical and programmatic), and test plans.

Refer to section **4.2.5: Software Testing and Quality Assurance** for more information about Deloitte's Software Testing and Quality Assurance functions.

Deloitte meets your requirements:

☑ The vendor must maintain a comprehensive package of testing data and materials for use in evaluating RAPIDS.

☑ The test data and materials shall be able to accurately predict all possible conditions, plus expected results, for base test and other installations.

☑ The vendor must provide quality assurance functions. This includes, but is not limited to:
a. Database reviews,
b. Documentation reviews,
c. Code reviews,
d. System review (both technical and programmatic), and
e. Test plans.

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Subsection 5.8: System Monitoring and Performance

Subsection 5.8:

The vendor must meet the requirement by the Office of Management Information Systems (OMIS) for monitoring the vendor's performance during operations using a performance reporting system to be implemented by the vendor. The Service Level Agreements (SLA) presented in Section Four, Subsection 5.8 of the CRFP establish the performance level expected by OMIS in a particular area. Key Performance Indicators (KPIs) are identified within each SLA and are to be measured and reported each month by the vendor. Service Level Agreements found in this attachment are:

1. System Availability,
2. System Performance, and
3. Operational Problem Management.

The vendor agrees to accept the Service Level Agreements as presented in Section Four, Subsection 5.8.

Vendor Response:

Deloitte will meet the requirements by the OMIS for monitoring Deloitte performance during operations using a performance reporting system which Deloitte will implement. Deloitte accepts that the SLAs presented in Section Four, Subsection 5.8 of the CRFP are the initial SLAs that establish the performance level expected by OMIS in a particular area and that adjustment to the SLAs will follow the process set out in the "Periodic Reviews" paragraph in RFP Section 5.8 (addressed in Subsection 5.8 c in this proposal).

Deloitte's existing performance reports will be leveraged and supplemented based on the KPIs.

Deloitte agrees that the KPIs identified within each SLA will be measured and reported each month. SLAs are categorized into three areas:

1. **System Availability.** Providing functional production and test environments as per State requirements. These are addressed in **Subsection 5.8.1: System Availability SLAs**.

2. **System Performance.** Building and maintaining the RAPIDS suite of applications to comply with State requirements. These are addressed in **Subsection 5.8.2: System Performance SLAs**.

3. **Operational Problem Management.** Operating the JIRA toolset to allow management of reported defects to comply with State requirements. These are addressed in **Subsection 5.8.3: Operational Problem Management SLAs**.

In order to effectively monitor KPIs, the State will provide access to the required technical components to appropriate Deloitte resources, both onsite and remote.

Refer to sections **4.2.1.2: Performance Tuning, 4.2.1.7: System Monitoring** and **Performance, 4.2.8.1: Performance/Network Monitoring**, and **4.2.8.3: Operational Reporting** for more information about Deloitte's approach to System Monitoring and Performance, as well as monthly reporting of SLAs.

Deloitte meets your requirements:

☑	The vendor must meet the requirement by the Office of Management Information Systems (OMIS) for monitoring the vendor's performance during operations using a performance reporting system to be implemented by the vendor
☑	The Service Level Agreements (SLA) presented in Section Four, Subsection 5.8 of the CRFP establish the performance level expected by OMIS in a particular area
☑	Key Performance Indicators (KPJs) are identified within each SLA and are to be measured and reported each month by the vendor. Service Level Agreements found in this attachment are: 1. System Availability; 2. System Performance; and 3. Operational Problem Management.
☑	The vendor agrees to accept the Service Level Agreements as presented in Section Four, Subsection 5.8.

Subsection 5.8 a: SLAs and Performance Monitoring

RFP Reference: RFP page 72

Subsection 5.8 a:
OMIS has identified the KPIs to be key indicators of the vendor's operational performance. If these Key Performance Metrics are not met, the "liquidated damage percentage" below will be utilized to determine what percentage of the monthly invoice will be decreased indefinitely by OMIS. The liquidated damage penalty cannot be recovered by the vendor.

Deloitte accepts that OMIS has identified the KPIs to be key indicators of the successful bidder's operational performance. If the KPIs are not met, Deloitte accepts that the associated "liquidated damage percentage" will be utilized to determine the percentage of the operations monthly invoice will be decreased based on missing that KPI. Deloitte also accepts that liquidated damage penalties cannot be recovered.

Refer to sections **4.2.1.2: Performance Tuning, 4.2.1.7: System Monitoring and Performance, 4.2.8.1: Performance/Network Monitoring**, and **4.2.8.3: Operational Reporting** for more information about Deloitte's approach to System Monitoring and Performance, as well as monthly reporting of SLAs.

Deloitte meets your requirements:

☑	OMIS has identified the KPIs to be key indicators of the vendor's operational performance.
☑	If these Key Performance Metrics are not met, the "liquidated damage percentage" below will be utilized to determine what percentage of the monthly invoice will be decreased indefinitely by OMIS.
☑	The liquidated damage penalty cannot be recovered by the vendor.

Subsection 5.8 b: Monthly Reporting

Subsection 5.8 b:

The vendor is expected to monitor performance against the OMIS-specified KPIs in this document and is to develop operations reports to demonstrate compliance with applicable KPIs. The vendor is to submit a performance report card monthly on all KPIs regarding the prior month's performance. This report is to be submitted no later than the 10th of the month. The vendor may include additional information regarding SLA compliance in its report. The vendor is to make available to OMIS upon request all reports or data used in the determination of SLA compliance.

Deloitte will monitor performance against OMIS specific KPIs and provide monthly reports demonstrating compliance with the KPIs or providing details if one or more KPIs is not met. The report will be submitted by the 10th of the month for the prior month. The report will be based on the finalized KPIs/SLAs as revised or modified per the process laid out in **RFP Section 5.8: Periodic Reviews**

Deloitte will work with OMIS to mutually agree on the structure and content of the monthly report card as part of the pre-commencement of operations KPI review, and as part of each change in KPIs.

See subsection **5.8 c: Periodic Reviews** for more information on the KPI reviews.

Refer to sections **4.2.1.2: Performance Tuning, 4.2.1.7: System Monitoring and Performance, 4.2.8.1: Performance/Network Monitoring,** and **4.2.8.3: Operational Reporting** for more information about Deloitte's approach to System Monitoring and Performance, as well as monthly reporting of SLAs.

Deloitte meets your requirements:

☑ The vendor is expected to monitor performance against the OMIS-specified KPIs in this document and is to develop operations reports to demonstrate compliance with applicable KPIs.

☑ The vendor is to submit a performance report card monthly on all KPIs regarding the prior month's performance. This report is to be submitted no later than the 10th of the month. The vendor may include additional information regarding SLA compliance in its report.

☑ The vendor is to make available to OMIS upon request all reports or data used in the determination of SLA compliance.

Subsection 5.8 c: Periodic Reviews

RFP Reference: RFP page 7 2

Subsection 5.8 c:

Prior to commencement of operations, OMIS and the vendor are to review all established KPIs to determine if revisions are needed. Thereafter, similar reviews are to be held annually, upon the implementation of a change that impacts existing KPIs, and/or at the request of OMIS. KPI's and liquidated damage rates prescribed here may only be modified by formal change order; they may, however, be waived at convenience of OMIS.

Prior to commencement of operations, Deloitte will meet with OMIS to review the KPIs in **Section: 5.8.1 System Availability SLAs, Section: 5.8.2 System Performance SLAs,** and **Section: 5.8.3 Operational Problem Management SLAs** to determine if revisions are needed. These discussions will also decide the methodology and or tool(s) for measuring conformance to each KPI. Deloitte will base its "performance reporting system to be implemented by the vendor" (see **Subsection: 5.8**) on these finalized KPIs and methodologies. Thereafter, similar reviews will be held when changes are made that may impact KPIs, annually and/or at the request of OMIS. If there is mutual agreement to implement changes to the KPIs and/or associated liquidated damages, the changes will be modified via a formal change order. OMIS reserves the right to waive KPIs, in whole are part, at the convenience of OMIS (without a formal change order).

Refer to sections **4.2.1.2: Performance Tuning, 4.2.1.7: System Monitoring and Performance, 4.2.8.1: Performance/Network Monitoring,** and **4.2.8.3: Operational Reporting** for more information about Deloitte's approach to System Monitoring and Performance, as well as monthly reporting of SLAs.

Deloitte meets your requirements:

- ☑ Prior to commencement of operations, OMIS and the vendor are to review all established KPIs to determine if revisions are needed
- ☑ Thereafter, similar reviews are to be held annually, upon the implementation of a change that impacts existing KPIs, and/or at the request of OMIS.
- ☑ KPI's and liquidated damage rates prescribed here may only be modified by formal change order; they may, however, be waived at convenience of OMIS

Subsection 5.8 d: Corrective Action

RFP Reference: RFP page 72

Subsection 5.8 d:

When a Key Performance Indicator is not met, the vendor is expected to provide OMIS with a written detailed Corrective Action Report no later than ten business days from the 10th of month which describes:

1. The missed KPI;
2. Full description of the issue;
3. Cause of the problem;
4. Risks related to the issue;
5. The resolution, including any failed solutions implemented prior to resolution; and
6. Proposed corrective action going forward to avoid missing the KPI in the future.

Upon receipt of the report, OMIS may request a meeting to further discuss related issues. The vendor is to implement proposed corrective action (#6 above) only upon approval of OMIS.

The State reserves the right to engage an outside contractor for system evaluation purposes. The vendor will be responsible for completing State recommended corrections at no additional cost to the State.

When a KPI is missed, Deloitte will provide OMIS with a written detailed corrective action plan no later than ten business days from the 10th of the month. The corrective action will detail:

1. The missed KPI;

2. Full description of the issue;

3. Cause of the problem;

4. Risks related to the issue;

5. The resolution, including any failed solutions implemented prior to resolution; and

6. Proposed corrective action going forward to avoid missing the KPI in the future.

Based on the report. OMIS may request a meeting to further discuss related issues. Deloitte will work to revise the corrective action plan based on OMIS input. Prior to implementing the corrective action, OMIS will provide approval.

As confirmed in Addendum Number 1, Deloitte will not be subject to liquidated damages caused by delays in the State providing input or approval of the corrective action.

The State may choose to engage an outside contractor for system evaluation purposes. Deloitte would be responsible for completing State recommended changes as a maintenance task, at no additional cost to the State.

Refer to **Sections 4.2.1.2: Performance Tuning, 4.2.1.7: System Monitoring and Performance, 4.2.8.1: Performance/Network Monitoring**, and **4.2.8.3: Operational Reporting** for more information about Deloitte's approach to System Monitoring and Performance, as well as monthly reporting of SLAs.

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Deloitte meets your requirements:

When a Key Performance Indicator is not met, the vendor is expected to provide OMIS with a written detailed Corrective Action Report no later than ten business days from the 10th of month which describes:

1. The missed KPI;
2. Full description of the issue;
3. Cause of the problem;
4. Risks related to the issue;
5. The resolution, including any failed solutions implemented prior to resolution; and
6. Proposed corrective action going forward to avoid missing the KPI in the future.

Upon receipt of the report, OMIS may request a meeting to further discuss related issues. The vendor is to implement proposed corrective action (#6 above) only upon approval of OMIS.

The State reserves the right to engage an outside contractor for system evaluation purposes. The vendor will be responsible for completing State recommended changes at no additional cost to the State.

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Subsection 5.8.1: System Availability SLAs

RFP Reference: RFP page 73

Performance Standard

System availability is to be defined as the percentage of possible uptime in a month that the RAPIDS environments (including all associated components) are available to users or to perform in a back-up capacity, including weekends and holidays. Negotiated downtime for system maintenance during off-peak hours is not to be included in the calculation of system availability.

Downtime.

Downtime is to be defined as the time during which all RAPIDS systems are not functioning/available due to hardware, operating system or application program failure. Production downtime is to be defined as the time during which the system is not available for production use due to the loss of the functional application. Outages during planned downtime approved by OMIS do not count towards downtime. System availability is to be based on the following hours of operation.

RAPIDS Hours of Operation.

RAPIDS access is to be available at a minimum 100% of the time during working hours, 7:00 a.m. to 7:00 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required at the request of the State with access on the holidays as agreed upon by OMIS and on an emergency basis if requested by OMIS.

Other Components Hours of Operation.

The Client Facing Web Portal, inROADS, and other system components, as required by OMIS, are to be available 100% of the time 24 hours per day, seven days per week, except for agreed upon downtime. The vendor is to ensure system availability meets the following performance standards.

Unscheduled Production Downtime

1. inROADS

Unscheduled production downtime for inROADS is to be one (1) hour or less within a 24-hour period or with approval by OMIS.

2. All Other RAPIDS Components

Production downtime for all other RAPIDS components is to be 1% or less.

Unscheduled Test Downtime

3. Test Environment

Test downtime for all RAPIDS components is to be 15% or less.

Liquidated Damage Percentage

Up to 5% of the monthly operating fee, as follows:

• Any 1 of 3 not met: 1%
• Any 2 of 3 not met: 3%
• Any 3 of 3 not met: 5%

Deloitte agrees to comply with these initial System Availability SLAs.

☑ Performance Standard
System availability is to be defined as the percentage of possible uptime in a month that the RAPIDS environments (including all associated components) are available to users or to perform in a back-up capacity, including weekends and holidays. Negotiated downtime for system maintenance during off-peak hours is not to be included in the calculation of system availability.

☑ Downtime.
Downtime is to be defined as the time during which all RAPIDS systems are not functioning/available due to hardware, operating system or application program failure. Production downtime is to be defined as the time during which the system is not available for production use due to the loss of the functional application. Outages during planned downtime approved by OMIS do not count towards downtime. System availability is to be based on the following hours of operation.

☑ RAPIDS Hours of Operation.
RAPIDS access is to be available at a minimum 100% of the time during working hours, 7:00 a.m. to 7:00 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required at the request of the State with access on the holidays as agreed upon by OMIS and on an emergency basis if requested by OMIS.

Other Components Hours of Operation.
The Client Facing Web Portal, inROADS, and other system components, as required by OMIS, are to be available 100% of the time 24 hours per day, seven days per week, except for agreed upon downtime. The vendor is to ensure system availability meets the following performance standards.

Unscheduled Production Downtime
1. inROADS
   Unscheduled production downtime for inROADS is to be one (1) hour or less within a 24-hour period or with approval by OMIS
2. All Other RAPIDS Components
   Production downtime for all other RAPIDS components is to be 1 % or less.

Unscheduled Test Downtime
3. Test Environment
   Test downtime for all RAPIDS components is to be 15% or less.

Liquidated Damage Percentage
Up to 5% of the monthly operating fee, as follows:
• Any 1 of 3 not met: 1%
• Any 2 of 3 not met: 3%
• Any 3 of 3 not met: 5%

Subsection 5.8.2: System Performance SLAs

RFP Reference: RFP page 75

Performance Standard

System performance is to be defined as RAPIDS response time to user queries. RAPIDS access is to be available at a minimum 100% of the time during working hours, 7:00 a.m. to 7:00 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required at the request of the State with access on the holidays as agreed upon by OMIS and on an emergency basis if requested by OMIS. inROADS client facing portal system response times are to be measured seven days a week, 24 hours a day except for agreed downtime.

The vendor is expected to only be responsible for that portion of the system and communication link for which the vendor has responsibility and control. For system response time performance measures, vendor control is to be defined as any subcontractor/vendor service/point up to and including the OMIS side of the router.

The vendor is to provide a system to monitor and report on response times as defined and approved by OMIS. All metrics are to be measured and evaluated in seconds. The vendor is to ensure system performance meets the following performance standards.

1. Menus -- The response time must be within three (3) seconds for ninety-five percent (95%) of all these transactions.
2. Simple Inquiries -- The response time must be within four (4) seconds for ninety-five (95%) of all these transactions.
3. Complex Inquiries – The response time must be within six (6) seconds for ninety-five (95%) of all these transactions.
4. Multi-Function Updates -- The response time must be within eight (8) seconds for ninety-five (95%) of all these transactions.
5. Multi-Unit-of-Work Programs -- The response time must be within fifteen (15) seconds for ninety-five (95%) of all these transactions.
6. Web Enabled Programs -- The response times for inROADS and all web enabled aspects of RAPIDS must be less than four (4) seconds ninety-five (95%) of all these transactions.

Liquidated Damage Percentage
Up to 6% of the monthly operating fee, as follows:
• Any 1 of 6 not met: 1%
• Any 2 of 6 not met: 3%
• Any 3 of 6 not met: 5%
• Any 4 or more of 6 not met: 6%

Deloitte agrees to comply with these initial System Performance SLAs.

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☑ The vendor is to ensure system performance meets the following performance standards.
1. Menus -- The response time must be within three (3) seconds for ninety-five percent (95%) of all these transactions.
2. Simple Inquiries -- The response time must be within four (4) seconds for ninety-five (95%) of all these transactions.
3. Complex Inquiries -- The response time must be within six (6) seconds for ninety-five (95%) of all these transactions
4. Multi-Function Updates -- The response time must be within eight (8) seconds for ninety-five (95%) of all these transactions.
5. Multi-Unit-of-Work Programs -- The response time must be within fifteen (15) seconds for ninety-five (95%) of all these transactions.
6. Web Enabled Programs -- The response times for inROADS and all web enabled aspects of RAPIDS must be less than four (4) seconds ninety-five (95%) of all these transactions.

☑ **Liquidated Damage Percentage**
Up to 6% of the monthly operating fee, as follows:
• Any 1 of 6 not met: 1%
• Any 2 of 6 not met: 3%
• Any 3 of 6 not met: 5%
• Any 4 or more of 6 not met: 6%

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Subsection 5.8.3: Operational Problem Management SLAs

RFP Reference: RFP page 77

Performance Standard

The vendor is to provide operational problem management to manage RAPIDS problems as they occur during the Operations Phase of the project, including issues associated with all system components. Operational issues are to be classified, communicated to OMIS, documented, addressed and tracked by the vendor in a form and format approved by OMIS.

The vendor is to provide software tools to enable the tracking of a specific defect from identification through correction, including all testing performed to ensure the correct fix is in place. Issues are to be documented in the form of an Impact Statement Report.

During the Operations Phase the vendor is to categorize and resolve errors in accordance with the OMIS Operational Problem Management Policy, as follows.

1. Application Unavailable

Indicates RAPIDS is unavailable for use resulting in a stoppage of operations and loss of functional application. Requires immediate OMIS notification and resolution within eight (8) hours.

2. Critical Errors

Critical business impact. No Work Around exists. This includes fatal errors and ABENDS. Requires immediate OMIS notification and resolution within 24 hours.

3. High Affecting Benefits

Serious business impact. Indicates serious production issues where RAPIDS is usable but is severely limited and workarounds exist but are burdensome to workers. Requires OMIS notification and resolution within 72 hours.

4. High Not Affecting Benefits Errors

Significant business impact. Does not affect benefits. Indicates moderate production issues where RAPIDS is usable. Requires OMIS notification and resolution within 10 business days.

5. Medium

Minimal business impact. Indicates the problem results in little impact on operations or a reasonable circumvention to the problem has been implemented. Requires OMIS notification within five business days of problem discovery and resolution within an agreed-upon schedule between the vendor and OMIS (as defined by OMIS).

6. Low

Affects workers' periodic activities. A simple workaround exists. Includes system enhancements. Requires OMIS notification within five business days of problem discovery and resolution within an agreed-upon schedule between the vendor and OMIS (as defined by OMIS).

Liquidated Damage Percentage
Up to 6.50% of the monthly operating fee, as follows:
• Application Unavailable standard not met: 2.50%
• Critical Errors standard not met: 1.50%
• High Affecting Benefits Errors standard not met: 1.00%
• High Not Affecting Benefits Errors standard not met: 1.00%
• Medium Errors standard not met: 0.50%
• Low Errors standard not met: 0.25%

Deloitte agrees to comply with these initial System Performance SLAs.

The methodology for categorizing defects is different than that currently used by RAPIDS. During the "pre-operations" meeting on SLAs, these definitions could change along with any other aspects of the SLA language. Once the defect categories are finalized, Deloitte would work with the State to make changes to the ALM tool configuration, triage process, and reporting processes as necessary to accommodate the changes.

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☑

Performance Standard

The vendor is to provide operational problem management to manage RAPIDS problems as they occur during the Operations Phase of the project, including issues associated with all system components. Operational issues are to be classified, communicated to OMIS, documented, addressed and tracked by the vendor in a form and format approved by OMIS.

☑

The vendor is to provide software tools to enable the tracking of a specific defect from identification through correction, including all testing performed to ensure the correct fix is in place. Issues are to be documented in the form of an Impact Statement Report.

☑

During the Operations Phase the vendor is to categorize and resolve errors in accordance with the OMIS Operational Problem Management Policy, as follows:

1. Application Unavailable
   Indicates RAPIDS is unavailable for use resulting in a stoppage of operations and loss of functional application. Requires immediate OMIS notification and resolution within eight (8) hours.

2. Critical Errors
   Critical business impact. No Work Around exists. This includes fatal errors and ABENDS. Requires immediate OMIS notification and resolution within 24 hours.

3. High Affecting Benefits
   Serious business impact. Indicates serious production issues where RAPIDS is usable but is severely limited and workarounds exist but are burdensome to workers. Requires OMIS notification and resolution within 72 hours.

4. High Not Affecting Benefits Errors
   Significant business impact. Does not affect benefits. Indicates moderate production issues where RAPIDS is usable. Requires OMIS notification and resolution within 10 business days.

5. Medium
   Minimal business impact. Indicates the problem results in little impact on operations or a reasonable circumvention to the problem has been implemented. Requires OMIS notification within five business days of problem discovery and resolution within an agreed-upon schedule between the vendor and OMIS (as defined by OMIS).

6. Low
   Affects workers' periodic activities. A simple workaround exists. Includes system enhancements. Requires OMIS notification within five business days of problem discovery and resolution within an agreed-upon schedule between the vendor and OMIS (as defined by OMIS).

The vendor is to ensure system performance meets the following performance standards.

Liquidated Damage Percentage

☑ Up to 6.50% of the monthly operating fee, as follows:

- Application Unavailable standard not met: 2.50%
- Critical Errors standard not met: 1.50%
- High Affecting Benefits Errors standard not met: 1.00%
- High Not Affecting Benefits Errors standard not met: 1.00%
- Medium Errors standard not met: 0.50%
- Low Errors standard not met: 0.25%

Subsection 5.9: RAPIDS System Availability

RFP Reference: Attachment B, page 4

Subsection 5.9:
The vendor must ensure RAPIDS online availability window of 7:00 a.m. to 7:00 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required at the request of the State.

Vendor Response:

Deloitte will provide support to maintain the RAPIDS system availability window of 7 a.m. to 7 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required for the Agency staff to support the core business. System availability can be impacted by outages or downtime for critical systems that underlie the solution, including mainframes, servers, DB2, Oracle, ESB, CICS, and network availability outside of Deloitte control.

See **Section 4.2.8.6: System Software Updates/Patches, Maintenance (subsection "System Availability")** for more information on RAPIDS System Operations.

Deloitte
MEETS
✓

Deloitte meets your requirements:

✓ | The vendor must ensure RAPIDS online availability window of 7:00 a.m. to 7:00 p.m. EST, Monday through Friday and 7:00 a.m. to 6:00 p.m. on Saturday and Sunday as required at the request of the State.

Subsection 5.10: Mass Change and Mass Mailing

RFP Reference: Attachment B, page 3

Subsection 5.10:

The vendor must implement periodic mass changes which update eligibility and benefit determinations on all or part of the RAPIDS caseload and periodic mass mailings which notify customers of information pertinent to their situation. These include, but are not limited to, reference table mass changes such as COLAs or other changes to eligibility parameter tables. Mass changes may also be used to implement software changes that affect large segments of the RAPIDS caseload. All resulting mass mailings and notices must meet State requirements.

Vendor Response:

Deloitte will implement periodic mass change which updates eligibility and benefit determinations on all or part of the RAPIDS caseload. We will also produce mass mailings that notify customers of information pertinent to their situation, based on State policy and requirements. The types of mass changes will include, but are not limited to, reference table mass changes (including COLA), changes to eligibility parameters, as well as mass changes necessitated by changes to the RAPIDS solution. All mass mailings and notices will meet documented State requirements.

See **Section 4.2.1.4: Mass Change** for more information concerned Mass Change and Mass Mailing.

Deloitte meets your requirements:

☑ The vendor must implement periodic mass changes which update eligibility and benefit determinations on all or part of the RAPIDS caseload and periodic mass mailings which notify customers of information pertinent to their situation. These include, but are not limited to, reference table mass changes such as COLAs or other changes to eligibility parameter tables. Mass changes may also be used to implement software changes that affect large segments of the RAPIDS caseload.

☑ All resulting mass mailings and notices must meet State requirements.

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Subsection 5.11: Cost-effective RAPIDS Operation

RFP Reference: Attachment B, page 4

Subsection 5.11:

The vendor must take measures to utilize the most cost effective operation of RAPIDS which includes but is not limited to data storage costs and batch and non-batch CPU costs such as, but not limited to the following.

a. The vendor must NOT run batch jobs during primetime hours (8:00 a.m. - 5:00 p.m. EST) unless deemed necessary by the State.

b. The vendor must run SQLs through batch unless otherwise directed by the State.

c. The vendor must review data storage usage and cost such as, but not limited to, ensuring the use of EXPDT/RETPD and RLSE, parameters, State approved GDG limit, and deleting unneeded/empty datasets.

Vendor Response:

Cost-effective operations are an important ingredient in a well-run maintenance and operations program. As required, Deloitte will take measures to use the most cost-effective operation of RAPIDS which includes but is not limited to data storage costs and batch and nonbatch CPU costs such as, but not limited to the following:

Deloitte
MEETS
✓

a. NOT running batch jobs during primetime hours (8 a.m. to 5 p.m. EST) unless deemed necessary by the State.

b. Running SQLs through batch unless otherwise directed by the State.

c. Reviewing data storage usage and cost such as, but not limited to, use of EXPDT/RETPD and RLSE, parameters, State-approved GDG limit, and deleting unneeded/empty datasets.

Refer to **Section 4.2.8.2: Batch Schedule/Execution** for more information concerning RAPIDS Operations.

Deloitte meets your requirements:

☑ The vendor must take measures to use the most cost-effective operation of RAPIDS which includes but is not limited to data storage costs and batch and non-batch CPU costs such as, but not limited to the following:
a. The vendor must NOT run batch jobs during primetime hours (8:00 a.m. – 5:00 p.m. EST) unless deemed necessary by the State.
b. The vendor must run SQLs through batch unless otherwise directed by the State.
c. The vendor must review data storage usage and cost such as, but not limited to, ensuring the use of EXPDT/RETPD and RLSE, parameters, State-approved GDG limit, and deleting unneeded/empty datasets.

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Subsection 5.12: State IT Procedures and Conventions

RFP Reference: Attachment B, page 4

Subsection 5.12:

The vendor agrees to conform to the State's Information Technology Procedures which include, but are not limited to, data set naming conventions, transaction naming conventions, and program naming conventions.

Vendor Response:

Deloitte will conform to the State's Information Technology Procedures which include but are not limited to, data set naming conventions, transaction naming conventions, and program naming conventions. Deloitte has extensive experience working with the Agency and has followed existing procedures and, when appropriate, defined standards for the RAPIDS system. Moving forward, we agree to continue adhering to naming standards for such components as data sets, transactions, and programs.

Refer to section **4.2.1.6: Code Review** for more information on State IT Procedures and Conventions.

Deloitte meets your requirements:

✓ The vendor agrees to conform to the State's Information Technology Procedures which include, but are not limited to, data set naming conventions, transaction naming conventions, and program naming conventions.

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Subsection 5.13: Database Operations

RFP Reference: Attachment B, page 4

Subsection 5.13:
The vendor, upon request by the State, must schedule database backups, reorgs, runstats, and other database utilities.

Deloitte will, upon request by the State, schedule database backups, reorgs, runstats, and other database utilities.

Refer to Section **4.2.9: Database Administration** for more information on Database Operations.

Deloitte meets your requirements:

☑ The vendor, upon request by the State, must schedule database backups, reorgs, runstats, and other database utilities.

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Appendix A

As required in Section Four, Subsection 5, Mandatory Requirements we present proof that we have established an office to house the RAPIDS Project within a 10-mile radius of 350 Capitol Street, Charleston, West Virginia. The Thirteenth Amendment and Supplement to Lease proves that we, Deloitte, lease from Kanawha Realty & Development Corp., the current RAPIDS project site at 1012 Kanawha Boulevard East, Charleston, West Virginia. Further, we agree to establish, subject to Agency approval, this same office for the duration of the RAPIDS project as presented in this RFP and described in this proposal.

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THIS INDENTURE OF LEASE made this
*17th*day of ~~August~~ *September* 1997,

By and Between:

KANAWHA REALTY & DEVELOPMENT CORP.,
a West Virginia corporation, here-
inafter designated as "Landlord",

- and -

DELOITTE & TOUCHE LLP, a Delaware
Limited Liability Partnership,
hereinafter designated as "Tenant".

That for and in consideration of the premises, covenants and agreements herein entered into between the parties, the parties do agree to and with each other as follows:

1. The Landlord does hereby rent and lease unto the Tenant and the Tenant hires from the Landlord approx. 12,153 sq. ft. of rentable floor space being situated on the Second Floor of the premises owned by the Landlord and located at 1012 Kanawha Boulevard East, Charleston, WV 25301. The demised premises are more particularly set forth and outlined in red on the sketch annexed hereto and made a part hereof. The Landlord will make available to the Tenant ten (10) reserved parking spaces in the parking area adjoining the demised premises.

2. The Landlord agrees to accept and the Tenant agrees to pay the annual base rent of   each year of the term hereof, except as hereinafter provided, to be payable in equal monthly installments of .   each in advance on the first day of each and every month during the said term, together with the additional rent hereinafter provided for; said payments to be made at the office of the Landlord, or such other place as the Landlord may designate in writing to the Tenant.

The annual base rent shall include the base year Real Estate Taxes, building insurance and capital improvement costs.

3. The term of this Lease shall be for a period of forty-two (42) months to commence on March 1, 1998, and to expire on August 31, 2001.

4. This lease is made upon the following covenants and conditions, each of which the respective parties hereto agree to perform:

A. The Tenant shall pay said rentals punctually and promptly notwithstanding that the Tenant may not be in possession of the premises

on the dates that said rentals become due hereunder, if such space were available for Tenant's occupancy.

B. Unless the Landlord consents thereto in writing, which consent shall not be unreasonably withheld, the Tenant:

(i) shall not use or permit the premises or any part thereof to be used for any purpose other than for general offices.

(ii) shall not make any structural alterations, additions or improvements, or changes, or alterations in any part of the heating, ventilating, air-conditioning, plumbing or electrical systems in the premises without the prior written consent of the Landlord and any and all such alterations, changes or improvements shall become and be the property of the Landlord upon the termination of this Lease, unless otherwise agreed upon in writing. The Tenant reserves the right to make changes in inner partitioning without permission of the Landlord, but Tenant shall make Landlord aware of any proposed alterations prior to making them.

Notwithstanding the foregoing, if any mechanic's lien is filed against the demised premises of the building, of which they form a part, for work or materials claimed to have been furnished to Tenant, it shall be discharged or bonded by Tenant within twenty (20) days thereafter following formal notification to Tenant at Tenant's expense. It being understood that Tenant's failure to discharge or bond any such lien within twenty (20) days after notice of filing thereof will in and of itself constitute damages to the Landlord in the amount of said lien and any expenses it may be put to in removing the same, including attorneys' fees.

(iii) shall not assign nor mortgage this Lease, nor relet, or underlet the premises, or any part thereof excepting, however, that the Tenant shall have the right to sublet to any of its associated affiliates without the consent of the Landlord provided, however, that at all times

DELOITTE & TOUCHE LLP

shall remain primarily liable for said rental payments and for the faithful performance of this Lease.

Notwithstanding the foregoing, Landlord's consent shall not be required by Tenant in connection with any consolidation or reorganization of Tenant (or of a successor to Tenant) or other restructuring of Tenant

(or of a successor to Tenant) or the merger of Tenant (or of a successor to Tenant) with another entity or the sale of all or substantially all of Tenant's (or such successor's) assets or of all or substantially all of the interests (whether partnership, stock, or otherwise) in Tenant (or those of a successor to Tenant), even if the Lease is assigned or transferred to the surviving entity, or in connection with any assignment or Sublease to an entity more than fifty (50%) percent of the equity of which is owned by Tenant (or by a successor to Tenant), so long as in the reasonable judgment of the Landlord any such successor or assignee can demonstrate financial responsibility equal to that of Tenant. In addition, Landlord's consent shall not be required for an assignment of this Lease to the State of West Virginia in connection with the contract between Tenant and the State of West Virginia for work to be performed by Tenant for the State of West Virginia within the demised premises.

(iv) shall not suffer any act of commission, or omission which will increase the rate of fire insurance of the premises or of the building of which the demised premises are a part, or invalidate any policies affecting same.

5. The Tenant shall, at its own cost, promptly comply with and perform all statutes, ordinances, orders, requirements and regulations, present or future, of any Federal, State, County or Municipal authority, or agency, or subdivision thereof, having jurisdiction over or affecting Tenant's use of said premises, including the lands appurtenant thereto.

6. The Tenant shall indemnify and save the Landlord harmless from all fines, suits, proceedings, claims and actions of any kind arising out of or in any way connected with the use or occupation of said premises and its appurtenances, or arising by reason of any breach or non-performance of any covenant or condition hereof, provided that such fines, suits, proceedings, claims and actions are caused through the negligence of the Tenant.

7. The Landlord shall not be liable to the Tenant for any damage sustained by it due to defects or change in condition in the premises, or in any part of the premises of which the demised premises are a part, nor to any persons, nor to any goods or things of any person

by reason of any cause whatsoever relating to or occurring in the demised premises, or any other portion of the building of which the demised premises are a part, unless such liability shall result from negligence on the part of the Landlord, or its agent. The Landlord's liability hereunder shall be limited to failures on the Landlord's part to act diligently after notice of any defect. Nothing herein shall constitute a waiver by Tenant of its rights at law or in equity.

8. If the entire premises, or the land on which the building stands be taken by virtue of eminent domain, or leased, or conveyed in lieu of such taking, this Lease shall expire on the date when title shall vest or the term of such Lease with the authority exercising its rights shall commence and the rent shall be apportioned as of said date and any rent paid for any period beyond said date shall be repaid to the Tenant.

If part of the building in which the demised premises are located, or any estate therein shall be taken by eminent domain and the remaining part of the demised premises are insufficient for the continuance of Tenant's business, Tenant shall have the option to terminate this Lease by notice given to Landlord within fifteen (15) days next following written notice to Tenant of the vesting of title. If the Tenant does not exercise such option, the rent reserved shall abate proportionately as to the part of the leased premises so taken as of the date of the vesting of title and the Landlord will restore the part of the leased premises not so taken; so far as may be practicable, to the condition existing prior to the taking.

The Tenant shall have no claim against the Landlord, nor be entitled to any portion of the amount that may be awarded as damages or paid as the result of the eminent domain; however, nothing herein contained shall interfere with or affect Tenant's right of recovery against the condemning authority for loss of business and fixture removal.

9. The Landlord reserves the right to subject and subordinate this Lease at all times to the lien of any first mortgage or mortgages now or hereafter placed upon Landlord's interest in the said premises and on the land and building of which the said premises are a part, and Tenant covenants and agrees to execute and deliver upon demand such further instrument, or instruments subordinating this Lease to the lien

of any such first mortgage, or mortgages as shall be desired by Landlord, and any first mortgagee, or proposed mortgagee provided, however, that it is a condition of such subordination, or any future subordination that this Lease shall not be terminated and Tenant's right hereunder shall not otherwise be disturbed by reason of default or foreclosure sale under any such mortgage if Tenant is not in default under this Lease beyond all applicable grace periods and Landlord acknowledges his obligation to deliver to Tenant a written covenant by any mortgagee, present or future, that Tenant shall not be divested of any rights or interests hereunder because of this or any future subordination, provided Tenant is not in default.

10. If the premises shall be so damaged by fire, casualty or other cause or happening so as to render the premises unfit for Tenant's proposed use, then this Lease shall terminate at the option of the Landlord or Tenant, and Tenant's obligation to pay further rent shall cease, and any unearned rent paid in advance shall be refunded to Tenant.

If the demised premises shall be partially destroyed by fire, casualty or other cause or happening, or be declared unsafe by any lawful authority, then the demised premises shall be promptly restored or made safe by Landlord within ninety (90) days after such partial destruction or declaration of unsafe condition and a just proportion of the rent specified shall abate until the leased premises shall have been restored or made safe provided, however, that should said premises not be restored to their former condition and/or made safe within ninety (90) days from the date of such partial destruction or declaration of unsafe condition thereof, except for delays resulting from conditions beyond Landlord's reasonable control, then Tenant at its option may, in addition to any other remedy, cancel and terminate this Lease in its entirety unless Landlord has commenced and is diligently pursuing restoration of the premises or correction of the condition. If Tenant exercises this option to terminate this Lease, then any unearned rent paid in advance shall be refunded to it.

11. Upon the continuance of any breach or violation by the Tenant of any of the terms, covenants or conditions of this Lease for a period of twenty (20) days after written notice, the Landlord may, at its election, terminate this Lease and upon such election this Lease and all

of the estate of the Tenant in said premises shall come to an end and the Landlord may thereupon re-enter the said premises as of its former estate provided, however, that the Landlord may institute dispossess proceedings for nonpayment of rent hereunder, or distraint, or other proceedings to enforce the payment of rent without the necessity of such notice or exercise of election, and provided further that if the breach or violation by the Tenant relates to any covenant other than one respecting the payment of rent, then the Landlord shall not be entitled to elect to terminate this Lease unless the Tenant fails, within a period of twenty (20) days after written notice, to begin to remedy the breach or violation complained of and thereafter fails to diligently complete the remedying thereof, and provided further that if the breach or violation complained of shall be the result of any action taken under any statute, ordinance, rule or requirement of any governmental body, then if the Tenant shall institute and prosecute diligently any bona fide action to establish the invalidity thereof the period of twenty (20) days shall be suspended until the final determination of such proceedings. Any waiver by the Landlord of any breach shall not be deemed a waiver of any similar or other further breach. The rights and privileges herein reserved shall be in addition to any remedy afforded to the Landlord in the courts of law or equity.

12. If the Tenant shall be dispossessed or removed from the premises, or if the term hereof shall end prior to the expiration date fixed herein because of any act or omission of the Tenant, or because of the happening of any contingency, or as a result of any election exercised by the Landlord pursuant to the terms hereof involving default on the Tenant's part, the Tenant does hereby authorize and empower the Landlord, at its option, to re-enter the premises under the Tenant, or for its own account, or otherwise, and to relet the same for any term expiring either prior to the original expiration date hereof, or simultaneously therewith, or beyond such date, and to repair and remodel the same, if necessary, or desirable, for reletting purposes, and to receive and apply the rent so received to the cost of re-entry and repair. The Tenant shall not be entitled to any surplus accruing from such reletting, but shall remain liable for any deficiency, which deficiency shall, at the Landlord's option, be payable monthly as the

- 6 -

amount thereof shall be ascertained, or in a single payment with reasonable allowance for acceleration on demand. Notwithstanding this provision, Landlord does not waive its right to collect from Tenant the rental payments due hereunder as the same become due.

13. The Landlord hereby covenants that if the Tenant shall perform all the covenants and agreements herein stipulated to be performed on the Tenant's part, Tenant shall at all times during the term hereof have the peaceful and quiet enjoyment and possession of the demised premises without any manner of let or hindrance from the Landlord or any person, or persons lawfully claiming said premises.

14. The Tenant also agrees to pay additional rent during the term of this Lease to the extent that the real estate taxes and building insurance costs in each lease year exceed the real estate taxes and building insurance costs paid for the calendar year 1997. The additional amount to be paid by the Tenant shall be that proportion of the increase in real estate taxes and building insurance costs over the year 1997, that the space occupied by the Tenant bears to the entire net rentable area of the building. Such additional amount shall be paid annually within thirty (30) days after demand by the Landlord. Such additional amount shall be equitably adjusted for any calendar year during which the Lease commences or expires, or terminates.

Landlord agrees to furnish to the Tenant copies of receipted tax bills in evidence of the amount of the real estate taxes so imposed for the calendar year 1997, for the calculation of the amount to be paid by the Tenant.

15. The operating expenses for the building which consist of the costs for utilities, janitorial service, supplies, refuse removal, maintenance of the elevator equipment and heating, ventilating and air-conditioning equipment, general maintenance and repairs, but exclude capital improvement, and all administrative and management costs, shall be assessed to the Tenant and paid by the Tenant in that proportion which the demised premises bears to the entire rentable area of the building. Said operating expenses shall be predicated on an annual operating expense budget to be developed by Landlord at the beginning of each calendar year, and Tenant shall be assessed its pro rata share for the year. Tenant shall pay its pro rata share of said operating expenses in

advance on the first day of each month, together with the base rental agreement.

At the end of each calendar year, when the total operating expenses for the building for that year have been determined, Landlord will submit to Tenant a Summary showing the amount of the operating expenses for the building which it had budgeted for that year and the amount actually spent for operating expenses. If the amount spent for the year exceeded the amount budgeted, Tenant will be billed its pro rata share of the excess spent above the amount budgeted and collected. If the amount spent was less than the amount budgeted and collected, Tenant will receive a refund of its pro rata share of the amount saved. Any additional amount payable by Tenant or any amount refundable to Tenant, shall be payable in a lump sum; any amount payable by Tenant shall be paid within thirty (30) days after demand by Landlord, and Landlord shall remit to Tenant payment of any amount refundable to Tenant within thirty (30) days after submission by Landlord of annual Summary of Operating Expenses.

16. Tenant will not commit any waste during the demised term and at the expiration or termination of the term, or any continuation thereof, will peaceably surrender the premises with all the improvements and additions thereto, broom-clean and in good condition, excepting for ordinary wear and tear. All repairs, alterations and additions made either by the Landlord or Tenant to the demised premises, except unattached movable business fixtures, shall be the property of the Landlord and remain upon and be surrendered with the premises as part thereof with the termination of the Lease.

17. The Landlord does covenant and agree that during the term of this Lease, or any renewal thereof, the following will be furnished to the Tenant:

a. The Landlord agrees to furnish, maintain and operate an air-conditioning and heating system sufficiently equipped to make the demised premises reasonably comfortable for occupation on a year-round basis during the normal work day (8:00 A.M.-5:00 P.M.) for each day of the calendar year, Saturdays, Sundays and legal holidays excepted, but the Landlord agrees to keep the premises comfortably heated half-days on Saturdays.

b. Electric power necessary to operate elevators, air-conditioning and heating system and lighting for building corridor, entrances, parking area and for lighting and office equipment in Tenant's demised premises.

c. Daily janitorial service including periodic floor waxing and window washing reasonably necessary to keep the said premises in a neat and tidy condition.

d. The Landlord agrees to provide and maintain one (1) electronically-controlled automatic elevator to be used in common with the other Tenants in the building.

e. Landlord shall not be liable to Tenant by reason of suspension of such services by reason of necessary repairs being made, or other circumstances beyond the Landlord's control.

18. The Landlord does hereby covenant and agree that possession to the premises as specified by this Lease will be conveyed in an "as is" condition with the space being equipped with the following finishes:

A. Recessed fluorescent lighting.

B. Suspended acoustic tile ceilings.

C. Wall-to-wall carpeting and/or vinyl asbestos floor covering.

D. Ceramic tiled men's and women's restrooms.

E. Electric and telephone outlets as presently existing.

F. Interior office partitions as existing.

Landlord represents that to the best of Landlord's knowledge and belief the demised premises and the building of which they are a part are substantially in compliance with all existing health, safety, fire, zoning, accessibility, building and environmental laws, rules and regulations, and Landlord, subject to available waivers or variances, agrees to comply with all existing and future health, safety, fire, zoning, accessibility, building and environmental laws, rules and regulations during the term of this Lease.

19. Tenant shall and will permit Landlord, Landlord's agent or employees, or any other person or persons authorized by the Landlord to inspect the demised premises at any time and to enter the premises,

if Landlord shall so elect, for making repairs or additions thereto or for making alterations, additions or repairs to the building of which the demised premises are a part. The Landlord may enter upon said premises at reasonable business hours on weekdays to examine the same and may during the twelve (12) months of said term exhibit the same to any person or persons.

20. At the expiration of this Lease, Tenant shall have the right and option to renew and extend this Lease for one (1) additional term of two (2) years upon the same terms and conditions as the terms that applied during the original term, except for the amount of the base rent, which shall be subject to a cost-of-living adjustment, which adjustment shall be based on the percentage increase in the U.S. Department of Labor's Consumer's Price Index between February 1998 (the Index's base), and August 2001. The Tenant shall give written notice to the Landlord on or before February 28, 2001, of its intention to exercise the two (2) year Lease Renewal Option.

21a. The Tenant shall have the right and option to terminate this Lease at the end of the eighteenth (18th) month (8/31/1999), if, and providing Tenant's Contract with the State of West Virginia is terminated, subject to the payment of a Lease termination charge that shall be an amount equal to four (4) months' base rent   and an additional amount equal to four (4) monthly installments of Tenant's Building Operating Expense share for the calendar year 1999, providing the Tenant shall have given written notice to the Landlord no later than February 28, 1999, of its intention to exercise its option to terminate the Lease effective August 31, 1999.

21b. The Tenant shall have the right and option to terminate this Lease at the end of the thirtieth (30th) month (8/31/2000), if, and providing Tenant's Contract with the State of West Virginia is terminated, subject to the payment of a Lease termination charge that shall be an amount equal to four (4) months' base rent   and an additional amount equal to four (4) monthly installments of Tenant's Building Operating Expense share for the calendar year 2000, providing the Tenant shall have given written notice to the Landlord no later than February 28, 2000, of its intention to exercise its option to terminate the Lease effective August 31, 2000.

22.   All written notices by the Landlord to the Tenant shall be sent by Registered or Certified Mail to the Tenant at 1012 Kanawha Boulevard East, Charleston, WV 25301, Attn: Project Manager, with a copy to be sent to: Deloitte & Touche, LLP, 10 Westport Road, Wilton, CT 06897, Attn: Director of National Facilities. All notices by the Tenant to the Landlord shall be sent by Registered or Certified Mail to the Landlord at P. O. Box 2709, Charleston, WV 25330, with a copy to be mailed to Landlord's office at 1002 State Street, Erie, PA 16501, or at such other place as the Landlord may from time to time designate in writing. Notices, demands and requests given in the manner aforesaid shall be deemed sufficient if served or given for all purposes hereunder five (5) days following the time such notice, demand or request shall have been deposited in any post office or branch post office regularly maintained by the United States Government.

23.   In the event of any act or omission by Landlord which would give Tenant the right to terminate this Lease by reason of a constructive, or partial, or total eviction, or otherwise, Tenant shall not exercise any such right (1) until it shall have given such written notice of such act or omission to the Landlord; and (2) until a reasonable period of time for remedying such act or omission shall have elapsed following the giving of such notice during which the Landlord and its agents or employees shall be entitled to enter the demised premises and to do therein whatever may be necessary to remedy such act or omission.

24.   Landlord or Landlord's agents have made no representations or promises with respect to the said building, the land upon which it is erected or the demised premises except as herein expressly set forth. The taking possession of the demised premises by Tenant shall be conclusive evidence as against Tenant, that Tenant accepts the same "as is" and that said premises and the building of which the same form a part were in good and satisfactory condition at the time such possession was taken. This Lease contains the entire agreement between the parties, and any executory agreement hereafter made shall be ineffective to change, modify, discharge or effect an abandonment of it, in whole or in part, unless such executory agreement is in writing and is signed by the party against whom enforcement of the change,

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modification, discharge or abandonment is sought.

25. No provision of this Lease shall be deemed to have been waived by Landlord unless such waiver be in writing signed by Landlord. No payment by Tenant or receipt by Landlord of a lesser amount than the monthly rent herein stipulated shall be deemed to be other than on account of the earliest, stipulated rent.

26. Tenant and Tenant's servants, employees, agents, visitors and licensees shall observe faithfully and comply strictly with the rules and regulations and such other further rules and regulations as Landlord or Landlord's agents may from time to time reasonably adopt. Any conflict between such rules and the provisions of this Lease shall be governed by the Lease. Notice of any additional rules or regulations shall be given in such manner as Landlord may elect. Nothing in this Lease contained shall be construed to impose upon Landlord any duty or obligation to enforce the rules and regulations or terms, covenants or conditions in any other Lease as against any other Tenant, and Landlord shall not be liable to Tenant for violation of the same by any other Tenant, its servants, employees, agents, visitors or licensees.

27. Tenant hereby expressly waives any and all rights of redemption granted by or under any present or future laws in the event of Tenant being evicted or dispossessed for any cause, or in the event of Landlord's obtaining possession of demised premises by reason of the violation by Tenant of any of the covenants and conditions of this Lease or other termination of this Lease as provided herein.

28. The terms, covenants and conditions of the within Lease shall be binding upon and enure to the benefit of each of the parties hereto, their successors and assigns.

So long as Tenant is Deloitte & Touche LLP, or a successor to Deloitte & Touche LLP, none of the Partners of Deloitte & Touche LLP, or any successor to Deloitte & Touche LLP, shall have any personal liability for the performance of Tenant's obligation under this Lease, and Landlord shall look solely to the assets of Deloitte & Touche LLP, or the successor to Deloitte & Touche LLP for the payment and performance of these obligations, and for purposes of this Section the negative, capital
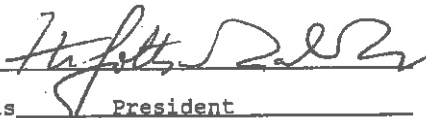
accounts of Partner shall not be considered an asset of Deloitte & Touche LLP.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly-authorized officers, and their corporate seals to be hereto affixed as of the day and year first above written.

ATTEST:

_____
Assistant Secretary

ATTEST:

_____

KANAWHA REALTY & DEVELOPMENT CORP.,
a corporation

By _____

Its_____ President _____

DELOITTE & TOUCHE LLP,
a Limited Liability Partnership

By _____

Its_____
WILLIAM H. STANTON
NATIONAL DIRECTOR
OF OPERATIONS

STATE OF PENNSYLVANIA)
)   To-wit:
COUNTY OF ERIE   )

    I, _John M. Andrews_, a Notary Public in and for the said County and State, do hereby certify that FRANK K. GOTTSCHALK, who signed the foregoiong writing bearing date the _10 TH_ day of ~~August~~ _November_ 1997, for Kanawha Realty & Development Corp., a corporation, has this day acknowledged the same before me in my said County to be the act and deed of said corporation.

    Given under my hand and notarial seal this _10 TH_ day of _November_ ~~August~~ 1997.

    My commission expires _Aug. 3, 1998_ .

                        John M Andrews
                          Notary Public

> Notarial Seal
> John M. Andrews, Notary Public
> Erie, Erie County
> My Commission Expires Aug. 3, 1998
> Member, Pennsylvania Association of Notaries
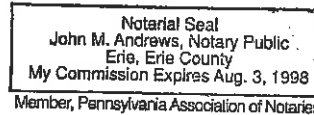
STATE OF ~~WEST VIRGINIA~~ _Connecticut_)
)   To-wit:
COUNTY OF ~~KANAWHA~~ _Fairfield_   )

    I, _Martha Ismailoff_, a Notary Public in and for the said County and State, do hereby certify that _William H. Stanton_, who signed the foregoing writing bearing date the _17th_ day of ~~August~~ _September_ 1997, for Deloitte & Touche LLP, a Limited Liability Partnership, has this day acknowledged the same before me in my said County to be the act and deed of said corporation.

    Given under my hand and notarial seal this _17th_ day of _September_ ~~August~~ 1997.

    My commission expires_____

> MARTHA ISMAILOFF
> Notary Public
> My Commission Expires
> September 30, 2000

                        Martha Ismailoff
                          Notary Public

THIRTEENTH AMENDMENT AND SUPPLEMENT TO LEASE

This Twelfth Amendment and Supplement to Lease, made as of this 15th day of July, 2015, by and between:

KANAWHA REALTY & DEVELOPMENT CORP., a West Virginia corporation, hereinafter designated as the "Landlord",

-and-

DELOITTE LLP (formerly known as Deloitte & Touche USA LLP), a Delaware limited liability partnership, hereinafter designated as the "Tenant".

WITNESSETH:

WHEREAS, on the 17th day of September 1997 Landlord entered into an Indenture of Lease with Tenant covering approx. 12,153 sq. ft. of rentable floor space being situated on the Second Floor of the premises owned by the Landlord and located at 1012 Kanawha Boulevard East, Charleston, West Virginia (the "Premises"), together with ten (10) reserved parking spaces, said Lease expiring on the 31st day of August 2001, except as otherwise provided for; and

WHEREAS, on the 27th day of May 1998 the parties amended and supplemented said Lease extending the expiration date until December 31, 2001; and

WHEREAS, on the 17th day of December, 2001, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2003; and

WHEREAS, on the 12th day of December, 2003, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2004; and

WHEREAS, on the 13th day of December, 2004, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2005; and

WHEREAS, on the 23rd day of December, 2005, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2006; and

WHEREAS, on the 31st day of January, 2007, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2007; and

WHEREAS, on the 31st day of December, 2007, the parties further amended and supplemented said Lease extending the expiration date until December 31, 2014; and

WHEREAS, on the 13th day of December, 2012, the parties further amended and supplemented said Lease pursuant to an Eighth Amendment and Supplement to Lease adding an additional 3,250 sq. ft. on the fourth floor of the building (the "Additional Premises") and an

additional three reserved parking spaces to the Premises for a term expiring on May 31, 2014; and

WHEREAS, on the 28th day of June, 2013, the parties further amended and supplemented said Lease pursuant to a Ninth Amendment and Supplement to Lease adding an additional 445 sq. ft. on the fourth floor of the building for a term which expired on November 30, 2013; and

WHEREAS, on the 9th day of April, 2014, the parties further amended and supplemented said Lease pursuant to a Tenth Amendment and Supplement to Lease extending the term of said Lease to December 31, 2014; and

WHEREAS, on the 10th day of December, 2014, the parties further amended and supplemented said Lease pursuant to an Eleventh Amendment and Supplement to Lease extending the term of said Lease to January 31, 2015

WHEREAS, on the 16th day of January, 2015, the parties further amended and supplemented said Lease pursuant to an Twelfth Amendment and Supplement to Lease extending the term of said Lease to July 31, 2015 and surrendering a portion of the Premises to Landlord (the original Lease, as so amended by the foregoing amendments, the "Lease"); and

WHEREAS, the parties have agreed to further amend and supplement the Lease.

NOW THEREFORE, in consideration of the covenants and conditions herein contained, it is agreed as follows:

FIRST: The term of the Lease is hereby further extended for a period of five (5) months to commence on August 1, 2015 and to expire on December 31, 2015.
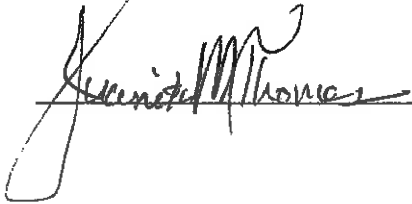
SECOND: Excepting as hereinabove stated, in all other respects all of the terms, covenants and provisions of the Lease, as amended hereby, shall apply with full force and effect to the Premises and the terms of said Lease as hereby amended and supplemented are hereby ratified and confirmed and shall otherwise remain in full force and effect between the parties during this renewal term.

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IN WITNESS WHEREOF, the parties hereto have hereunto duly executed these presents the day and year first above written.

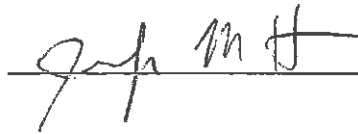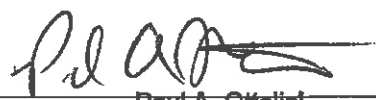ATTEST: **KANAWHA REALTY & DEVELOPMENT CORP.**

By: _____
                  President

ATTEST: **DELOITTE LLP**

By: _____

Name: _____
                 Paul A. Ottolini
                 Authorized Signatory

Title: _____
      Director of Workplace Services Group
           of Deloitte Services LP

Deloitte.