Title Page

WV Department of Health and Human Resources RAPIDS Project

CRFP 0511 HHR1500000009

Deloitte

2500 One PPG Place

Pittsburgh, PA 15222

USA

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Fax: +1.412.402.5530

www.deloitte.com

Rick Dorman

rdorman@deloitte.com

March 24, 2015

Table of Contents

Deloitte.

Deloitte Consulting LLP
2500 One PPG Place
Pittsburgh, PA 15222
USA
Tel: +1 412 338 7400
Fax: +1 412 338 7380
www.deloitte.com

March 24, 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 HHR1500000009 for system application operations, maintenance, and modifications 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 HHR1500000009, for system application operations, maintenance, and modifications 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.

In carefully considering the requirements outlined in your RFP, we have assembled a qualified team with the right management oversight, experience and technical prowess. Our team offers a proven track record of providing application development and maintenance services with systems of comparable scope and complexity to that of RAPIDS, FACTS and OSCAR.

For more than 18 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.

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.

The State of West Virginia has been and continues to be a very important and valued client to Deloitte. Deloitte has partnered with DHHR on several initiatives since 1994 including the development of both RAPIDS and FACTS and the maintenance and enhancement services for RAPIDS since the system's successful implementation in 1996. We appreciate your consideration of Deloitte and our team for this important engagement. 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: _____

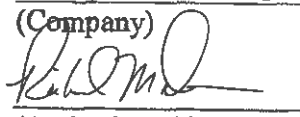
Rick Dorman, Principal

CERTIFICATIONAND SIGNATURE PAGE

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

Deloitte Consulting LLP

(Company)



Rick Dorman, Principal

(Authorized Signature) (Representative Name, Title)

Phone: +1.412.402.5170 Fax: +1.412.402.5530 March 24, 2015

(Phone Number) (Fax Number) (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 Service, One Davis Square, Suite 200, Charleston, WV 25301** 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 HHR1500000009** .

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 **6th** day of **February** A.D. ,**2015**.

Deloitte Consulting LLP (SEAL)

Principal

C. Wheelahan , *Witness*

By N. Nagen Suriya DIRECTOR

NAGEN SURIYA. , *Title*

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

Surety

Migdalia Otero

Migdalia Otero, *Witness*

By Theresa Giraldo (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: Gregory E. Murray

Assistant Secretary
Gregory E. Murray

Thomas O. McClellan

Vice President
Thomas O. McClellan

State of Maryland
City 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

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

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 6th day of February, 2015.

Geoffrey Delisio

Geoffrey Delisio, Vice President

STATE OF NEW YORK
COUNTY OF NEW YORK

On February 6, 2015, before me, the undersigned, a Notary Public in and for said county, personally appeared Theresa Giraldo 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 Fidelity and Deposit Company of Maryland 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.

Terry Ann Gonzales-Selman
Notary Public, State of New York
No. 01GO6272513
Certificate Filed in Kings County
Commission Expires November 19, 2016

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 Consulting LLP

Authorized Signature: _____ Date: 3/13/15

State of West Virginia

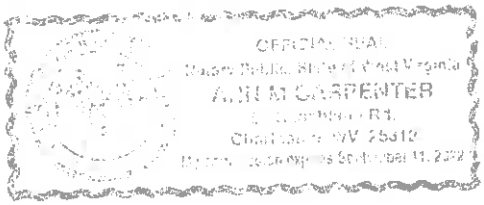
County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 13 day of March, 2015.

My Commission expires September 11, 2022.

AFFIX SEAL HERE

NOTARY PUBLIC Ann M Carpenter



Purchasing Affidavit (Revised 07/01/2012)

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: 26970
Doc Description: Request for Proposal: IV-A Software RAPIDS
Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-30	2015-01-28 13:30:00	CRFP 0511 HHR1500000009	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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER
Robert Kilpatrick
(304) 558-0067
robert.p.kilpatrick@wv.gov

Signature X [signature] FEIN # 06-1454513 DATE March 24, 2015

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

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: 26970

Doc Description: Addendum #1: Request for Proposal: IV-A Software RAPIDS

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-01-06	2015-03-04 13:30:00	CRFP 0511 HHR1500000009	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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER

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

Signature X [signature] **FEIN #** 06-1454513 **DATE** March 24, 2015

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

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: 26970

Doc Description: Addendum #2: Request for Proposal: IV-A Software RAPIDS

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-03-03	2015-03-18 13:30:00	CRFP 0511 HHR1500000009	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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER

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

Signature X [signature] **FEIN #** 06-1454513 **DATE** March 24, 2015

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

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: 26970

Doc Description: Addendum #3: Request for Proposal: IV-A Software RAPIDS

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-03-04	2015-03-18 13:30:00	CRFP 0511 HHR1500000009	4

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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER

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

Signature X _____ **FEIN #** 06-1454513 **DATE** March 24, 2015

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

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: 26970

Doc Description: Addendum #4: Request for Proposal: IV-A Software RAPIDS

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-03-13	2015-03-18 13:30:00	CRFP 0511 HHR1500000009	5

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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER

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

Signature X [signature] **FEIN #** 06-1454513 **DATE** March 24, 2015

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

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: 26970
Doc Description: Addendum #5: Request for Proposal: IV-A Software RAPIDS
Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-03-17	2015-03-24 13:30:00	CRFP 0511 HHR1500000009	6

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
Pittsburgh, PA 15222
Tel: +1 412 338 7400
Fax: +1 412 338 7380

FOR INFORMATION CONTACT THE BUYER

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

Signature X [signature] **FEIN #** 06-1454513 **DATE** March 24, 2015

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

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: HHR1500000009

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)

[✓]	Addendum No. 1	[ ]	Addendum No. 6
[✓]	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
Company

Authorized Signature

March 24, 2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

REQUEST FOR PROPOSAL

WV Department of Health and Human Resources
Management Information Services
RAPIDS Project
CRFP 0511 HHR1500000009

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: Attachment A, page 1

Section 4, Subsection 3.1: (Corporate Qualifications and Experience)
Provide a response regarding the following from Section 4: firm history, company references, proposed staffing plan, and staffing qualifications and experience. Vendor will also provide experience in completing similar projects entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where.

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 area of Child Welfare, Child Care, Child Support Enforcement and Integrated Eligibility (IE), and we continue to act as the primary vendor supporting many of these systems. 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.

DHHR 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
- Over 10,000 practitioners supporting the Public Sector with over 3,400 specifically supporting the state government sector.

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 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 a full range of services including audit and enterprise risk, consulting, tax, and financial advisory, bringing informed viewpoints and providing 360-degree perspective to each State Government project we undertake.

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

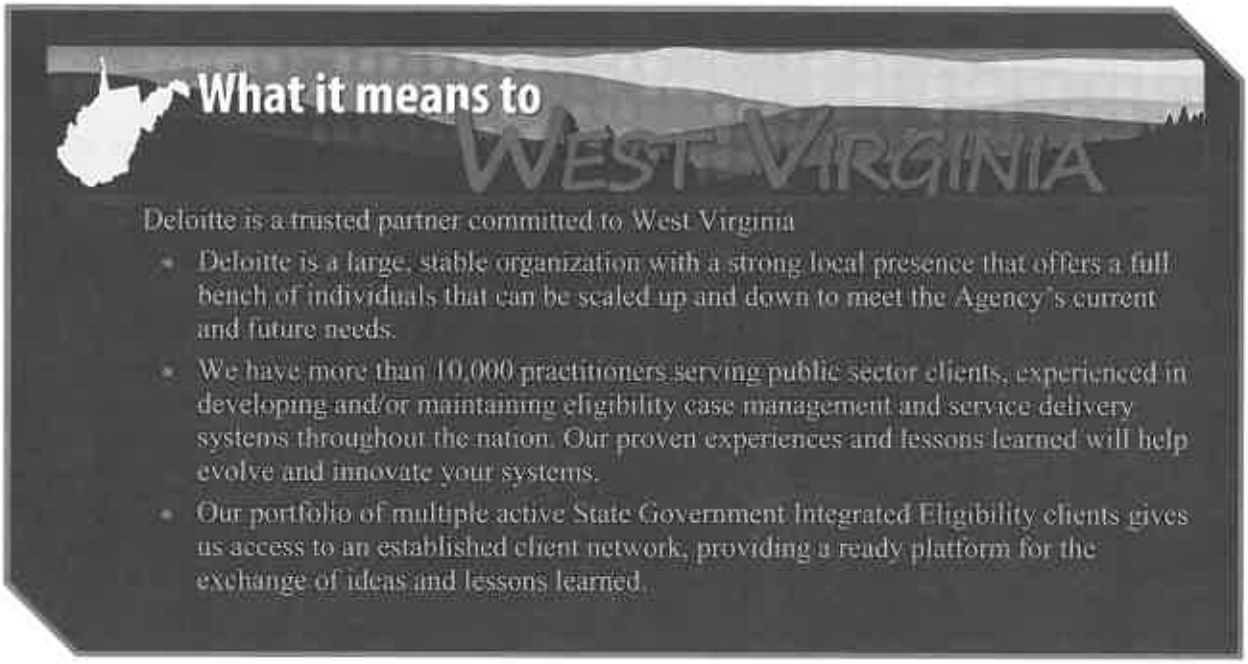
Source: Kennedy Consulting Research & Advisory; United States State & Local Government Consulting; Kennedy Consulting Research & Advisory estimates. © 2014 Kennedy Information, LLC. Reproduced under license

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 quickly 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.

The Agency began its relationship with Deloitte in 1994 with the transfer of the Wisconsin CARES integrated eligibility system. Because of this history, we understand the operation of the system better than any of our competitors could. We have the experience necessary to evaluate requested enhancements and recommend the most robust and cost-effective system solutions. We also have the necessary proven maintenance and enhancement experience to implement solutions with minimal effect on system operations, and a strong project team who can continue to provide these services in a cost-effective manner.

Deloitte is committed to delivering a highly-qualified and experienced team to successfully maintain the systems at the Agency. Our Project Management team, Track Managers, Programmer Analysts, and technical staff have experience working with Agency processes and enterprise solutions daily, and the team brings an 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 has asked for a firm with the experience and capability for undertaking a project of the size and complexity of the DHHR Modernization Program (Application Development and Maintenance services for RAPIDS, FACTS, OSCAR and DHHR-wide initiatives). Deloitte is that firm. Details of our proposed staffing plan are included in **Section 4, Subsection 3.2**.



Subsection 3.1.1: Firm History

RFP Reference: Attachment A, page 1

Subsection 3.1.1: Firm History

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
- Financial advisory
- Risk management
- 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

"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

regulations of the particular country or countries in which it operates. Across all member firms, Deloitte employs around 210,400 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 64,000 practitioners in 107 offices in the U.S, including more than 9,000 technical 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	Deloitte Brings Broad IT Service Experience to its Clients
Consulting	As the world's largest management consulting firm, we help organizations build value by uncovering insights that create new futures and doing the hard work to improve performance. Our clients look to us for the ability to implement the ideas we present. They expect excellent performance that draws upon our breadth of industry and service experience. Simply put, we provide our clients with world-class insights that generate tangible and measurable impact.
Audit and Enterprise Risk Services (AERS)	Deloitte's AERS practitioners help organizations build value by taking a Risk Intelligent approach to managing financial. technology and business risks. This approach helps our clients focus on their areas of increased risk, bridge silos to effectively manage risk across organizational boundaries and seek not only risk mitigation, but also pursue intelligent risk taking as a means to value creation.
Tax	Deloitte offers clients a broad range of fully integrated tax services. Our approach combines insight and innovation from multiple disciplines with business and industry knowledge to help our clients excel globally.
Financial Advisory Services	Deloitte FAS practitioners provide assistance to organizations faced with opportunities for growth such as a merger or acquisition, or critical challenges such as fraud, litigation or reorganization. Our experienced practitioners have extensive business knowledge and compliance know-how along with access to a global network of industry specialists from Deloitte Touche Tohmatsu member firms and their affiliates.

Figure 4.3.1-1. Deloitte's Business Area Descriptions.

Among these 4 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 DHHR Modernization Program 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 3 separate 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

Deloitte Organization Across Functional Areas

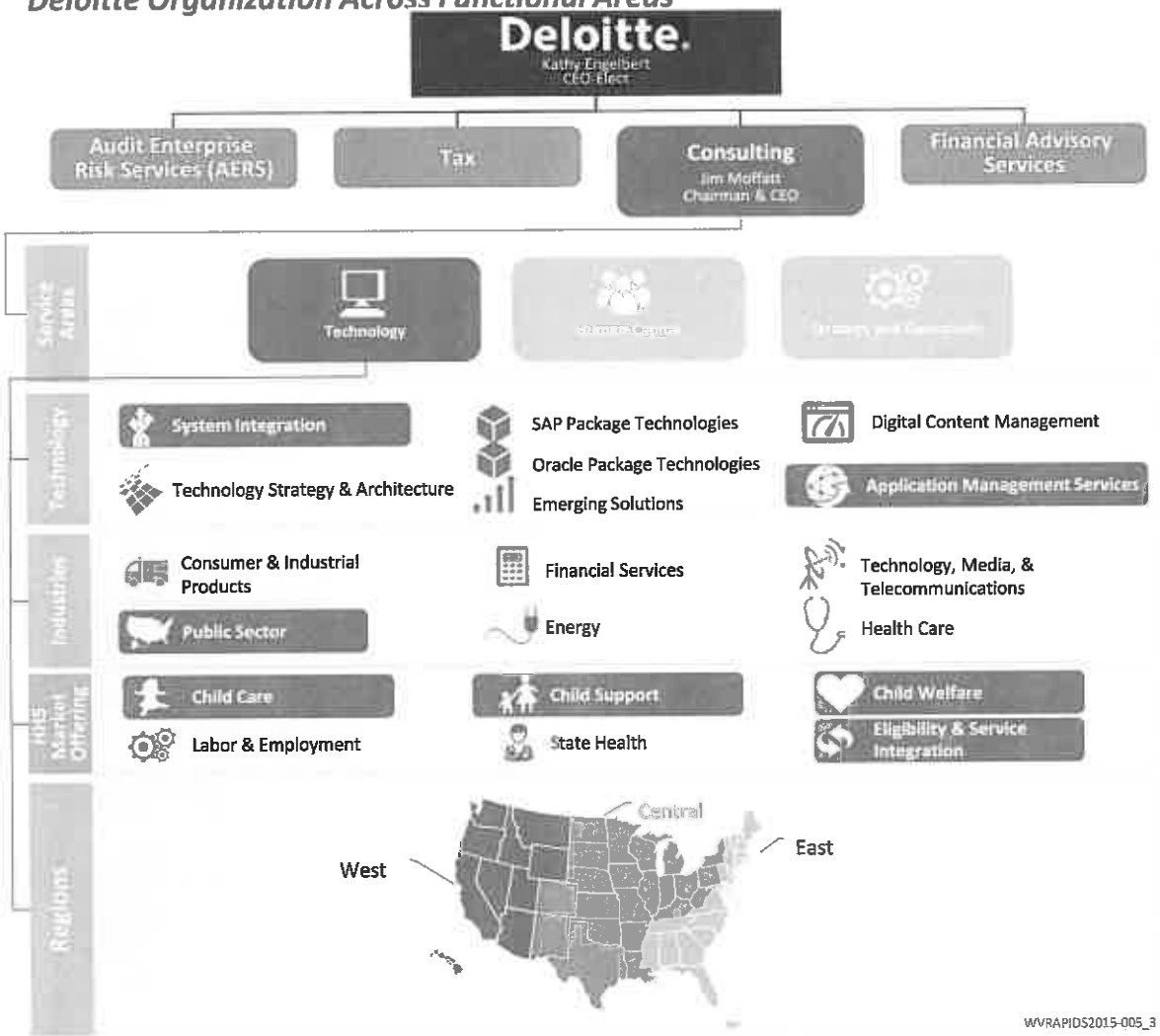


Figure 4.3.1-2. Deloitte Across Functional Areas.

The following sections describe Deloitte Consulting's three main focus 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- 3. 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:

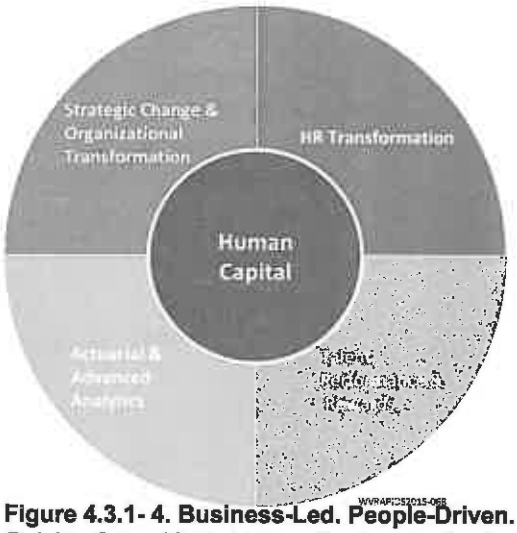


Figure 4.3.1- 4. Business-Led. People-Driven.
Deloitte Consulting's Human Capital practice is a leading advisor and implementation partner working to improve our clients' organizational results

- 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

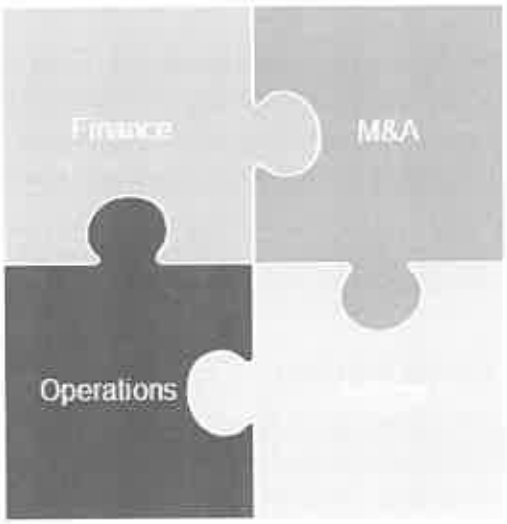


Figure 4.3.1-5. Linking strategy with execution.
Our Strategy & Operations professionals draw on the strength of Deloitte's full suite of professional services and industry experience to focus solutions on the real issues affecting businesses

RFP Reference: Attachment A, page 1

f. Total Number of Employees.

Vendor Response:

Globally, Deloitte employs around 210,400 people across 150 countries and territories.

In the United States, Deloitte LLP has over 64,884 practitioners across all functions working across 107 offices. This includes more than 10,000 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

"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

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 DHHR enterprise solutions.

Consolidated Revenue Breakdown By Area	2014	2013	2012
Audit and Enterprise Risk Services	29.4%	30.7%	31.2%
Consulting	47.7%	46.0%	45.2%
Tax	17.9%	17.9%	18.5%
Financial Advisory Services	5.0%	5.4%	5.1%

Source: Deloitte LLP, New York

Figure 4.3.1-6. 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 2

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

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 working focused on Integrated Eligibility and the remaining primarily support Child Care, Child Support Enforcement and Child Welfare engagements across the nation.

RFP Reference: Attachment A, page 2

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.

Subsection 3.1.2: Corporate Experience

RFP Reference: Attachment A page 2

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:

Deloitte has experience customizing, implementing, and maintaining 38 eligibility case management and 23 self-service solutions. Our public sector experience spans 35 years, including 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.

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

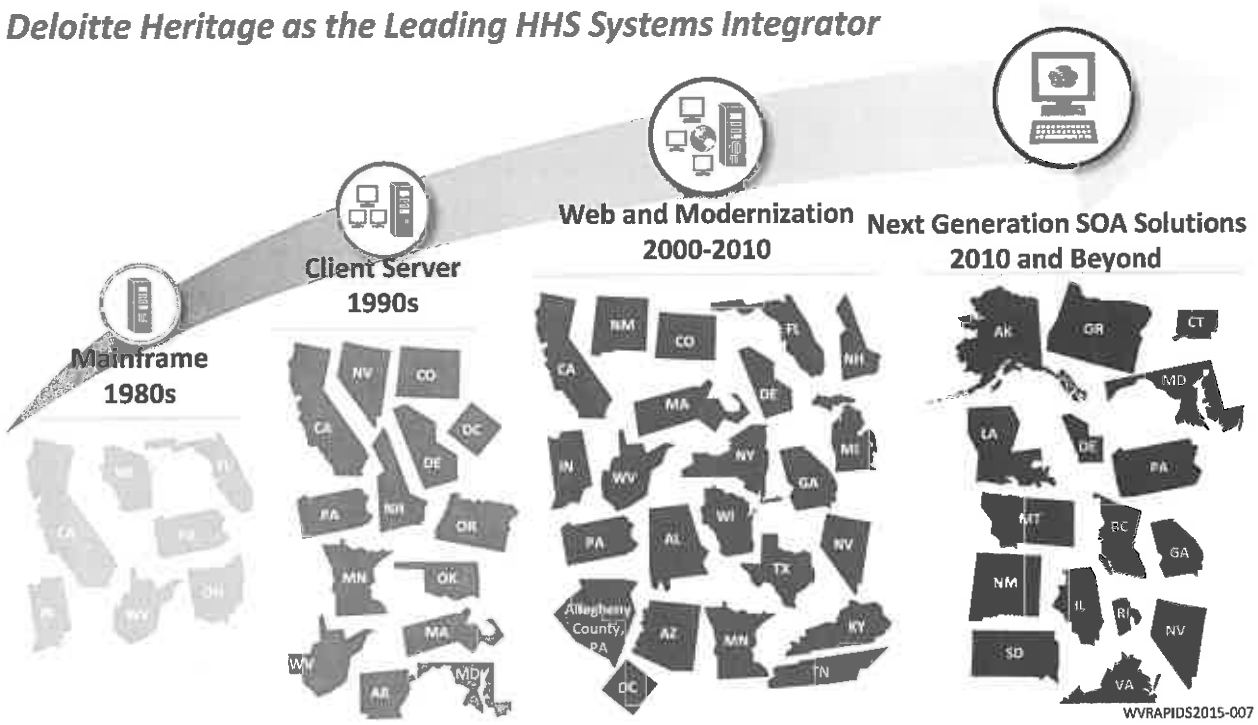


Figure 4.3.1-7. Deloitte's Heritage as the Leading HHS Systems Integrator.
Deloitte has a wealth of experience helping clients modernize and support their systems.

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. Through our dedication to successful implementations, we have established long term partnerships with many states. Below are just a few of many 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. Among local government clients, Deloitte has been serving Allegheny County Department of Human Services (ACDHS) in Pennsylvania for more than 15 years, implementing a fully-integrated Child Welfare Management application in 2009 and maintaining it since.

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.

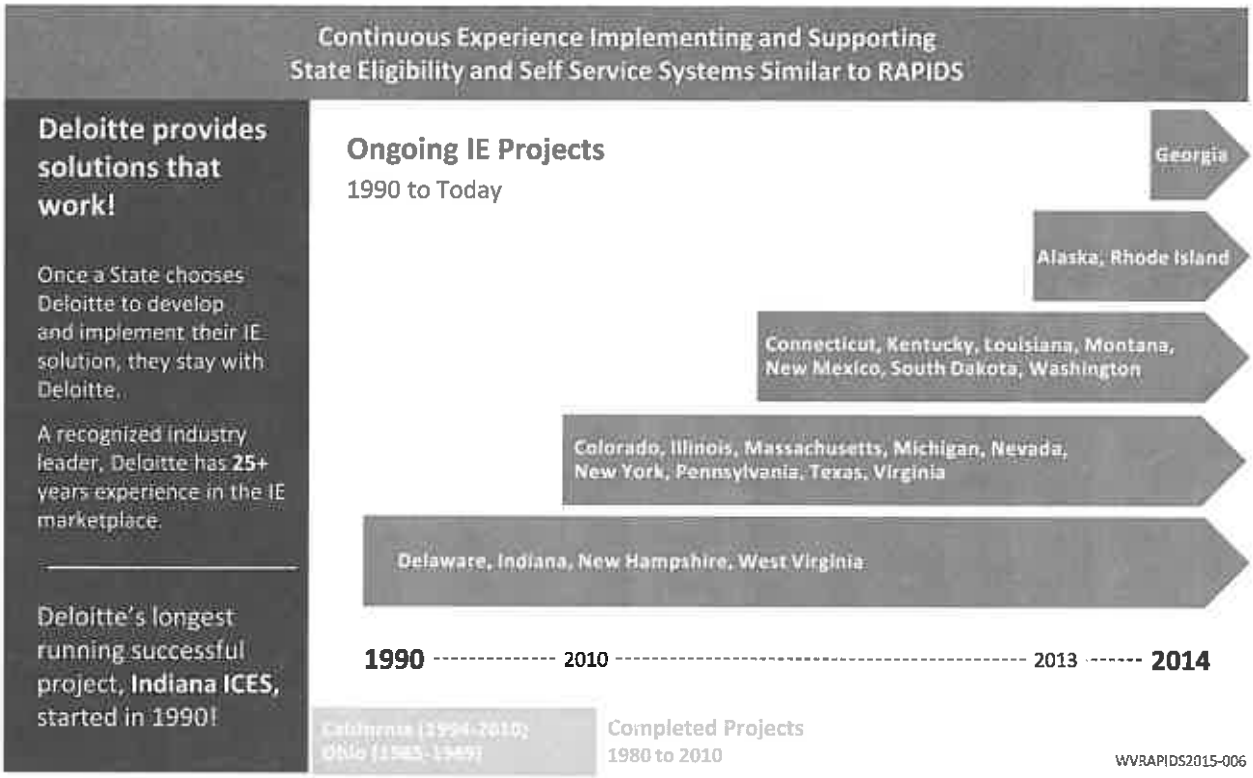


Figure 4.3.1-8. Continuous Experience Implementing & Supporting State Eligibility and Self-service Systems Similar to West Virginia.
Deloitte is a recognized industry leader in the integrated eligibility marketplace and has a history implementing and supporting state eligibility systems.

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 Florida 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 all the information required in the RFP 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

Relevant Experience

☑ Data Warehousing ☑ Business Rules Engine ☑ Master Data Management ☑ IV - A System

Programs Supported

☑ Integrated Eligibility

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.

- 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
- Supported by 49 Deloitte practitioners and 94 subcontractors

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 & Allegheny County Department of Human Services

Project Name:	**Commonwealth: ICIS (Integrated Eligibility), PACSES (Child Support Enforcement), PELICAN (Child Care)** **Allegheny County: KIDS (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

Department of Human Services, Allegheny County

Project Manager	Randolph W. Brockington Deputy Director County of Allegheny Department of Human Services	**PM Contact Information**	Office of Administrative and Information Management Services One Smithfield Street - 5th Floor Pittsburgh, PA 15222-2221 randolph.brockington@alleghenycounty.us 412.350.5203

Relevant Experience

☑ Data Warehousing ☑ Business Rules Engine ☑ Master Data Management ☑ IV - A System ☑ Enterprise Service Bus

Programs Supported

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

Why We Selected This Qualification

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. Since Pennsylvania administers child welfare programs at the county level, we have also provided a reference for a large Child Welfare system (KIDS) which we developed and currently maintain for the second largest county in Pennsylvania – Allegheny County.

- 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

Overview

Deloitte provides to the Commonwealth of Pennsylvania Maintenance and Operations services both at the Commonwealth of PA Department of Human Services (DHS) in Harrisburg and at the Allegheny County Department of Human Services (DHS) in Pittsburgh. 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 both the Commonwealth and Allegheny County, including: PACSES (Child Support Enforcement), PELICAN (Child Care), and iCIS (Integrated Eligibility) at the Commonwealth, and KIDS (Child Welfare) at Allegheny County. There are currently more than 300 Deloitte and subcontractor practitioners on the project team.

These applications are the cornerstone components for a portfolio of systems that 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.

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).

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.

Allegheny County KIDS (Child Welfare)

Between 2006 and 2011, Deloitte worked with the Allegheny County Department of Human Services to develop and roll out a fully automated child welfare system called Key Information and Demographics System (KIDS) in a phased manner. The final phase went to production in 2011 and Deloitte has been providing maintenance, operations and enhancement services since then. The KIDS application supports the social workers of the County

child welfare agency (CYF) in intake, referral, assessment, case management, placement, adoption, and many other aspects of the child welfare business process.

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.
- KIDS Application Suite:
  - More than 800 screens and 250 reports

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.
- KIDS Application Suite:
  - KIDS supports an average 824,000 transactions every month, with more than 15,000 monthly user logins, and on an average 2,000 new clients and 250 new cases being added to the system every 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
- KIDS Application Suite:
  - Screens/pages: approximately 2.5 sec
  - Reports: approximately 10.00 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

Relevant Experience

☑ Business Rules Engine ☑ IV - A System ☑ Enterprise Service Bus

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.

- 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).
- Currently staffed with about 40 Deloitte staff and more than 100 subcontractors

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.

The project is currently staffed with about 40 Deloitte staff and more than 100 subcontractors. Deloitte practices involved in the project include: Technology (Application Management Services, Deloitte Digital, Information Management, Systems Integration), Strategy and Architecture, Human Capital (Organization Transformation, HR Transformation), Audit & Enterprise Risk Services (AERS) and Financial Advisory Services (FAS).

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 Florida

Project Name: Child Support Automated Management System (CAMS)

Project Manager	Mary Whitacre CAMS Project Manager	**PM Contact Information**	Florida Department of Revenue 2450 Shumard Oak Boulevard Tallahassee, FL 32399 WhitacrM@dor.state.fl.us 850-510-3864

Relevant Experience

☑ Data Warehouse ☑ Business Rules Engine

Programs Supported

☑ Child Support Enforcement

Why We Selected This Qualification

Deloitte's experience working with Florida Department of Revenue's (DOR) Child Support Enforcement 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 automated child support 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 DOR, the solution was transitioned to the State with minimal interruption to service delivery and service quality. We were able to do this effectively because our implementation approach included the design of a comprehensive transition work plan that assisted the State's team to stay engaged during the Build and Test Phase of the engagement, and successfully take over the system at the end of Warranty.

Overview

Florida Department of Revenue's (DOR) child support enforcement unit provides services to approximately one million children and collects over $1 Billion in child support every year. Florida's child support program's main purpose is to help children get the financial support they need when it is not received from one or both parents. To accomplish this, the State works directly with the families that they serve and partner with State and Federal agencies, and private companies to carry out critical steps in the child support process.

The following services are provided by the State of Florida Child Support Enforcement Department:

- Locate parents and assets
- Establish paternity
- Establish and modify child support orders
- Monitor and take action to help parents comply with child support orders
- Receive and distribute child support payments

- Deloitte was the primary integrator during the full system lifecycle and transitioned the solution to the state after the warranty period
- CAMS uses SAP Business warehouse (BW) for the data warehousing and Business Process Framework (BRF) for Guideline calculations, Locate Process, and Compliance remedy.

- Educate and assist parents and the public

Deloitte was engaged by DOR to build a child support and enforcement system that would be highly automated and provide tighter integration across various processes of the child support system. The implemented solution would provide cost-effective and efficient handling of certain critical processes such as order establishment, suitable enforcement solution for cases etc. The solution would also increase the productivity of the program's staff which in turn would help employees better serve the children in need of financial support.

The resulting Child Support Automated Management System (CAMS) project involved the design, development and end to end integration testing of the child support system. The solution helped in the automation of various processes involved in the child support system such as case creation, paternity establishment, support order creation, financial processing, compliance and enforcement.

By automating various processes, the CAMS solution helped DOR to provide a seamless integrated solution from case initiation to case closure, tracking every single activity that the case accomplishes. The CAMS's financial solution for PPFD (Payment processing & Fund Distribution) in ECC has helped the client to regulate their financial processes such as collection, disbursement, payment exception process. Over a period of time, strategic data analysis of the Child support program's performance has helped the client to significantly improve their obligation ratio, current support and arrearage ratio which in turn have provided enhanced federal incentives to DOR.

Our solution in Florida utilizes SAP with the core functions built on the CRM and ECC modules with system enhancements leveraging standard SAP ABAP coding. The CAMS system also uses SAP Business warehouse (BW) for data warehousing, reporting and strategic data analysis, and Business Process Framework (BRF) for Guideline calculations, Locate Process, and Compliance remedy.

An important factor in the successful transition of CAMS to the state was the transition work plan designed and implemented by Deloitte that gave a blue print to DOR on approaches to take during different phases of the project lifecycle to provide accountability, knowledge transfer and hands-on experience to client's IT team. This included activities like involving the DOR's IT team in testing activities to give them end-to-end understanding of the process flow in the system, providing detailed user manuals and training material towards go-live, and implementing a program of job shadowing to give by DOR resources hands-on experience maintaining the system.

During the peak implementation phase of the project, Deloitte had approximately 150 practitioners working on the project.

System Size and Complexity

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

- The CAMS solution includes around 150 forms, 200 interfaces, 1286 Batch job schedules and 275 reports

Transaction Volume

- Approximately 125 Million receipts processed per month
- Approximately 132 Million disbursements processed per month

System Response Times

- Averaging five second per report
- Averaging two seconds per page

Subsection 3.1.3: Company References

RFP Reference, Attachment A, page 2

Subsection 3.1.3: Company References

The vendor should submit names, mailing addresses, email addresses, and current telephone numbers of individuals from 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 3

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 on-site for the term of the contract. As with all personnel hired for the Software Modification Hours usage, the Agency will have approval over personnel assigned to the project. Whenever possible, 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 qualification of the proposed staff.

Job descriptions for key staff are listed below. Please provide resumes for the staff being recommended for these positions.

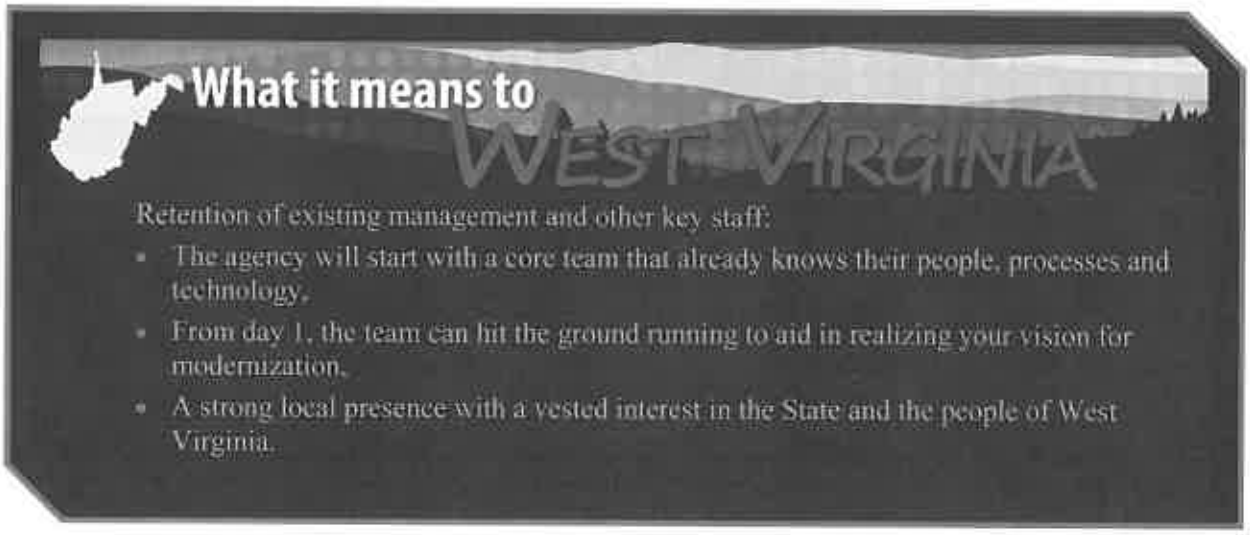
Qualified, experienced staff is of paramount importance to the success of maintaining and enhancing the mission critical West Virginia Department of Health and Human Resources (DHHR) systems. DHHR Agency workers and many citizens of West Virginia depend on the quality and experience of the people involved in its day-to-day management and operations. Our team brings almost three centuries of combined Agency 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 17 years, is directly attributable to the quality of our team members and the collaborative working relationship we have formed with the Agency.

Deloitte Features:

- More than 270 cumulative years of experience with the RAPIDS system
- Strong local team experienced with the RAPIDS system
- The right blend of industry, technical and management expertise

Each member of our proposed project team is well suited to the needs of the position, and many exceed the experience requirements identified in this RFP. Our staff is very familiar with the DHHR enterprise solutions, 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. The mix of a large local project team, infused with traveling staff with varied experiences from different states, our project team is uniquely qualified to continue to provide quality application development services to the Agency and its changing business and system needs.

The Deloitte team includes many experienced practitioners with RAPIDS expertise who work on RAPIDS and Enterprise System SMP initiatives. The new teams for Child Welfare, Child Care, and Child Support Enforcement also have prior experience in the respective domains. Deloitte possess deep subject matter specialists in each of these areas, and the respective SMP teams will be staffed with the same type of high caliber resources West Virginia has come to expect from Deloitte.



Staffing Approach and Org Chart

Deloitte's organization for the DHHR Modernization Program provides a flexible structure to address the needs of the Agency. It has the leadership necessary to manage the large team and maintain high quality. The business solution teams possess the domain knowledge and technical skills to maintain and enhance their corresponding applications. The shared services team provides a foundation of architectural, operational and integration services. With a common methodology, tools and catalog of enterprise services, the business application teams can focus on delivering high value for their respective user communities.

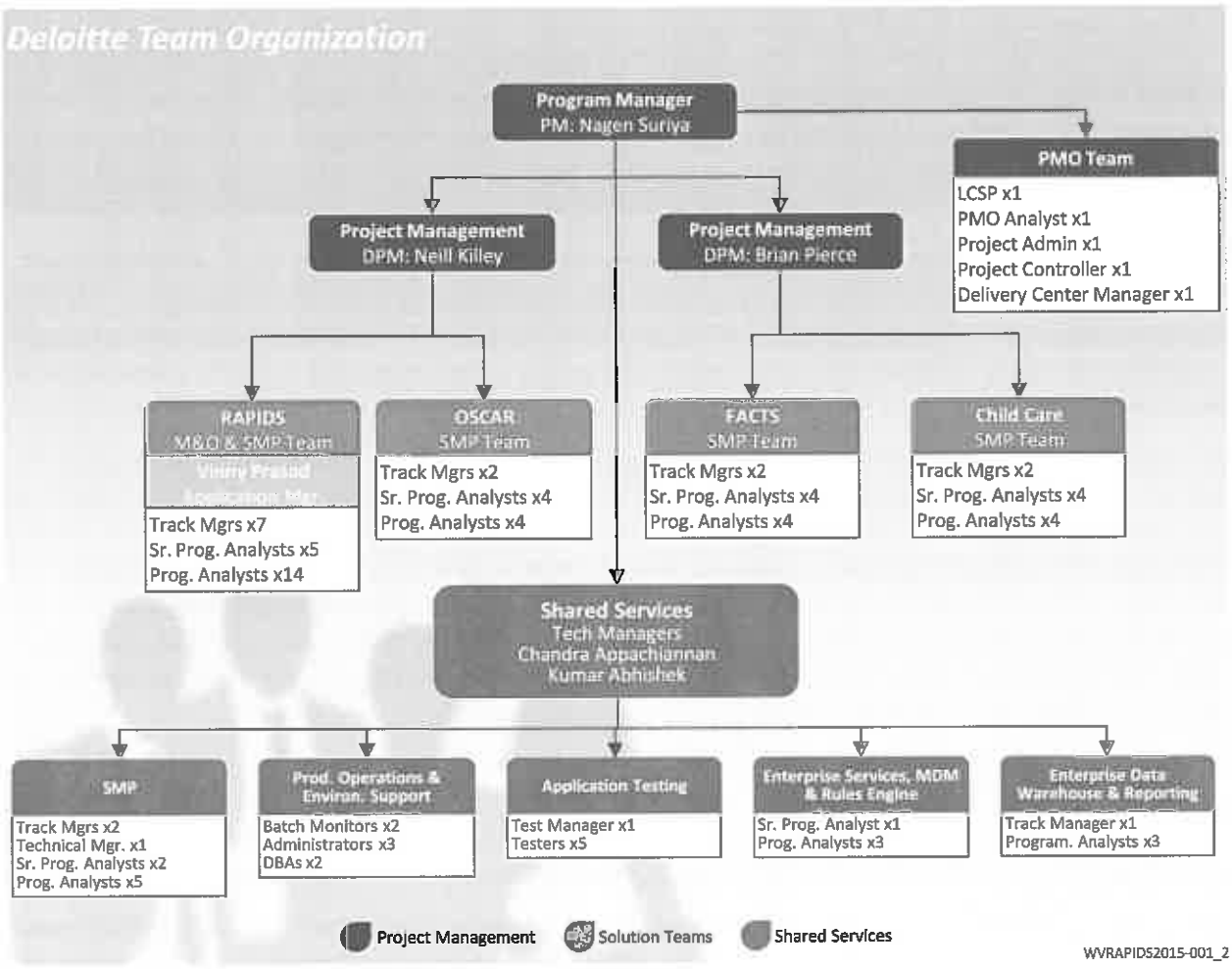


Figure 4.3.2-1. Deloitte Team Organization.

At the top of the chart is our Project Management team. Project management duties are split across the lead project manager (Nagen Suriya) and two deputies, each of which has primary responsibility for two business solutions. The project management team is supported by a project management office focused on key administrative, financial and reporting functions.

Nagen Suriya, the current RAPIDS project manager, will be overall project manager for the DHHR Modernization Program, with overall responsibility and accountability to the DHHR leadership team. His knowledge and experience will be leveraged over a much larger team and scope of systems.

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 enhancement of the RAPIDS suite of applications and on the enhancement of the OSCAR child support enforcement solution. Neil is extremely well versed in the RAPIDS system, and his strong analytic and project management skills that will help him guide the OSCAR modernization. The OSCAR modernization is likely to have similarities with that of RAPIDS since the legacy solutions are based on similar technologies. From inception through implementation, Neil has extensive experience in managing similar incremental initiatives.

Brian Pierce, the recent RAPIDS ACA project manager, will fulfill the role as a second deputy project manager. Brian will focus his energies on the FACTS and Child Care initiatives. His experiences with the ESB and MDM have made Brian familiar with the FACTS team and the child welfare domain and challenges. Brian has prior experience working on the VA Child Care project and he will leverage those lessons learned and his domain expertise to assist the new Child Care solution get off the ground successfully. Brian will also continue to invest energy in MDM and Data Warehouse initiatives, focusing on using the new enterprise capabilities to provide business value to DHHR.

In the middle of the chart are the business solution teams. 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. The new OSCAR, FACTS, and Child Care teams will be staffed with new resources appropriate to the startup activities of these initiatives, and quickly transition into the mixed functional and technical teams shown.

A new dimension and distinguishing characteristic of our proposed structure is the Shared Services group. By moving our technical support, operations, and the M&O of enterprise services into a central, shared service area we can further leverage these assets and improve the efficiency of the DHHR Modernization Program. Chandra Appachiannan, the technical manager, possesses deep technical skills in terms of database design and administration, solution design and legacy technologies. He fulfills the key technical manager RFP role. He joins forces with Kumar Abhishek, an experienced Web architect, to manage the shared services team and to consult with each of the business solution teams. Also of note, Kumar comes to us with strong Child Care experience, and we expect to leverage his skills in leading the Child Care initiative with Brian.

An important component of shared services is a dedicated testing team. This team will augment the business solution teams to increase the quality of each software release. By staggering our delivery schedules, the testing team will be able to provide a large dedicated team of testers, to rapidly complete testing cycles. They will also create automated testing suites to streamline regression testing and increase system quality.

By structuring our team in this way, Deloitte feels it can most effectively address the needs of the DHHR enterprise. While subdivided and organized into these groupings, it cannot be forgotten that the teams are integrated under common management into a synergistic whole. We will be agile in addressing the needs of the DHHR enterprise, collaborating across team boundaries, and ultimately aiding DHHR in evolving its enterprise solutions. Our primary goal is to bolster West Virginia's workers with effective tools to serve the citizens of West Virginia.

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 below. The numbered staff are positions requested in the RFP. Those with an "(a)" are additional staff that have project level responsibilities important for us to successfully manage and deliver to the RFP requirements. A check mark in the "Positions Filled" column indicates that all numbered individuals proposed for the position will fulfill the RFP role (position description and responsibilities) and commitments (such as key, period of participation, onsite, full-time) as specified in the RFP for each position narrative and clarified in Addendums 2 and 3. The position specific qualifications (such as years of experience and bachelor's degree) are addressed specifically in each resume, and not formally acknowledged in this table. The resumes are presented immediately following the Staffing Summary.

Position	Resources	Positions Filled
On-Site Project Manager (1)	(1) Nagen Suriya	☑
On-Site Deputy Project Manager (1)	(1) Neil Killey - RAPIDS and OSCAR (a) Brian Pierce – FACTS and Child Care	☑
Application Manager	(a) Vinayaga Prasad	☑
Technical Manager (1)	(1) Chandra Appachiannan (a) Kumar Abishek	☑
Track Managers (7)	(1) Nag Nagisetty (2) Venkata Kaza (3) Janardhana Dhage (4) Hannah Hass (5) Arvind Chandran (6) Akhil Pillai (7) Dan Chimes	☑
Database Administrators (2)	(1) Rafi Basha (2) Rajulan Chidambarajan	☑
Web Application Server Administrator (1)	(1) Harish Kumar	☑
Technology Administrator (1)	(1) Khalid Bhatti	☑
Sr. Programmer Analysts – Mainframe (2)	(1) Sheema Shireen (2) Bhaskara Mutyala	☑
Sr. Programmer Analysts – Java (3)	(1) Manasa Sesham (2) Krishna Reddy (3) Subbu Padharthi	☑
Sr. Programmer Analyst- Corticon (1)	(1) Anjan Bhattacharjee	☑
Programmer Analysts – Mainframe (5)	(1) Siva Babu (2) Srinivasvas Basavanbail (3) Dhamo Venkatsan (4) Venu Arumalla (5) Wasim Bargir	☑

Position	Resources	Positions Filled
Programmer Analysts- Java (8)	(1) Shekhar Mudarapu (2) Ravindranath Chenna (3) Vijay Gali (4) Venu Khyri (5) Rajneesh Ranjan (6) Sureshkumar Veluchamy (7) Haymanot Ayele (8) Neelakandan Mani	☑
Programmer Analyst-Adobe (1)	(1) Vijaya Vardan Reddy Chavva	☑
Programmer Analyst – Corticon (1)	(1) Ravindranath Karavadi	☑
Programmer Analyst- Enterprise Service Bus (1)	(1) Suchandan Kasula	☑
Programmer Analyst- Master Data Management (1)	(1) Manvendra Tiwari	☑
Programmer Analyst- Cognos (2)	(1) Klayton Shannon (2) Sagar Shukla	☑
Programmer Analyst-Extract Transform and Load (1)	(1) Naveen Kumar Panuganti	☑
Batch Monitor (1)	(1) Noordin Amlani	☑
Data Custodian - Master Data Management (1)	(1) Priyanka Sharma	☑

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

RFP Reference: Attachment A, page 3

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 State 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:

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 Your Requirements

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 14 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 20 years of experience working on public sector projects, including work with IV-A systems in Pennsylvania, Connecticut, New York and for the past eight months, 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 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 as 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

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

RFP Reference: Attachment A, page 3

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:

Although only one Deputy Project Manager was requested, with the inclusion of 80,000 additional SMP hours and three new systems (FACTS, OSCAR, and Child Care), Deloitte requires additional management level resources to manage the staff and quality on the project. We are presenting two proven managers with significant WV experience: Neil Killey and Brian Pierce.

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.

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 has the production proven experience for this role.

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 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 17 years of experience in the analysis and design of IV-A systems similar to RAPIDS.

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	Neil's has 16 years of experience working with users as defined in this requirement.
Two (2) years of CICS/D82 experience in the last five (5) years with the last twelve (12) months being with DB2 Version 9 or greater	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 11 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, Food Stamps, 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, Food Stamps, 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

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 Enterprise Service Bus, Master Data Management solution, transfer of a new inROADS self-service portal solution, and implementation of Medicaid rules in a Business Rules Engine. This ESB and MDM experience enabled Brian to develop working relationships and knowledge of the Agency's Child Care, Child Welfare, Child Support Enforcement, Medicaid and CHIP solutions. Brian has a technical background in .NET, Web Technologies, and is in the process of achieving a Java certification.

"I'm looking forward to leveraging my prior experience with Child Care systems to WV's Child Care solution!"

Brian Meets Your Requirements.

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	Brian has been involved in two projects involving the development and maintenance of an IV-A system. The primary experience was with WV RAPIDS, but he also worked with PA ICIS system. He also was part of the management team on the Child Care solution in Virginia, which is directly applicable to the Child Care SMP initiative for West Virginia.
Three (3) years of analysis and design experience on an IV-A statewide system similar to RAPIDS	Brian has three and a half years of experience in the analysis and design of WV RAPIDS and PA ICIS.
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	Brian has more than 15 years of experience working with users as defined in this requirement.
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	Brian has helped manage WV RAPIDS which utilizes CICS and DB2, gaining the required experience of 30 months in DB2 Version 9. Brian has experience working in CICS and DB2 on separate projects going back to the 1980s and 1990s. He has extensively experience modeling and programming using DB2 on a seven year project.
Two (2) years of experience with Java enterprise application development projects	Brian has five years of experience with Java enterprise application development projects.
A Bachelor's Degree	Brian has a bachelor's degree.

Education

University of Virginia	Bachelor of Arts in Mathematics

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

QA Manager
Feb 2012 – June 2012

Brian worked on the Affordable Care Act change order for the RAPIDS project. This approximately 3 year project focused on the following:

- 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.
- 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 smashes") in the contributing systems. Together the RAFT data warehouse, it provides a platform for analytics not previously possible for DHHR.

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.

Commonwealth of Virginia – Dept of Social Services

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

Application Manager
February 2010 – January 2012

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.

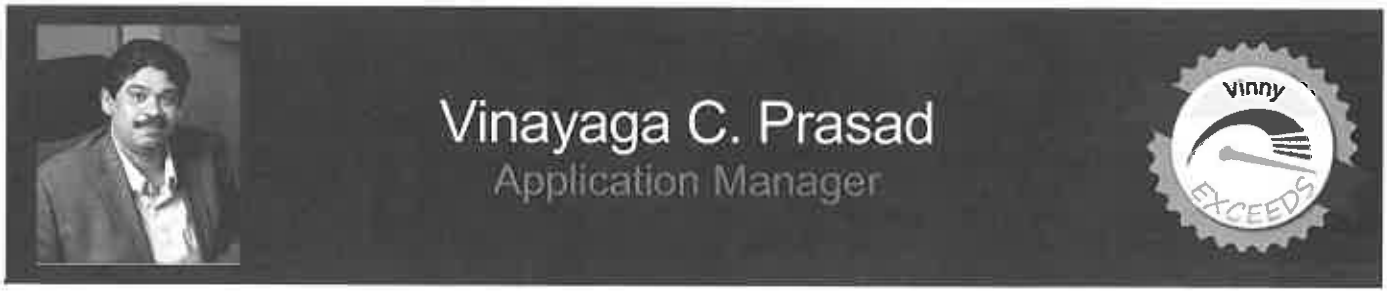
Additional Experience

1990 – 2009

- Virginia Dept. of Environmental Quality – Managed FileNet Document Management Implementation
- Virginia Dept. of Social Services – Managed Licensing and Tablet Inspection solution for VA adult and child care centers
- 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 solution. During initial development stage, Brian performed Oracle Data Modeling using ERwin and Oracle SQL and PL/SQL Development / Tuning. 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)

Application Manager

Although not requested, we have included an Application Manager role for RAPIDS. Having worked on RAPIDS for 15 years, Vinny Prasad has operated in the application manager position for over eight, He brings unparalleled expertise in both business and technology dimensions on RAPIDS. He is an important member of the RAPIDS team and an important ingredient in our value proposition to the State. His requirements are aligned to the Deputy Project Manager role.



Summary

Vinny has more than 18 years of experience in in public sector program management and Information Technology (IT) projects. Vinny brings deep expertise and knowledge of Health and Human Services (HHS) programs. Vinny has over 16 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.

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 Exceeds Your Requirements.

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	Vinny has 15 years of management experience in WV RAPIDS.
Three (3) years of analysis and design experience on an IV-A statewide system similar to RAPIDS	Vinny exceeds the requirement with more than 16 years of experience in the analysis and design of West Virginia's IV-A system 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	Vinny exceeds the requirement with more than 16 years of experience working with users as defined in this requirement.

RFP Requirement	Additional Details
Two (2) years of CICS/D82 experience in the last five (5) years with the last twelve (12) months being with DB2 Version 9 or greater	Vinny exceeds the requirement with more than 19 years of CICS experience, and seven years of experience in RAPIDS using DB2 version 8 and greater.
Two (2) years of experience with Java enterprise application development projects	Vinny has more than 5 years of experience with Java enterprise application development projects.
A Bachelor's Degree	Vinny has a master's degree.

Education

Bharathidasan University — Master of Science in Computer Science

Work Experience

State of West Virginia, Department and Health and Human Resources

Application Manager
June 2007 – Current

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.

With his wealth of experience Vinny guided the RAPIDS development team through the incremental modernization from legacy to web-based solution.

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 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 3.2.3: Technical Manager (one position)

RFP Reference: Attachment A, page 4

Subsection 3.2.3: 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 State. 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:

Although only one technical manager was requested, with the wide-range of technologies involved with the Agency's solutions, Deloitte believes that two senior technical managers are required, one focused on the legacy components, and one focused on the Web technology architecture. Thus we are presenting two resumes in this position – Chandra and Kumar.

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.

On the DHHR Modernization Program he will work alongside Kumar Abhshek, who has 14 years of experience working with technical architecture for Java enterprise application development projects, to meet the production proven technical management needs of the project.

Chandra has the production proven experience for this role.

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 17 years of RAPIDS experience.
Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects	Chandra has two years of experience in designing, documenting and communicating technical architecture for Java enterprise applications. As Chandra has vast experience in legacy applications, he will leverage experience of Kumar Abhishek, who has more than 10 years of experience in meeting the requirements.
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 experience in architecting browser based enterprise applications. Chandra has strong legacy RAPIDS experience of more than 10 years in architecting online and batch solutions. Chandra will leverage experience of Kumar Abhishek, who has more than 10 years of experience in meeting the requirements.
Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration	Chandra has between three and 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, 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.

Kumar Abishek

Technical Manager

Summary

Kumar has more than 18 years of experience in software design, development and management with a focus on application development, systems integration and business intelligence. He has built scalable, persistent, distributed, transactional software systems in Public Sector, HHS, and other industry spaces. His HHS project experience includes Child Care, Health Insurance Exchange, Integrated Eligibility, and citizen-portal applications. He is well versed in server side technologies, user interface (UI) frameworks, software middleware, integration technologies, data warehousing and persistence frameworks. He has worked on and managed all phases of the Software Development Life Cycle (SDLC) and has led multiple software project teams successfully to deliver quality technical products.

On the DHHR Modernization Program he will work alongside Chandra Appachiannan, who has 17 years of experience working with the Agency and OT on RAPIDS, to meet the production proven technical management needs of the project.

Kumar Meets Your Requirements.

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	Kumar exceeds the requirement with more than 18 years of experience working with large scale systems in a variety of applications and industry segments.
Six (6) years of experience designing, documenting, and communicating technical architecture for Java enterprise application development projects	Kumar exceeds the requirement with 14 years of experience in designing, documenting and communicating technical architecture for Java enterprise applications.
Six (6) years of experience architecting and designing scalable, robust, and secure browser-based enterprise applications to support over 2,000 users	Kumar exceeds the requirement with 14 years of experience in architecting and designing scalable, robust and secure, large scale browser based enterprise applications.
Three (3) years of experience designing architecture and solutions that includes Web Services, XML, SOAP, object persistence methodologies and application integration	Kumar has more than eight years of experience designing architecture and solutions that includes Web Services (eight years), XML (ten years), SOAP (eight years), object persistence methodologies (eight years) and application integration (eight years).
Two (2) years of experience developing web-based applications in an integration environment such as Oracle SOA, Corticon, and Weblogic	Kumar has more than two years of experience developing web-based applications in an integration environment such as Oracle SOA (two years with Oracle SOA and IBM SOA), Corticon (three years with Corticon and JBoss Rules), and Weblogic (five years with WebSphere and JBoss).
Two (2) years of experience integrating Enterprise Information Portals and systems Integration	Kumar has more than five years of experience integrating Enterprise Information Portals (five years) and systems Integration (six years).

RFP Requirement	Additional Details
Three (3) years of experience using DB2 Version 8 or greater	Kumar exceeds the requirement with more than five years of experience using DB2 version 8 and greater.
A Bachelor's Degree in Information Technology or a related field	Kumar has a bachelor's and two master's degrees

Education

Indian Institute of Technology, Delhi, India.	Bachelor of Technology in Mechanical Engineering
Purdue University	Master of Science in Mechanical Engineering
Purdue University	Master of Science in Computer and Information Science

Work Experience

State of Illinois – Child Care Management System (CCMS)

Project Manager and Technical Manager
July 2013 - Current

Technical Manager and Architect
December 2012 - January 2013

Technical Manager and Architect
August 2011 - October 2012

Illinois Department of Human Services contracted Deloitte's services to design, develop and implement a Child Care Management System with the following functionalities: web-based statewide electronic document workflow system; improved eligibility determination; electronic document image capture, storage, retrieval and management; correspondence management; reporting; and integration/interfacing with the existing legacy system.

Responsibilities:

- Managed all aspects of the technical solution and provided technical design and architecture for the solution.
- Provided functional leadership and design for the solution.
- Acted as the prime interface and the point of contact to the client on all project matters. Interfaced with senior client side executives on a routine basis.
- Looked upon as a trusted adviser and was regularly sought by the client for consultation on all technical, functional and project related matters.
- Interfaced with and led requirement collection sessions with client and end users.
- Interfaced with and led technical and functional design sessions with client teams.
- Managed project scope, mitigated scope creep and tracked progress of the project team.
- Reported project status on a regular basis to client and Deloitte executive management through status documents and conference calls.
- Worked closely with development, testing and training teams to achieve and deliver project goals.
- Provided leadership and guidance to the project team to troubleshoot and resolve day to day design and implementation issues.

Commonwealth of Massachusetts – Health Insurance Exchange and Integrated Eligibility System (HIX/IES)

Technical Manager and Track Lead
February 2013 - July 2013

Massachusetts Executive Office of Health and Human Services contracted Deloitte's services to design, develop and implement a new Health Insurance Exchange and Integrated Eligibility System (HIX/IES).

Responsibilities:

- Provided technical leadership and management to three separate work tracks for the project.
- Led the work track for assessment of the effort on eligibility rules, notices, interfaces and reports for the Worker Portal add-on work and contributed significantly to the assessment for batch programs.
- Led eligibility rules work track for the Worker Portal add-on project during the project inception phase. Prepared the project plan for the eligibility rules work track.

- Led the track team for the My Workspace and Electronic Document Management (MWS/EDM) enhancement effort to successfully complete requirements collection, design and development.
- Provided leadership to track team on all functional, technical and project related matters for the work track.
- Built a trusted adviser relationship with the client. Was sought by the client routinely for consultation on functional, technical and project issues.
- Interfaced with and led requirement collection sessions with client and end users.
- Interfaced with and led technical design sessions with the client side technical development team.
- Managed and tracked the progress of the work track team.
- Reported project status on a regular basis to client and Deloitte executive management through status meeting, documents and conference calls.

State of Illinois – Integrated Eligibility System (IES)

Technical Architect

October 2012 - December 2012

Illinois Department of Healthcare and Family Services contracted Deloitte's services to design, develop and implement a new Integrated Eligibility System (IES).

Responsibilities:

- Contributed significantly to the technical design and architecture during the inception phase of the project.
- Provided technical design and analysis to the technical reference architecture, virtual server topology and physical infrastructure for the project. Design and detailed diagrams were presented to and appreciated by the client.
- Researched technical design deliverables for other similar projects and worked on the deliverables for technical, application, integration and data architectures for the project.
- Interfaced closely with Deloitte procurement and third party vendors to complete the hardware and software sizing and procurement effort for the project.

State of Nevada – ACCESS

Technical Architect

March 2011 - July 2011

Nevada Division of Welfare and Supportive Services contracted Deloitte's services to design, develop and implement enhancements to the State's ACCESS Nevada and AMPS applications. ACCESS Nevada is the State's online Welfare Assistance application system. Applications for Assistance are processed by the AMPS system which allows Intake Workers to process these applications and get them to the back end NOMADS system.

Responsibilities:

- Provided technical architecture and design for the project enhancements and communicated these to the client by writing design documents.
- Provided reference implementations for the enhancements and worked closely with development and system testing resources to provide guidance and leadership in day to day project work.
- Served as the primary subject matter specialist on the ACCESS Nevada application and interfaced directly with the client to collect detailed requirements.
- Provided functional leadership to the project by leading requirement collection and functional design sessions, presenting User Interface (UI) mockups and conducting application demonstrations with the client.
- Led the project team to design, develop and implement all required project enhancements.
- Performed project management tasks such as providing regular project tracking to ensure timely completion of deliverables and communicating project status to Deloitte and client executive management regularly via status documents and conference calls.

Additional Experience

July 1996 – February 2011

- Ameriprise Financial Services – Data and Information Integration Analyst
- E2open, Inc. – Technical Manager and Architect for this cloud based supply chain execution and B2B systems integration solutions provider
- I2 Technologies, Inc. – Technical Architect and Lead
- Rolls Royce North America – Software Engineer and Architect

Subsection 3.2.4: Track Managers (seven positions)

RFP Reference: Attachment A, page 4

Subsection 3.2.4: 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 time frame; and
5. A Bachelor's Degree.

Vendor Response:

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.

"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 Your Requirements

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 Lead and Implementation Lead experience on the RAPIDS project. 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 Nagisetty 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 Nagisetty has more than six 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	Nag Nagisetty has more than six years of experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system.
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

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 Your Requirements

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, five months of Track-Lead and Implementation Lead experience on the RAPIDS project. 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 13 years, two months 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 13 years, six months 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, five months experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system.
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.

Janardhana Dhage, PMP

Track Manager 3

Summary

Jani is the current Track Manager on RAPIDS for the Data warehouse and business intelligence track. 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.

"I'm looking forward to using my RAPIDS and FACTS knowledge to serve West Virginia DHHR."

Jani Meets Your Requirements

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	Jani has one year of Track Lead and implementation Lead experience in RAPIDS (IV-A) project. Specifically, he has worked in the RAFT, ADHOC reporting, and MDM subsystems.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Jani has more than 17 years of experience of analyzing and designing WV DHHR's FACTS and RAPIDS applications. One year of his experience is with IV-A, the rest with IV-E.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Jani has more than 18 years of experience in systems analysis, most of that in a variety of roles with WV DHHR's FACTS and RAPIDS 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	Jani has more than 15 years of experience working with DHHR on defining needs and requirements for various enhancements to FACTS and RAPIDS system.
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

State of West Virginia DHHR – FACTS Project

Senior Application DBA
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:

- 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

Senior System Analyst
January 1995 – February 1997

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.

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

System Analyst
January 1992 – January 1995

Aeronautical Development Agency is the Department of Defense R&D agency for LCA, the world's smallest lightweight multi-role combat aircraft.

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.

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 Your Requirements

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 Lead 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' 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' 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	Hannah has more than four years' experience working with the Agency on defining needs and requirements for various enhancements to the RAPIDS system.
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

Arvind Chandran

Track Manager 5

Summary

Arvind has a wide range of experience leading strategic initiatives and technology transformation programs. Arvind is also adept in designing and implementing large scale technology initiatives. Arvind has been with the RAPIDS project for two years and led the effort for Release 6 – modernization of QC functionality, from inception through implementation and maintenance. In November 2014 Arvind also took the role of back-up Track Manager to inROADS. This allowed for a smooth transition to him becoming the Track Manager late in January 2015.

Staff Highlight

Arvind led the QC solution that has drawn national attention and acclaim with its capabilities to ease QC worker case review in the face of forthcoming FNS reporting changes.

Arvind Meets Your Requirements

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	Arvind has been with the RAPIDS project for two years and has led the effort to develop the Quality Control sub-system through two end-to-end phases of the SDLC. He is the track lead for QC, inROADS and is also leading the implementation of the ADW changes.
Two (2) years of analysis and design experience on a IV-A statewide system comparable in size and complexity to RAPIDS	Arvind has two years of analysis and design experience on the RAPIDS system.
Three (3) years of system analysis experience, with special attention given to design, programming, testing, and implementation	Arvind has eight years system analysis experience in programming, designing, testing and implementing projects for clients in the public and private sectors.
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	Arvind has six years of experience working with users to define their needs and to in producing outputs in pre-determined time frames.
A Bachelor's Degree	Arvind has a bachelor's and a master's degree.

Education

Kerala University	Bachelor of Technology
Texas A&M University	Master of Business Administration

Work Experience

State of West Virginia DHHR – RAPIDS Project

Track Manager

Arvind is the track manager for the Quality Control subsystem and inROADS – the Information Network for Resident Online Access and Delivery of Services. His experience has positioned him to lead a number of high-profile initiatives, including:

- Track lead for Release 6 modernization of Quality Control Phases 1 and 2, in which he

March 2013 – Current

led the project from inception to implementation; he also leads the effort for ongoing maintenance and operations

- Lead for the implementation of the Aged and Disabled Waiver (ADW) changes to the RAPIDS system, including requirements gathering, project planning, design review and test case review phases
- Lead for the next major enhancement for inROADS – the inclusion of Change Reporting functionality

Dell Inc.

Intern Graduate Sr. Advisor
May 2012 – July 2012

Product marketing intern for the most profitable unit within the technology major. Performed competitive analysis on internal tools and made recommendations to the project Director. Implemented a working model of the project and coordinated with leadership from multiple functions to develop collateral.

Responsibilities:

- Developed functional competitive framework for the Networking team to facilitate sales success and product development. Initiated sales engagement with early adoption success by the end of the program.
- Coordinated with industry analyst research firm on competitive analysis to develop enhanced insight into industry dynamics. Made recommendations to make analysis reporting robust and effective.

Cognizant Technology Solutions Pvt. Ltd.

Business Analyst
October 2005 – July 2011

Technical and functional lead for a number of projects in the commercial sector. Product manager for multiple tools and implemented projects for several clients. Led team members present in multiple geographic locations for successful projects within the projected deadlines.

Responsibilities:

- Coordinated efforts of developers, designers, usability experts and requirements team to develop products for integration of multiple business models to create effective products.
- Led effort for mobile and tablet application development initiatives.

Akhil Pillai

Track Manager 6

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 Your Requirements

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 and Development Lead experience on the RAPIDS project. 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.
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 7

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.

Dan Meets Your Requirements

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-Lead and Implementation Lead experience on the RAPIDS project. 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.
A Bachelor's Degree	Dan has a bachelor's degree.

Education

Pennsylvania State University	Bachelor of Science in Information's 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.

Subsection 3.2.5: Database Administrators (two positions)

RFP Reference: Attachment A, page 5

Subsection 3.2.5: 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 expertise to maintain and administer the State's critical database assets.

Summary

Rafi is an experienced database administrator with well over six 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 has the production proven experience for this role.

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 two years, 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, six months of experience in physical and logical database modeling using CA Erwin Data modeler that include ACA and QC initiatives.
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 in Oracle application DBA that includes implementing inROADS initiative.

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 for 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 to issue 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 (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

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 has the production proven experience for this role.

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 one year, 11 months experience in Oracle database version 8 or above administration experience on a system comparable in size and 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.
Two (2) years of data warehouse experience using ETL tool OWB	Rajulan is in the process of learning data warehouse using ETL tool OWB.
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 on the same.
- 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, etc.; 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 in 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.
- Troubleshoot 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 3.2.6: Web Application Server Administrator (one position)

RFP Reference: Attachment A page 5

Subsection 3.2.6: 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 and 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:

Summary

Harish has proven experience in clustered application server based environment 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 Your Requirements

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 and SME of Boeing and FedEx to understand the business and functional requirements and converted those requirements into SRS and design documents and designed and developed the products and delivered the products on time.
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.

RFP Requirement	Additional Details
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.
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 nearly 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 — Bachelor's Of Engineering Electronics and Communication

Work Experience

State of West Virginia DHHR – RAPIDS Project

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 works 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 workflows.

Responsibilities:

- Worked on migrating the Jboss server from 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 JavaScript

- 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

Subsection 3.2.7: Technology Administrator (one position)

RFP Reference: Attachment A page 6

Subsection 3.2.7: Technology Administrator (one position)

The technology administrator's responsibilities include preparing new workstations and laptops for vendor staff; migration of software to acceptance and production environments; maintenance of vendor user IDs; back-up tapes for the network; and back-up CDs for the project tracking systems. This person should also be responsible for the PCs, servers, projectors, network printers, local printers, copiers, and fax machines and also functions as liaison with and provides assistance to DHHR MIS with regard to software and hardware problem resolution. This person is considered key personnel and should be housed on-site full-time. The technology administrator should have the following qualifications:

1. Three (3) years of network administration;
2. Two (2) years of microcomputer experience installing and maintaining development software, including Word, TELON, Mainframe Express, Windows OS, and Enterprise Architect;
3. Two (2) years of experience supporting and maintaining host emulation software (IBM Personnel Communications/3270 or BlueZone) to transfer data across platforms (PC/Network to Mainframe), desktop and computer configuration and maintenance; and
4. A Bachelor's Degree.

Vendor Response:

Khalid Bhatti

Technology Administrator

Summary

Khalid has more than eighteen years of experience on the RAPIDS Project by providing support and troubleshooting in network administration, and in hardware/software installation, configuration, and upgrades. Khalid's intimate knowledge of the office technology configurations make him a perfect choice for the role of Technology Administrator. Khalid is eager to continue his work with the Agency by utilizing his technical and interpersonal skills to maintain a stable work environment, and directly assist State and Deloitte workers with their technology challenges.

Khalid Meets Your Requirements

RFP Requirement	Additional Details
Three (3) years of network administration;	Khalid has more than 15 years of extensive network administration experience in Windows and Novell networks on the RAPIDS Project.
Two (2) years of microcomputer experience installing and maintaining development software, including Word, TELON, Mainframe Express, Windows OS, and Enterprise Architect;	Khalid has more than 18 years of extensive experience in installation, configuration, troubleshooting, and maintenance of hardware (microcomputers, laptops) and all software including Word, TELON, Mainframe Express, Windows OS, and Enterprise Architecture on the RAPIDS Project.
Two (2) years of experience supporting and maintaining host emulation software (IBM Personnel Communications/3270 or BlueZone) to transfer data across platforms (PC/Network to Mainframe), desktop and computer configuration and maintenance;	Khalid has more than 18 years of extensive experience in installation and configuration, and supporting and maintaining host emulation software (IBM Personnel Communications/3270 or BlueZone) to transfer data across platforms (PC/Network to Mainframe) on desktops.
A Bachelor's Degree	Khalid has a bachelor's degree.

Education

Lakehead University, Thunder Bay, Ontario	Bachelor of Engineering in Computer Engineering/Electrical Engineering,

Professional Certifications

Cisco, Microsoft	Cisco Training Course, Windows Supporting and Administration Course, A certification Training Course, Window Server 2008/2012 Training Course, Windows 7/8.1 Training Course

Work Experience

State of West Virginia – RAPIDS Project

Network Administrator/Desktop Support

December 1996 – Current

Khalid is the Network Administrator at RAPIDS and supports desktop software and hardware deployment. Specifically, Khalid:

- Installs, configures, troubleshoots, supports, and maintains the hardware and software (Word, TELON, Mainframe Express, Windows OS, and Enterprise Architect, Weblogic Server, Oracle, host emulation IBM Personnel Communications/3270 or BlueZone), Java, eclipse, SVN, Oracle Warehouse Builder, Cognos Frame Work Manager, IBM Data Studio, etc., on desktops and laptops
- Prepares MS patch calendar and sends it to OT and the Deloitte Team.
- Performs Acceptance and Production migration
- Runs mainframe jobs in Acceptance and Production regions by using Control-M
- Supports and maintains all network and mainframe printers
- Provides hardware and software support to the RAPIDS staff
- Runs script and generates RAFT reports then follows through with the respective track leads for validation
- Maintains the inventory for all hardware and software including Licenses and Warranties
- Installed and configured Dell Power Edge Server for Oracle Database
- Maintained LAN and handled various types of system hardware and software problems
- Performed LAN management and administration such as user accounts, Group accounts, Trustee directory, login scripts, profile scripts, user and group rights, and Network security
- Planned, documented, and implemented complete data migration from Novell 3.12 to Windows NT 4.0
- Installed, configured, and implemented Arcserve V6.0 Tape Backup software. Replaced Arcserve V6.0 with Seagate Backup Exec 7.5 in order to make Y2K compliance
- Configured and set up Cloning Device for imaging Hard Disk to provide a uniform system to the users
- Created and maintained standard desktop and laptop images
- Prepared Network architecture and design using MS Visio

Additional Experience

May 1992 – November 1996

- B and B Software Solutions – Network Administrator/Desktop support
- Silcom Manufacturing Technology Inc. – Network Administrator/Desktop support

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:

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 Your Requirements

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;	Sheema has more than 13 years of analysis and programming experience on complex business systems, including eight years of experience on the RAPIDS project.
Seven (7) years of COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS;	Sheema has more than 13 years of COBOL experience with the majority using COBOL OS/390 and z/OS.
Seven (7) years of DB2 Version 8 or greater programming experience;	Sheema has 12 years of experience in DB2 Version 8 or higher.
One (1) year of CICS programming experience (TELON development experience preferred);	Sheema has more than 13 years of CICS programming experience.
Seven (7) years of TSO/ISPF experience;	Sheema has ten years of TSO/ISPF experience.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Sheema has eight years of experience with public assistance programs, all of which are 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:

- 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

Bhaskara Mutyala

Senior Programmer Analyst - Mainframe 2

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.

Bhaskara Meets Your Requirements

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;	Bhaskara has more than 16 years of experience in analysis and programming, including ten years of directly working with customers.
Seven (7) years of COBOL programming experience with the last six (6) months using COBOL OS/390 and VM or z/OS;	Bhaskara has more than 16 years of COBOL experience with the last 15 years using COBOL OS/390 and z/OS.
Seven (7) years of DB2 Version 8 or greater programming experience;	Bhaskara has six years of DB2 Version 8 and two years of DB2 Version 9 programming experience.
One (1) year of CICS programming experience (TELON development experience preferred);	Bhaskara has five years of CICS programming experience with one year of experience on TELON.
Seven (7) years of TSO/ISPF experience;	Bhaskara has 15 years of TSO/ISPF experience.
Three (3) years of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Bhaskara has three years of experience in the programs TANF, SNAP and Medicare and four years of experience in Retirement solutions Insurance Industry.
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 previous three years working on various aspects and modules of the RAPIDS system. Recently he has concentrated on the legacy development for Client Notices including mass mailings and the conversion of notices into Adobe.

- Formulates the business requirements into system requirements and completes design, development and unit testing.
- Fixes the errors in the existing programs.
- Converts the legacy Notices/Letters to Adobe format by creating XMLs and creating Adobe templates using Java script.
- Converts major approval/denial Notices for SCA, LIEAP etc.
- Participates in mass change activities including COLA, LIEAP, SCA, etc.
- Handles monthly mass mailing.
- Analyzes daily error files.
- Provides analysis to the business user's questions.
- Provides level of effort estimates for the new enhancements.

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 - 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 USA. There are several Mainframe applications, which 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 Agents' Commissions, Benefits, Agents Medical Insurance coverage, Managing partners compensation, Agents awards, Commission adjustments, retiral benefits, Agents 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, Inquires etc., The systems are developed in both mainframe and open system technologies.

VTNS-AM receives outbound service orders from 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, Ezytrieve 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 so many compilation errors like illegal characters in the Numeric fields etc., 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.

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

RFP Reference: Attachment A: page 7

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 and 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:

Summary

Manasa is ideal for this position given her six and half 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 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 Your Requirements

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 seven years of design/development and testing experience, with more than six 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.
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.

RFP Requirement	Additional Details
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.
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 an 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

Summary

Krishna has nearly 14 years of experience in Information Technology, with extensive experience in the design, development, testing and implementation of solution 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 Your Requirements

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 13 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.
Seven (7) years of J2EE programming experience with last six (6) months using Java, EJB, MVC Architecture, Design Patterns and JSPs;	Krishna has 14 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.
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 in 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, 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 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

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.

"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 Your Requirements

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 15 years of experience 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 14 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 14 years of developing UI components using technologies and have 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.
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 build and deployments.

Standard Chartered Bank
Core Banking Project

Technical Architect
May 2007 – May 2008

Technical Lead
January 2004 – April 2007

Senior Programmer Analyst
June 2002 - December 2003

Onsite Technical Coordinator
July 2001 – May 2002

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.
- 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.

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

RFP Reference: Attachment A page 7

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-de
2. Seven (7) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and 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:

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 Your Requirements

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 13 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 13 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.

RFP Requirement	Additional Details
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 home PC through his 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

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

ERS - 2

Software Engineer - Skytech Solutions
November 2005 – November 2006

different sub groups like mechanical, medical, security etc. There is also a set of administration modules like User, Role (including role tree) etc.

Responsibilities:

- 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

Subsection 3.2.11: Programmer Analysts – Mainframe (five positions)

RFP Reference: Attachment A, page 7

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 and should 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 and 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/ISPF 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:

Siva Babu

Programmer Analyst – Mainframe 1

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 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 Exceeds 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	Siva has 16 years of system analysis and programming experience and he has 14 years of system experience on the RAPIDS project. Specifically, he has worked in the EDBC, Mass Change and Confirmation subsystems.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 & VM or z/OS;	Siva has 15 years of COBOL programming experience.
One (1) year of CICS programming experience (TEL ON development experience preferred);	Siva has seven years of CICS programming experience and seven years of TELON development experience.
Five (5) years of DB2 Version 8 or greater programming experience	Siva has 16 years of DB2 programming experience.
Five (5) years of TSO/ISPF experience	Siva has 16 years of TSO/ISPF experience.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Siva has 14 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 14 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 eRAPIDS subsystem EDBC 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, 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, that 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 and in a timely manner.

Srinivas Rao Basavanbail

Programmer Analyst – Mainframe 2

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 Exceeds 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	Srini has 11 years of work experience in requirement gathering, design, development, maintenance and production support of large scale mainframe systems.
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 11 years of COBOL programming experience.
One (1) year of CICS programming experience (TEL ON development experience preferred);	Srini has seven years of CICS programming experience.
Five (5) years of DB2 Version 8 or greater programming experience	Srini has 11 years of DB2 programming experience which includes writing SQL queries, stored procedures, and Native Stored procedures. Nine of these years are in version 9 or higher.
Five (5) years of TSO/ISPF experience	Srini has 11 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 served by RAPIDS.
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 codes the new functionalities.
- Writes DB2 SQL Queries to generate the 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 for 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 Online payment system. It accepts payment towards delinquent or current loan payment. TRIAD is a FICO product. It is a decision engine used to score accounts for risk-based collections. These applications 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.

Dhamodharan Venkatesan

Programmer Analyst – Mainframe 3

Summary

With 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 Exceeds 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	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.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or zJOS;	Dhamo has nine years of COBOL programming, eight years of z/OS and one year of OS/390 experience.
One (1) year of CICS programming experience (TEL ON development experience preferred);	Dhamo has seven years of CICS programming experience and two years of TELON development experience.
Five (5) years of DB2 Version 8 or greater programming experience	Dhamo has nine years of DB2 programming experience.
Five (5) years of TSO/ISPF experience	Dhamo has nine years of TSO/ISPF experience.
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 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 etc.
- 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.

Venugopal Arumalla

Programmer Analyst – Mainframe 4

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 Exceeds 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	Venu has more than 14 years of experience on Mainframe technologies, with 13 years working directly with customers.
Five (5) years of COBOL programming experience with the last six (6) months being with COBOL OS/390 and VM or z/OS;	Venu has more than 14 years of experience on COBOL and JCL.
One (1) year of CICS programming experience (TEL ON development experience preferred);	Venu has eight years CICS programing experience.
Five (5) years of DB2 Version 8 or greater programming experience	Venu has seven years of experience on DB2 version 8.
Five (5) years of TSO/ISPF experience	Venu has more than 14 years of experience on TSO/ISPF.
One (1) year 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.

- Develops 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, statement printing services to the world's largest financial Institutes, and to the merchant around the world.

Responsibilities:

- Analyzed the programs and prepared the technical specifications and documents for the enhancement projects.
- Interacted with the client, business solution design people for requirement, system test people, 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. ANP application support nationwide agents, nationwide call center people 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

Wasim Bargir

Programmer Analyst- Mainframe 5

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 Exceeds 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	Wasim has eight years of work experience in development of software product from requirement analysis to system study, designing, testing, de-bugging, documentation and implementation. Wasim has strong analytic, problem solving skills and organizational ability.
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/zJOS.
One (1) year of CICS programming experience (TEL ON development experience preferred);	Wasim has eight years of DB2 programming experience and two years, seven months of 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 requirement 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 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 the member giving him an overview of his account. It contains details of his personal health record, health saving account, claims he had last month, amount he has spent by Humana, prescription details etc. This would also provide him 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 in batch stream.
- Gathered the requirements via discussions/meetings with business users and IT Management.
- Involved in batch cycles monitoring and ABEND fixing which part of production support is and creating ABEND logs for future reference.
  - Provided the permanent fix the frequently getting abends.
- Participated in Client/Team meetings send 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 the production problems and took action immediately.
  - Performed the code changes or data patching if necessary
  - Updated all the QMS documents to be updated accordingly.
  - Coordinated with the other teams to follow up to solve immediately and informed management on up-to-date status when the 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 desk top application. Collection and Customer care receive numerous requests on a daily basis from customer requesting the option to make a payment via their debit card. Care and Collection can only process Check-By-Phone or savings Accounts payment from customers through desktop application.

ONE HSBC Description: This Project is for HSBC. 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 requirement 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 production environment.
- Involved in running the entire batch cycle in test region with the new modifications which are going to be turned into production with the test data provided by the tester.

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

RFP Reference: Attachment A, page 8

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 and should be housed on-site full-time. 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 and 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:

Summary

Shekhar has been working in RAPIDS for more than six years and played a crucial role in achieving the Agency's goal of incremental modernization. Shekhar specializes in delivering quality end-products, adding strength to the team. Shekhar is a perfect choice for the role of Programmer analyst – Java with his current functional and technical capabilities within RAPIDS. Shekhar is passionate about injecting the latest technology trends into the system that can enhance user experiences. He is enthusiastic to provide client services to the Agency and is excited to contribute his experience in upcoming enhancements.

Shekhar Exceeds 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	Shekhar has seven years of experience in programming experience at the RAPIDS project. Shekhar also has two years of experience as deputy track lead where he has worked directly with the client and conducted multiple JAD sessions.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Shekhar has more than six years of J2EE programming experience. He has been working on EJB's, core Java, MVC architecture, design patterns and JSP's for the last four years.
Two (2) years of programming experience in writing Services and UI components	Shekhar has four years of experience in writing Services and UI components including JQuery, JavaScript, and JSP.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Shekhar has more than six years of experience at the RAPIDS project with public assistance programs such as TANF, SNAP and Medical Assistance.

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

Education

KITS – JNTU University, India.	Bachelor of Science in Computer Science and Information Technology.
Texas State University, San Marcos, TX - 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 2008 - Current

Shekhar has been driving force for introducing innovative and effective technologies into eRAPIDS resulting in well received solutions such as the modernized Quality Control (QC) subsystem. He continues as the lead for QC and the Pin Smash process which is undergoing modernization changes.

- Leads the initiative for Pin Smash implementation process.
  - Conducts JADs with the clients
  - Leads the team to implement the solution

In previous roles on RAPIDS, Shekar has:

- Served as functional and technical lead for Quality Control phase 1 and Phase 2 releases.
  - Successfully delivered both phases with his technical knowledge and played a crucial role for this module implementation.
  - Introduced technical components like Velocity Template engine that eased the implementation process for few complex business client needs.
- Been involved in development of Caseload Management components such as the Dashboard and Activity details screens.
- Led performance testing module for eRAPIDS modules for Application entry and Caseload Management.
- Provided production support for the current eRAPIDS modules such as Work Programs, Client Scheduling, and Web Inquiry.
- Developed several Client Scheduling screens such as Reception Log, Add Entry and Recurrences.
- Developed Work Programs screens such as the Dashboard.
- Worked on global changes to enhance look and feel of eRAPIDS.

State of Pennsylvania Department of Transportation - PennDOT Project

Programmer Analyst
January 2008 – October 2008

The DOTCENTRIC project focuses on the inventory management and financial administrative system of the PennDOT (Pennsylvania Department of Transportation). This system is the replacement of the existing IBM mainframe application (TOPICS) to a web based application in Java. I was mainly involved in batch processing and scheduling tasks involved in the dot centric project. Primarily responsible for developing the batch jobs, running them in various environments and schedule them through TWS (Tivoli Work Scheduler). These jobs are written using JAVA supported by BoscoE4J framework. The scope of my role in this project extends to the entire modules that are required for the current release.

Responsibilities:

- Analyzed the BoscE4j framework and designed a custom based batch framework which

supports all the batch jobs explicitly.

- Interacted with all the modules of the project, gathered the batch related requirements and designed accordingly.
  - Involved in scheduling all the batch tasks to run in different environments.
- Designed the batch framework component which works independent of the online application system. Used DOM Parser, which is used to parse the XML files in order to show the Inquiry Screen, which is dynamically generated, based on XML.
- Used JMS to send and receive messages in the form of XML's. Configured the Data source to access the Oracle database using JDBC Provider for Oracle in the Application server.
  - Involved in writing batch scripts and deployment of the application in WebSphere application server.

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 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	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.
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 financial sector providing wide variety of Mortgage products within and outside the firm. Mortgage banking service integration is major initiative taken by 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. My role in this project includes the design and development of the mortgage web services and assuring their performance within the agreed levels.

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 with in 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.
- 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

Vijay K Gali

Programmer Analyst - Java 3

Summary

Vijay has 15 years of experience in the Software Development Life Cycle (SDLC), which includes Business Requirements gathering, analysis, system design, coding, testing, implementation and maintenance with domain knowledge in Integrated Eligibility Systems, Financial Services, and Insurance. At RAPIDS he is the inROADS developer specialist.

Vijay 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	Vijay has eight years of experience working in RAPIDS and inROADS.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Vijay has more than five years of experience being a part of incremental modernization of West Virginia State Integrated Eligibility System (eRAPIDS) which is developed and implemented in Java.
Two (2) years of programming experience in writing Services and UI components	Vijay has more than five years of experience in RAPIDS developing worked on several pages, Web services, etc.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Vijay has more than eight years of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Vijay has a bachelor's degree and a master's degree.

Education

Nizam college, Osmania University	Bachelor of Science in Mathematics and Sciences
Osmania University	Master of Computer Applications

Professional Certifications

PEOPLECERT	ITIL V3 FOUNDATION certification

Work Experience

WV DHHR - inROADS Project

Programmer Analyst
April 2007 – Current

Vijay has been the lead developer for inROADS for much of his tenure at RAPIDS, and has not only established himself as the go-to person for changes to inROADS, but also has developed a good relationship with the State lead for inROADS. His responsibilities include:

- Developing class and sequence diagrams.
- Analyzing and developing new screens.
- Developing the components across all the layers including EJBs, DAOs, Cargos, Collections, JSPs and tag libraries (Fast4j Framework).
- Performing integration and regression testing.
- Analyzing mainframe screens and implemented the same business functionality on Web.
- Developing stored procedures, which interact with DB2 on mainframes and provide results to Java applications.
- Preparing Unit Test cases.
- Sharing knowledge with the new developers and guided them to understand the business functionality.

Verizon

Senior Developer
July 2006 - April 2007

Based in New York, Verizon has a diverse workforce of approximately 250,000 and generates annual consolidated operating revenues of approximately $90 billion.

The Customer Accounts File System (CAFS) module maintains payment Adjustments and maintains customer accounts.

Responsibilities:

- Interacted with upstream and downstream system teams to formalize functional and non-functional requirements and to resolve any technical hurdles and issues.
- Understood the functional specifications given by the client and the business needs.
  - Estimated the dollar cost for software development, documentation and installation, and to write up the detailed technical specifications for the offshore team
- Involved in Analysis, Coding and Testing of COBOL II and COBOL I programs.
- Developed and coded the Mainframe COBOL batch applications accessing IMS and DB2 database and VSAM files
- Modified and tested batch COBOL programs and job streams.
- Modified ASSEMBLER programs used in Batch and Online.
- Wrote COBOL programs for Batch Processing and debugging of programs using Xpeditor.

Additional Experience

October 1999 – July 2006

- Allmerica Financial Services/Keane – Senior Software Engineer
- Renault Credit International/Keane – Software Engineer

Venu Khyri

Programmer Analyst - Java 4

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 Exceeds 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	Venu has 11 years of experience in analysis and programming experience. He has worked directly with the clients for quality outputs.
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 11 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 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, which 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 his 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.
- 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 interconnect CDRs and provide the operator specific invoices and accounting as per the TRAI guidelines for specific call scenarios. This web portal development basically involves 5 levels plus one additional level called MBT who are all actually the 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 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 etc 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

Rajneesh Ranjan

Programmer Analyst - Java 5

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.

Rajneesh 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	Rajneesh has more than eight years of experience in large scale system analysis and programming, and working directly with customers.
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, analysts and 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.
- 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 fulfil 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 6

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 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	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.
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, 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 basically 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 to receive 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 to access to interact database.
- Developed the Adapter classes to interact 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 now Chrysler 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 for the same.
- Completed the assigned tasks in the given time frame.
- Deployed the changes when authorized by the client.

Haymanot Ayele

Programmer Analyst - Java 7

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 quickly and has focused on fixes for numerous PCRs. She has outstanding communication skills; expressing herself effectively with upper management, peers and clients.

Haymanot has the production proven experience for 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	Haymanot has five years' experience on large scale projects which provide service for a large number of customers. She has used state of the art technologies and satisfies client requirements. In addition, she has eight months 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 almost a year (eight months) 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 Institute of Technology (Ethoipa)	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.

Responsibilities:

- Participated in the design and development of a Statewide Project NIJIS (National Integrated Information System) for integrating all justice governmental offices in that State using Java web technologies: JSP and SERVLETS. Mostly I was working in all phases of Prison module.

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 managements.

Responsibilities:

- 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 4 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.

Neelakandan Mani

Programmer Analyst - Java 8

Summary

Neelakandan has 10 years of experience in the analysis, design, development, implementation, integration, testing and support of the Client, Server and n-tier enterprise applications using Java & J2EE technologies.

Neelakandan has the production proven experience for 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	Neelakandan has ten years of experience in the system analysis, design and programming working directly with the customers to meet their needs.
Three (3) years of J2EE programming experience with the last six (6) months using Core Java, EJB, MVC Architecture, Design Patterns and JSPs	Neelakandan has ten years of experience developing the applications using Java, J2EE, EJB, MVC, Design and JSP's.
Two (2) years of programming experience in writing Services and UI components	Neelakandan has more than four years of writing web-services using SOAP, RestFul and UI components.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance;	Neelakandan has five months of experience with public assistance programs such as TANF, SNAP and Medical Assistance.
A Bachelor's Degree	Neelakandan has a Bachelor' of Engineering in Computer Science & Engineering.

Education

Anna University, Chennai - India Bachelor of Engineering in Computer Science & Engineering.

Professional Certifications

SwissRe Insurance Insurance Domain Certified

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst - Java
Feb 2015 – Current

Neelakandan is a new addition to the RAPIDS project, responsible for defect fixes and enhancements for the Application Entry and Client Registration subsystems.

- Analyzes, designs and develops Application Entry and Client Registration enhancements and fixes.
- Designs and develops many Java batch jobs and performs configuration and scheduling through UNIX.
- Works on data access layer for insertions, updating and retrieval operations of data from Oracle database.
- Provides production support for the current eRAPIDS modules such Application Entry, Client Scheduling, Web Inquiry, Record Navigator, Framework and Reporting.

GS1 USA

Senior Java Developer
Aug 2014 – Jan 2015

The GLN Registry is a subscription-based service that provides a comprehensive list of companies in the U.S. with their corresponding GLNs and GLN information. The GLN Registry serves as the "single source of truth" for location information enabling subscribers to access up-to-date, reliable location information for industry manufacturers, distributors, retailers, hospitals, clinics, and retail and mail-order pharmacies to improve the accuracy of their supply chain activities.

Responsibilities:

- Led the design, development & implementation of Java based enterprise applications employing the agile development methodology and using the JAVA/J2EE technologies.
- Developed various application modules and the user Interfaces using Struts 2 framework, JSP, Java Scripts and CSS.
- Designed & Developed multiples application services for the End Clients or consumers using Restful and SOAP based Web-Services.
- Analyzed client's needs to develop solutions for the range of Application Modules to improve the performance of the business process.
- Fixed critical and major issues reported by SONAR to comply with the JAVA Coding Standards.
- Coordinated with Onsite and Offshore teams to review and check in the code to avoid any conflicts.
- Attended daily meeting with the Client and Offshore EDC team for project discussions and status updates.

Discover Financial Services

Technical Lead
Oct 2010 – Jul 2014

Discover Financial Services (NYSE: DFS) is a direct banking and payment services company with one of the most recognized brands in U.S. financial services. Discovercard.com is an important source for Card member self-service and significantly contributes to the corporate goal of "Build on leadership position in rewards, service, online".

Responsibilities:

- Interact with Business Analyst to understand the business requirements and scope of the project.
- Developed various Application modules using Struts, EJB and Spring frame work
- Designed, Developed and Consumed the Enterprise common services using RMI, SOAP and Restful Web-services
- Prepare the Application architecture, configuration management, E2E Diagrams, Functional documents and update them periodically.
- Involved in fixing and delivering the Security Vulnerability fixes on time for the applications as per the Security Team needs

Swiss Reinsurance

Project Lead
Jan 2008 – Sep 2010

UK Life Claims is basically administrator application used for administering accounting and claim information for its re-insurance business. The application deals with claim documents, which need to undergo insurance processing depending on the document type.

Responsibilities:

- Understand the new requirements for the Development for redesigning the new Billing application.
- Prepare test cases for the new modules, Impact Analysis, Coding, testing and delivering it on time to meet the FTR and OTD.
- Designed and created a new application TIBCO Inconcert Work flow for the Claims and Billing application.
- Designed and developed the back end processing tool to migrate 200 Million documents from CCIS to Claims system.
- Lead the Design, development, Enhancement & implementation of web-based Enterprise applications employing the SDLC methodologies.
- Interact with the Business partner and analyze the requirements to develop solutions for the range of insurance Application Modules to improve the performance of the business process.
- Developed application tools to generate custom reports and unique solutions using JAVA/J2EE, UNIX and Mainframe technologies. And also designed a JAVA tool to migrate Millions of Claim documents in to a new Claims system.

General Electric (GE) ERC

Senior Java Developer
Jan 2006 – Dec 2007

Java Developer
Jun 2005 – Dec 2005

Actuarial referral is a critical process within transactional pricing. Actuarial Referral System acts as an interface between the Underwriters and Actuaries globally to refer treaties written under P&C Re business. GE is one of the world's largest and most diversified reinsurer's .Operating in more than 20 countries, and with a presence on all continents. GE provides wholesale (re)insurance products, insurance-based capital market instruments, and supplementary risk management services to Property & Casualty and Life & Health clients and brokers around the globe

Responsibilities:

- Understand the requirement documents from the Client, analyze, Estimate and prepare design documents.
- Implement new customized UI interfaces for their actuarial pricing system
- Implemented application Server side and Client Side validation.
- Worked on the Unit testing, integration and UAT issues reported by the Client or Testing team.
- Involved in the Client Coordination, enhancement, Support and maintenance of this application on a daily basis to meet the business needs of this application.

Subsection 3.2.13: Programmer Analyst – Adobe (one position)

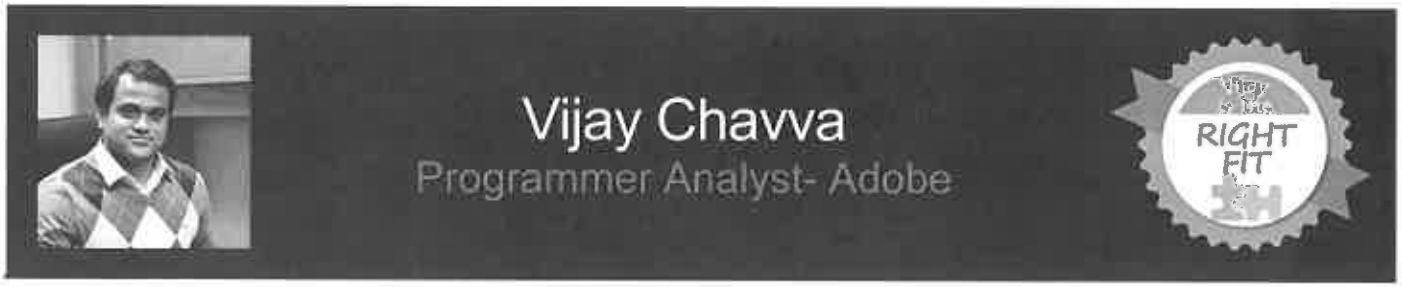
RFP Reference: Attachment A, page 8

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 and should 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:



Summary

Vijay has nearly four years of experience in enterprise application development and has been working for the Agency for about a year. Vijay has converted many of the legacy templates into Adobe, and was also an active member of the e-Notices project which provided the opportunity for citizens to check their notices at any time in inROADS.

Vijay has the production proven experience for this role.

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	Vijay has four years of progressive experience in programming and requirements gathering and has worked closely with the RAPIDS team for nearly a year 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;	Vijay has 11 months of experience with the LiveCycle suite.
Two (2) years of experience with Adobe Acrobat Professional	Vijay has 11 months of experience with Adobe Acrobat Professional.
Two (2) years of experience of JavaScript Programming	Vijay has three years of experience with Java Script programming.
Two (2) years of experience with XML design and programming	Vijay has four years of experience with XML design and programming.

RFP Requirement	Additional Details
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Vijay has 11 months of experience with SNAP, Medical and public assistance programs.
A Bachelor's Degree.	Vijay has a bachelor's and a master's degree.

Education

Jawaharlal Nehru Technological University	Bachelor of Science in Electrical and Electronics Engineering.
Southern Illinois University, Carbondale	Master of Science in Electrical and Computer Engineering.

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
July 2014 – Current

Vijay has been a critical resource in our Client Notices modernization and has designed the majority of the Adobe notices over the previous year.

- 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.

DirecTV

Web Services Developer
September 2011 – June 2014

DirecTV is a leading direct broadcast satellite service provider, the project at DirecTV spans account management, commerce and legacy integrations via SOA. A layered SOA based architecture is used to integrate CRM, OMS, Billing and other legacy systems. The middleware encapsulates the complexity of orchestrating calls across the diverse existing systems in different locations, providing a single and consistent facade for the application layer.

Responsibilities:

- Involved in development of critical web services which update the device activations and billing changes to engineering system and subscriber transaction management system (STMS) respectively.

Tech Mahindra

Web Services Developer
June 2011 – September 2014

The project was about integration between two different systems that were based on Java and .net.

Responsibilities:

Designed and developed the integration through Oracle Service Bus (OSB) for accessing and exposing web services to external systems.

Subsection 3.2.14: Programmer Analyst – Corticon (one position)

RFP Reference: Attachment A, page 3

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 and JSPs;
3. Two (2) 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. One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance; and
6. A Bachelor's Degree

Addendum 3 Clarifications and Revisions, page 4

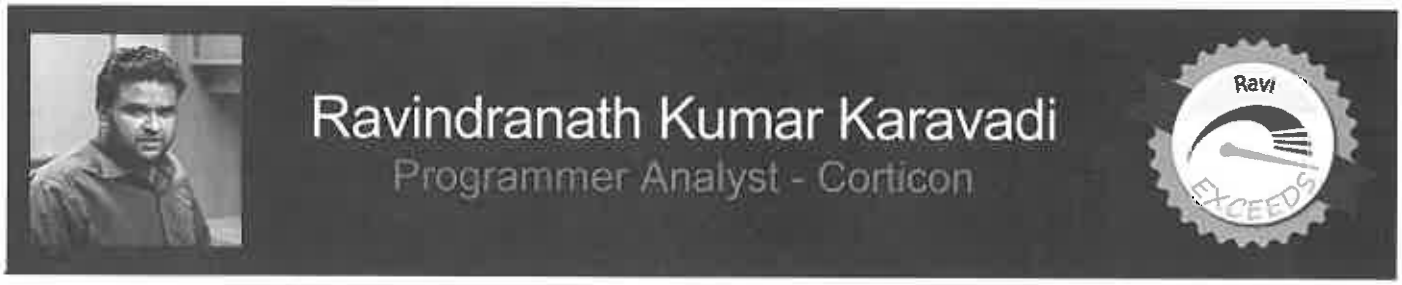
2) Cost effective; FNS encourages for key staff to be limited to assure bids submitted are competitive and not cost prohibitive to either the state or federal partner. Therefore, in an effort to help reduce cost the following staff identified within Section#3.2: Staff Qualifications and Experience shall not be required as key staff; employees of these classifications are not required to be on-site.

3.2.14 Programmer Analyst- Corticon (one position)

3.2.19 Batch Monitor (one position)

3.2.20 Data Custodian- Master Data Management (one position)

Vendor Response:



Summary

Ravi has been working at RAPIDS for more than four years and played a crucial role in achieving the Agency's goal of incremental modernization. Ravi's experience with functional and technical capabilities in the new Corticon BRE makes him a perfect choice for the role of Programmer Analyst – Corticon.

"I am happy to have been challenged by the ACA go-live. Having a leadership role in migrating existing Medicaid groups into the BRE was exactly the kind of challenge that excites me."

Ravi 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	Ravi has seven years of experience in programming experience on large scale systems and is experienced in working directly with the Client and delivering the right solution ahead of time.
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 seven years of J2EE programming experience. He has been working on EJB's, core Java, MVC architecture, design patterns and JSP's for the last four years.

RFP Requirement	Additional Details
Two (2) years of programming experience in writing Services and UI components	Ravi has seven years of experience in writing Services and UI Components.
Two (2) years of experience configuring I implementing business rules in the enterprise software package known as Corticon	Ravi has three years of experience working on Corticon Rules Engine. Specializes in integrating COBOL rules into Business Rules Engine.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Ravi has four years of experience at the RAPIDS project with public assistance programs such as TANF, SNAP and MAGI.
A Bachelor's Degree	Ravi has a bachelor's and a master's degree.

Education

Jawaharlal Nehru Technological University	Bachelor of Technology in Electronics and Communication.
Southern Illinois University, Carbondale	Master of Engineering in Electronics and Computers.

Professional Certifications

Oracle	SCJP
Progress	Progress Corticon Programmer/Administrator.

Work Experience

State of West Virginia DHHR – RAPIDS Project

Programmer Analyst
February 2011 – Current

Ravi has been a critical resource in implementing the Business Rules Engine. As the architect for the BRE ruleflows and vocabulary, his experience in the RAPIDS Corticon Solution is unparalleled. He is also holds a critical in the operational deployment of the rules.

- Leads the complete architectural design for integrating BRMS into the existing eRAPIDS application.
- Develops the rules required to incorporate the new MAGI Medicaid rules using Corticon.
- Extracts complex rules from the existing Legacy COBOL systems and implemented those rules in Corticon Developer.
- Exposes the MAGI Medicaid Decision services to be consumed in various deployment architectures like in process java calling, web services.
- Performs stress/performance tests the Business rules Engine integrated with eRAPIDS application using Jmeter.
- Conducts training sessions on Business Rules Engines to the new team members as part of the second phase of MAGI Medicaid Expansion.
- Uses the Enterprise Architect designed various software design models for the application.
- Works with the operational team for tasks like deployment of the new Decision Services into Web logic Server, merging code bases between Rex and eRAPIDS.

Guru

Developer Analyst
June 2009 – January 2011

Guru is a web application used by Simon Property Group to service and maintains more than 400 malls all over the nation. The Managers of each Mall can login to Guru to generate various reports and enter data about the Mall.

Etrac is a Java RMI application used by all the business users of Simon for financial transactions and billing. Simon provides Electric, Water, Gas and all other utilities to the tenants and acts as a secondary Utility Provider.

Responsibilities:

- Supported bug-fixing, enhancements, troubleshooting various application errors/ exceptions/ roadblocks on different environments and implementation of new requirements.
- Integrated and installed MySQL configured the cron job to refresh the data on database.
- Developed Struts2 based presentation layer, Hibernate based Dao layer and integrated them using Spring Dependency injection, ORM and Web modules.
- Developed test driven, test first methodology based JUnit test cases for existing modules, new enhancements and new modules.

Subsection 3.2.15: Programmer Analyst – Enterprise Service Bus (one position)

RFP Reference: Attachment A, page 9

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 and 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:

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 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;	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.
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, must 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.

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

Education

JNTU University, India. Bachelor's 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 as the market share goes. 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.

Subsection 3.2.16: Programmer Analyst – Master Data Management (one position)

RFP Reference: Attachment A, page 10

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:

Summary

Manvendra has nearly 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.

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 has the production proven experience for this role.

RFP Requirement	Additional Details
Five (5) years of experience in Informatica (Siperian) MDM and Informatica ETL or comparable software	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 12 years of experience in designing data extraction and conversion procedures for diverse technical platforms and data-stores.
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.

RFP Requirement	Additional Details
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

MDM Lead
August 2012 – current

Java Development Lead
July 2007 – August 2012

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 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 (one position)

RFP Reference: Attachment A, page 10

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 J2EE programming experience; and
4. A Bachelor's Degree.

Addendum 3 | Clarifications and Revisions, page 4

2) Cost effective; FNS encourages for key staff to be limited to assure bids submitted are competitive and not cost prohibitive to either the state or federal partner. Therefore, in an effort to help reduce cost the following staff identified within Section#3.2: Staff Qualifications and Experience shall not be required as key staff; employees of these classifications are not required to be on-site.

3.2.14 Programmer Analyst- Corticon (one position)

3.2.19 Batch Monitor (one position)

3.2.20 Data Custodian- Master Data Management (one position)

Additionally, during the review with FNS the state identified a need to add to position, 3.2.17 Programmer Analyst- Cognos, to change the quantity of positions needed from one to two as well modifying their qualifications requirements to state "Two (2) years of combined or separate experience with J2EE, COBOL, and/or DB2 programming; and ... "

Vendor Response:

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.

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 has the production proven experience for this role.

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. 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 one year and seven months 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.
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.

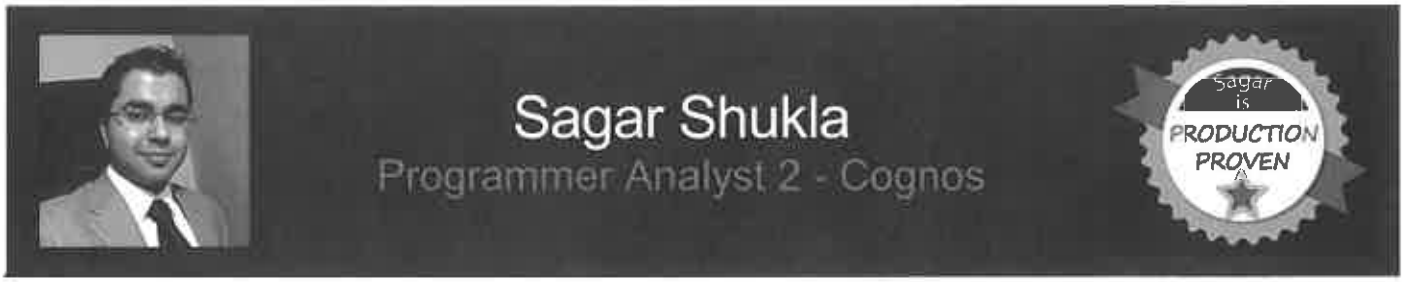
West Virginia Division of Highways

.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.



Summary

Sagar is a talented Cognos developer with experience working on the Commonwealth of Pennsylvania's business analytics team which supports various HHS and Insurance related initiatives. He has two years of Cognos experience with the Oracle Database, the same technology stack that is used in WV. Sagar is a proven choice as a Cognos Programmer Analyst position.

Sagar has the production proven experience for this role.

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	Sagar has two years of large scale system analysis and programming, which included working with customers to translate business needs into functional products.
Two (2) years of Cognos experience developing reports and dashboards, as well as knowledge of data warehousing concepts including dimensional data modeling	Sagar has two years of Cognos experience working with various program offices within the Pennsylvania account. He has also completed the following training: • IBM Cognos Framework Manager Training • IBM Cognos Report Studio Training He has successfully delivered various reports that offer the program offices of the Commonwealth of Pennsylvania access to reporting capabilities including enrollment activities, expenditures and operational performance.
Two (2) years of combined or separate experience with J2EE, COBOL, and/or DB2 programming;	Sagar has two months of Java SE programming experience. He also has two years of experience programming SQL and PL/SQL using Oracle, which is similar to DB/2 and directly applicable to WV's DW solution which is also based on Oracle.
A Bachelor's Degree	Sagar has a bachelor's degree.

Education

Pennsylvania State University Bachelor of Science in Information Science and Technology. Minor in Business

Work Experience

Commonwealth of Pennsylvania – Business Analytics Shared Services Team

Programmer Analyst/ Cognos Developer/Tester

July 2013 – Current

Currently Sagar is supporting the Pennsylvania Insurance department (PID) and the Office of Children, Youth and Families (OCYF) as a Program Analyst and Cognos Developer/Tester. Sagar worked with Cognos 10.2 and 7.4 Report Studio and Framework manager. His current assignment is to upgrade and recreate over 100 Cognos objects from Cognos 7.4 to 10.2. He also participates in all the client meetings, gathering requirements and participating in providing essential insight to the processes required for the migration. He has a similar role in the Summer Kindergarten Readiness Program (SKRP) initiative for the OCYF office which he is also supporting.

- Works as a Cognos developer/tester which includes gathering requirements, designing and maintaining reports and dashboards, and creating framework models. Acts as the 'go to' person for the testing team, monitoring the progress and reporting to leads.
- Was previously a Qlikview developer for the Governor's Office of Administration. Was responsible for the updating the payroll dashboard with new requirements and data and developed an internal dashboard for the BASS team.
- Performs as a tester for Microsoft Test Manager (MTM) and Team Foundation Server (TFS) to provide defect tracking, tracking progress of test scenarios and the project life cycle.

Subsection 3.2.18: Programmer Analyst – Extract Transform and Load (one position)

RFP Reference: Attachment A, page 10

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.

Vendor Response:

Summary

Naveen has experience in all phases of data warehousing applications, including the critical Extract, Transform, and Load (ETL) functions. He is Oracle certified in Oracle Business Intelligence solutions. He also has the strong SQL skills necessary to support WV DHHR requirements for the ETL Programmer Analyst position.

Naveen has the production proven experience for this role.

RFP Requirement	Additional Details
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	Naveen has four years of experience Oracle Data Integrator, a similar but more advanced ETL tool to Oracle Warehouse Builder. He has an additional 4 years of experience with Informatica PowerCenter, the ETL tool used with the MDM that could be leveraged for Data Warehousing. He has one year of PL/SQL experience, and a strong knowledge of data warehousing concepts including dimensional data modeling. Naveen has not specifically worked on an Integrated Eligibility DW, but has a diverse set of DW experiences.
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;	Naveen has six years of experience working on large scale warehousing applications working directly with clients to define requirements, and delivering the outputs the meet the requirements within the estimated timer frame. He has performed overall analysis, architecture, design, development and implementation of data warehousing/business intelligence initiatives for last the four years.
A Bachelor's Degree	Naveen has a Bachelor's and Master's degree.

Education

Osmania University	Bachelor's Degree in Computer Science.
Osmania University	Master's in Computer Applications.

Professional Certifications

Oracle Certified	Oracle Business Intelligence Foundation Suite 11g

Work Experience

Diebold Inc

Technology Lead

February 2012 – November 2014

Diebold is a leader in manufacturing, selling, installing, and servicing self-service transaction systems (e.g., ATMs), physical/electronic vaults, and software solutions that augment their products, for financial and other commercial clients.

Naveen worked on the BI Reporting Solution Data warehouse (DW) for Diebold, built using data from its Oracle's Enterprise Business Suite and Seibel Customer Relationship Management (CRM) solutions. The DW allows users to monitor various elements of Diebold profitability and SLAs.

Responsibilities:

For two modules of the BI Reporting Solution, service and project analytics, Naveen acted as technical lead focusing on the solution approach, design, development (including SQL) and delivery using the Informatica PowerCenter ETL tool and an Oracle Database. The project included one year of PL/SQL experience.

Diebold Inc

Technology Lead

February 2011 – January 2012

Built a client-specific data warehouse to support ATMs at a large financial institution. The solution delivers reports for ATM Utilization, ATM Downtime, ATM forecasting, Cash Management, Substantial Chronic deviation, Break Fix, Weekly operations, Downtime analysis and their outage minutes, etc.

Responsibilities:

Naveen acted as data warehouse architect, involved in estimating, gathering requirements, and creating the data model. He managed a team of ten developers performed environment setup, code migrations, version control, development (including SQL) and testing. The solution used Informatica PowerCenter on an Oracle Database.

Nielsen

Technology Analyst

February 2008 – February 2012

Nielson is a leading provider of television audience measurement services in the United States and Canada. It also provides competitive advertising intelligence and Internet measurement services. The main product of Nielsen is Information and statistics. Clients use Nielsen television audience research information to buy and sell television time as well as to make program decisions.

Responsibilities:

Naveen supported and enhanced three data warehouses:

1. Base - Gathers data from TV set-top boxes from designated samples across the US.
2. Local – Using the Base DW above, the Local DW aggregates and reports on viewing habits in local markets.
3. Global – Using the Local DW above, the Global DW aggregates data nationally.

Naveen used Oracle Data Integrator to perform numerous enhancements. The database platforms were Sybase and Natezza.

Motorola Solutions

Technology Analyst

February 2006 – January 2008

Motorola is a global leader in providing integrated communications and embedded electronic solutions.

Responsibilities:

Naveen was involved with the Information Management division to enhance and maintain the OneVIEW Data Warehouse. It reports financial results of sales across the world.

Subsection 3.2.19: Batch Monitor (one position)

RFP Reference: Attachment A, page 11

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.

Addendum 3 | Clarifications and Revisions, page 4

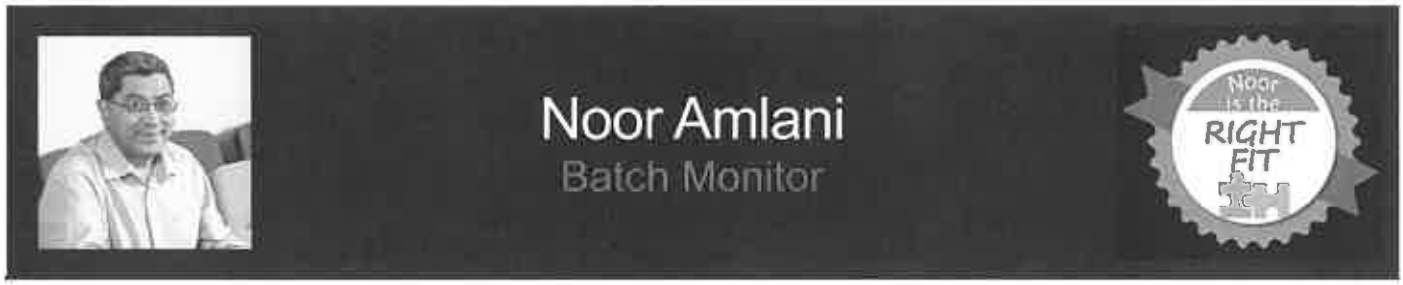
2) Cost effective; FNS encourages for key staff to be limited to assure bids submitted are competitive and not cost prohibitive to either the state or federal partner. Therefore, in an effort to help reduce cost the following staff identified within Section#3.2: Staff Qualifications and Experience shall not be required as key staff; employees of these classifications are not required to be on-site.

3.2.14 Programmer Analyst- Corticon (one position)

3.2.19 Batch Monitor (one position)

3.2.20 Data Custodian- Master Data Management (one position)

Vendor Response:



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 has the production proven experience for this role.

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.
Three (3) years of experience monitoring nightly batch operations using Control-M or similar job scheduling tools;	Noor has been operating the RAPIDS batch for over two 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 2-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.

Subsection 3.2.20: Data Custodian – Master Data Management (one position)

RFP Reference: Attachment A, page 10

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 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. 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. Five (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.

Addendum 3 | Clarifications and Revisions, page 4

2) Cost effective; FNS encourages for key staff to be limited to assure bids submitted are competitive and not cost prohibitive to either the state or federal partner. Therefore, in an effort to help reduce cost the following staff identified within Section#3.2: Staff Qualifications and Experience shall not be required as key staff; employees of these classifications are not required to be on-site.

3.2.14 Programmer Analyst- Corticon (one position)

3.2.19 Batch Monitor (one position)

3.2.20 Data Custodian- Master Data Management (one position)

Vendor Response:

Summary

Priyanka joined the DHHR MDM team with extensive experience programming and configuring the Informatica MDM solution for large commercial clients. She has successfully applied her skills to the Agency's MDM project. Her background and specific experience on the Agency's system make her an excellent fit for the MDM Data Custodian role.

Priyanka has the production proven experience for this role.

RFP Requirement	Additional Details
Five (5) years of experience with Informatica MDM/Siperian software administration or a comparable software;	Priyanka has four years and six months of experience in Informatica (Siperian) MDM involving design, development and administration of Informatica MDM solutions. Priyanka also has more than three years of experience in design and implementation of Informatica Data Director (IDD).
Five (5) years of experience with Informatica ETL Development administration or a comparable software;	Priyanka has four years and six months of experience in Informatica ETL involving design, development and administration of Informatica MDM solutions.
Three (3) years of Oracle development/DBA experience;	Priyanka has more than four years of Oracle development/DBA experience.

RFP Requirement	Additional Details
Two (2) years of Java programming experience;	Priyanka has over one year of experience in Java programming. Priyanka also has more than two years of experience in integrating Informatica MDM software with Java and SIF based services.
One (1) year of experience with public assistance programs such as TANF, SNAP and Medical Assistance	Priyanka has over one year of experience with public assistance programs such as TANF, SNAP and Medical Assistance while working with RAPIDS team.
A Bachelor's Degree	Priyanka has a bachelor's degree.

Education

University of Burdwan	Bachelor of Engineering in Electronics from Madhav Institute of Technology and Science, Gwalior (M.P.)

Work Experience

State of West Virginia DHHR – RAPIDS Project

ETL Lead
April 2014 – current

Priyanka was responsible for configuring the IDD to meet WV DHHR requirements, as well as the ETL routines to load source system data from RAPIDS, FACTS, MMIS, and OSCAR into the MDM.

Biogen Idec

MDM Specialist
January 2014 – March 2014

Biogen Idec is the oldest independent biotechnology company in the world with an established R&D focus to bring new therapies to market for patients with neurodegenerative diseases, autoimmune disorders and hemophilia. Biogen used the MDM technology to consolidate providers for research and lab supplies.

Responsibilities:

Priyanka was part for functional team for Operation Candle project and she was directly involved in various key decisions for architecture design and data modelling. Priyanka was responsible for:

- MDM architecture design and configuration.
- Informatica MDM environment set-up.
- System testing of Informatica MDM Hub.

Additional MDM Experience

January 2011 – June 2013

Priyanka worked as an MDM developer supporting MDM solutions for the following companies:

- Protective Life Corporation (Jul 2013 – Dec 2013
- EMC (Oct 2012 – Jun 2013
- GlaxoSmithKline (Jan 2012 – Oct 2012)
- Harman International Industries Inc. (August 2011 – December 2011)
- Johnson and Johnson (Jan 2011 – July 2011)

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 HIGHLIGHTS

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 DHHR Modernization Program will benefit 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 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.

Subsection 4.1, Goal 1: Management Plan

RFP Reference: Attachment A, page 13

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 proposed approach to managing the DHHR Modernization Program is centered on the fundamental principles of project management, combining the leading practices of the Agency and Deloitte project management methodologies and tools. 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 Project Management 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).

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 quality fixes for the environments, well planned routine updates, and foresight to decrease disruptions to the users. 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. For projects, we adapt our strategy using common sense and experience to guide the process and provide the flexibility required to support the business. These methods support both the RAPIDS legacy and web-based technologies.

The workflows in the process management model are not rigid nor are the tasks in the groups discrete, one-time events. 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.

The project management approach also leverages aspects from our proven EVD for SI methodology. EVD for SI, which incorporates processes and practices from PMBOK, is a methodology enhanced further by Deloitte's prior successful experiences in 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.

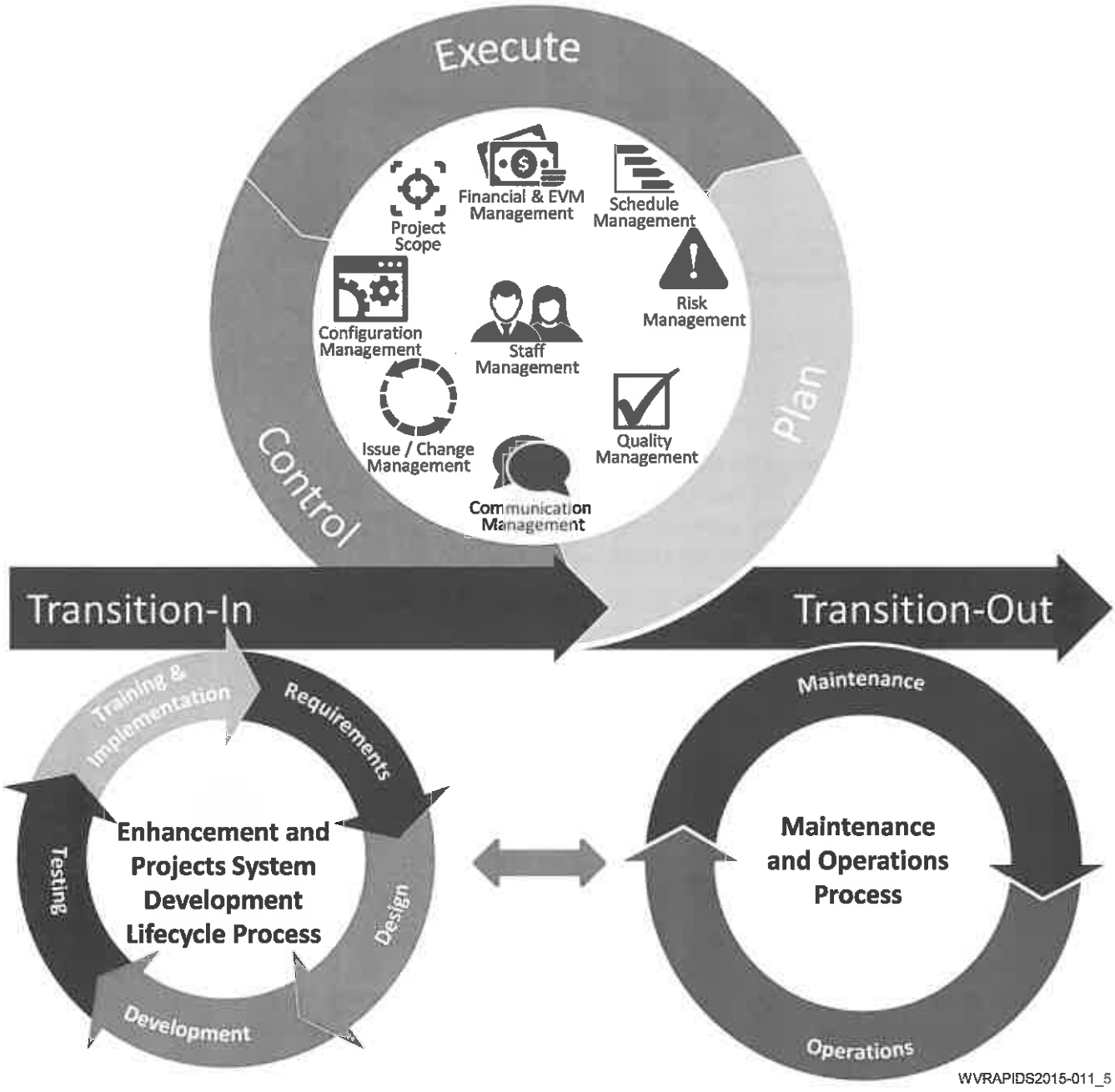


Figure 4.4.1-1. RAPIDS Project Management Components.
RAPIDS' Project Management approach is PMBOK based and tailored further using EVD for SI, to provide oversight and controls to application development and maintenance activities.

The following figure displays highlighted values the established project management methodology brings when executed by Agency and Deloitte staff working in concert.

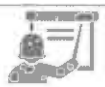
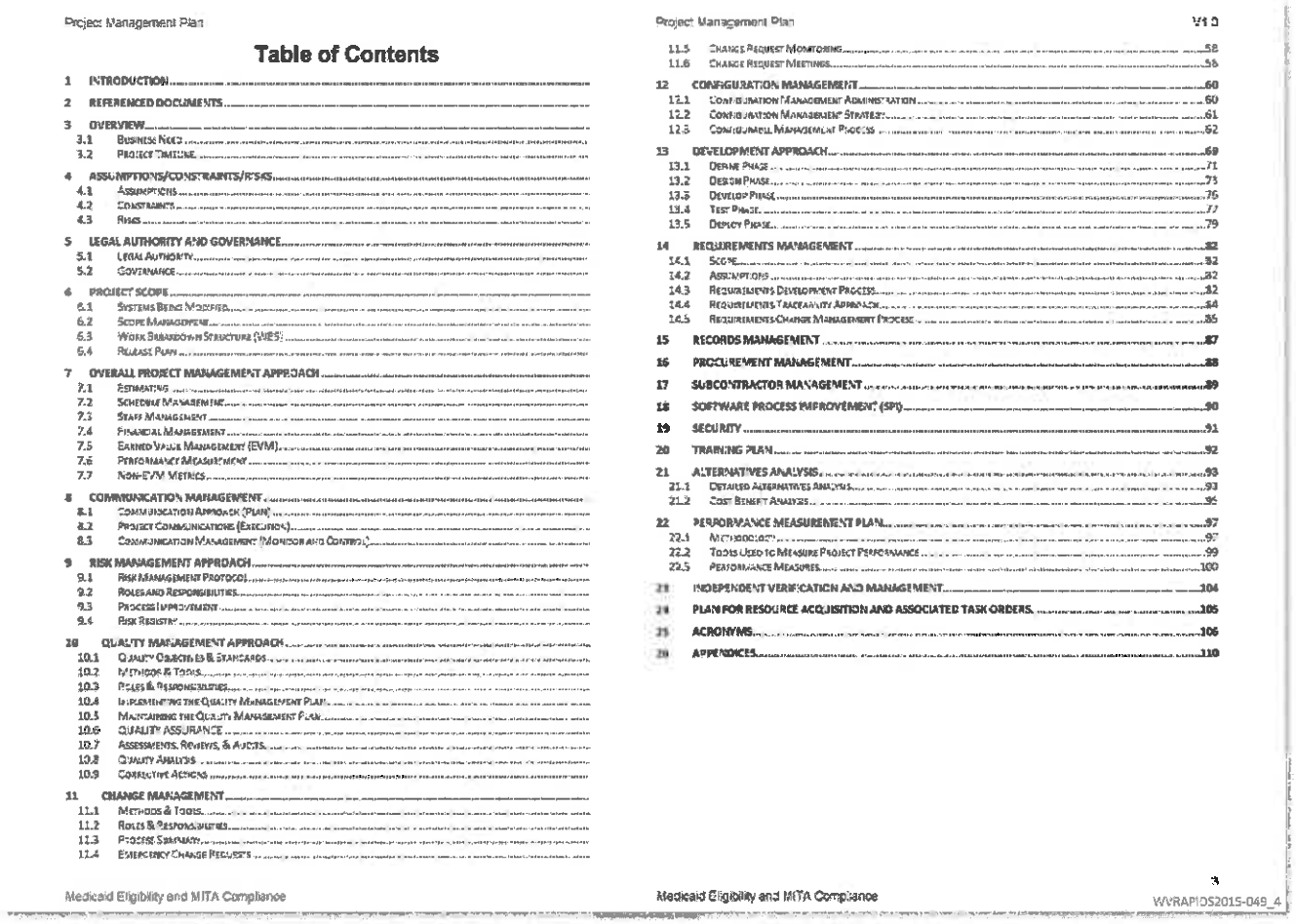
Our Core Project Management Values		Our Project Management Approach Benefits DHHR
	**Not Re-Inventing The Wheel**	The Agency and Deloitte have collaborated successfully at RAPIDS, and the knowledge and experiences of DHHR enterprise systems and processes brings continuity to managing the programs.
	**Clear 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.
	**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, and 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 Project Management Plan used for RAPIDS. But 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 from the RAPIDS Change Order



Project Management Plan

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Project Management Plan V1.0

Medicaid Eligibility and MITA Compliance

Medicaid Eligibility and MITA Compliance

WVRAPIDS2015-049_4

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 DHHR Modernization Program:

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.

Project Management Plan Component	Component Description
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 DHHR Modernization Program.
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.
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 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 (such as project initiation with a new vendor, system documentation and system conversion.)

Lastly, innovative technology solutions for enhancing communication and collaboration, such as the RAPIDS Resource Center website, have been launched and others (for example, a new application lifecycle management tool) are recommended in this proposal. The proposed Project Management Plan also addresses other areas of project management that 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 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.

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.

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 the graphic, 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.

- **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.
- **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.
- **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.
- **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.
- **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*.
- **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

Communication Strategy

Using the various modes described above, Deloitte is in constant 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.

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.

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.

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. The onboarding material will be expanded to include FACTS and OSCAR as well, so the onboarding process for the various systems is identical. 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.

Unfortunately, Deloitte has little control over resources that choose to leave the firm. When a resource leaves the firm unexpectedly, we focus that resource's remaining time on finalizing knowledge transition and preparing their

back-up resource to fully assume the track responsibilities. We also communicate the resource's decision to leave to the State team promptly.

Given that projects like RAPIDS have longer-term contracts, it is sometimes in the Deloitte resource's best interest for their own personal career development to seek projects outside of RAPIDS during the course of the contract. When this situation arises, we communicate the transition to the Agency team as soon as we are able. Where possible, this communication will occur one calendar month prior to roll-off of the resource. This provides the current resource with the ability to finalize the knowledge transfer to their back-up resource and transition outstanding tasks to their replacement.

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. 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.

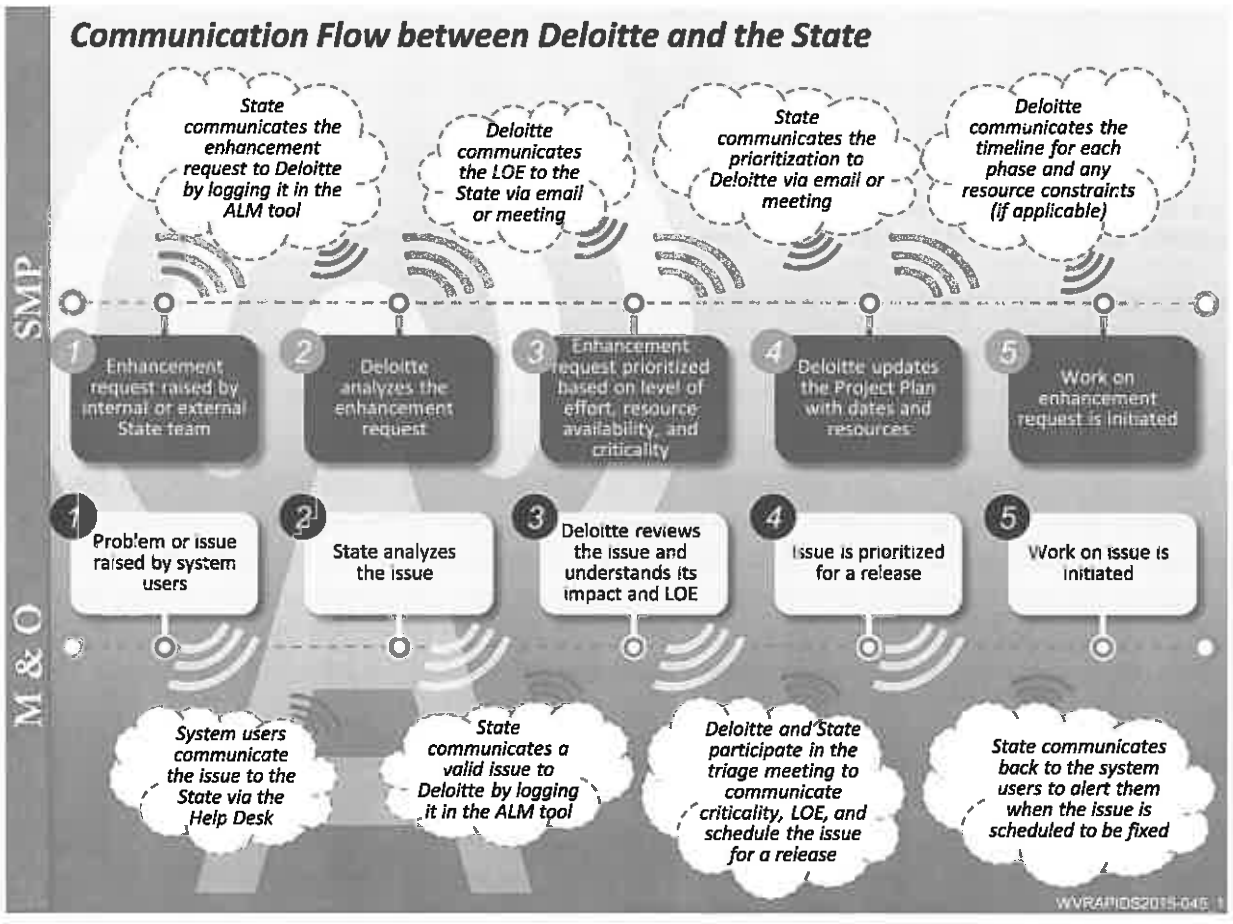


Figure 4.4.1-7. Flow of Communications for SMP and Maintenance Work.
The flow of communications differs between Maintenance and Operations Work and Enhancement (SMP) work, but in both cases involves constant interaction and communication between Deloitte and the Agency.

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 Application Lifecycle Management tool, 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 appraised 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 to relay project schedule tracking information 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 that will be used across systems.

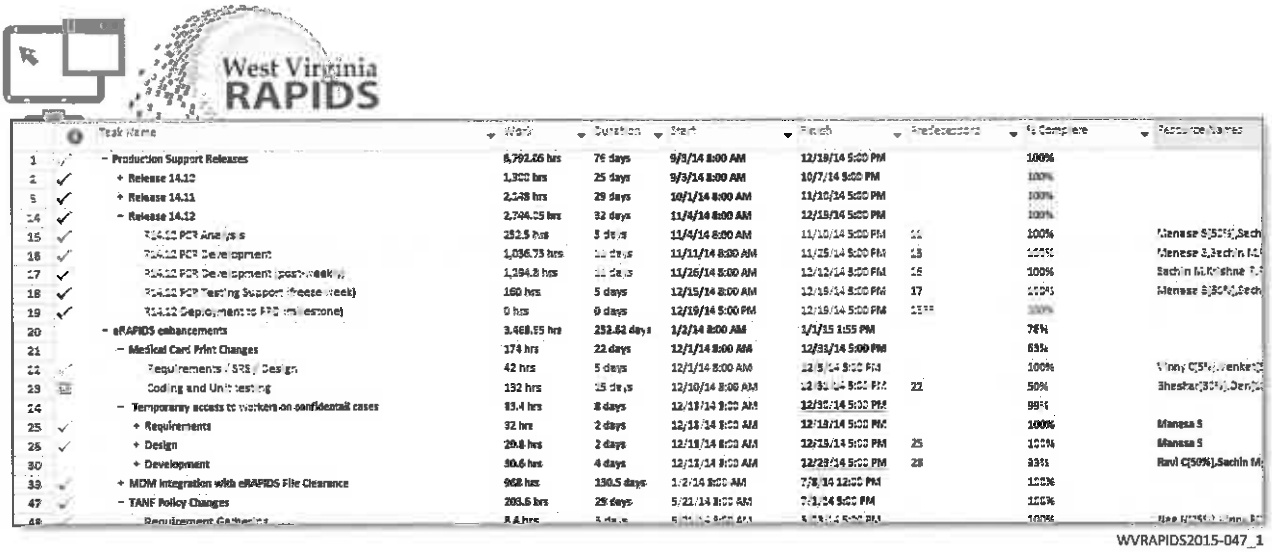


Figure 4.4.1-8. Snapshot of Current RAPIDS Project Plan.
This snapshot of the Project Plan used by Deloitte to track M&O and enhancement tasks is representative of the type of Project Plan that will be used across systems.

- **Application Lifecycle Management Tool.** The RAPIDS project will be using JIRA as their Application Lifecycle Management tool. JIRA has the capability to capture project "health" by reporting on critical project metrics such as schedule adherence. 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.

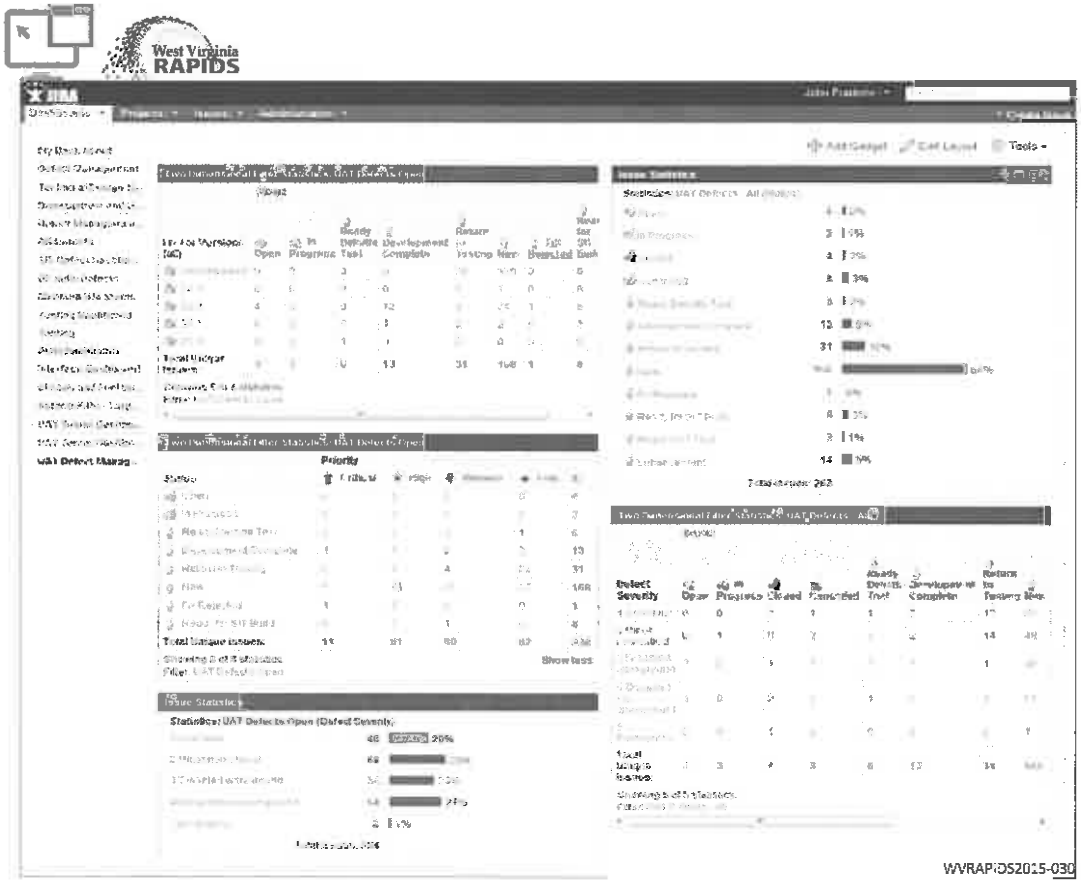


Figure 4.4.1-9. Snapshot of a JIRA Dashboard.
JIRA has the capability to capture project "health" by reporting on critical project metrics.

- **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 be system or business process issues. 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 the Deloitte team is working to resolve it based on the prioritized date, the end users are able to quell their distrust.
- **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 the ALM tool 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.

The ALM tool 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, resource allocation and productivity, schedule adherence, and new issues that arise. This ALM tool 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 Advisory Boards and the Executive Steering Committee. Keeping the Change Advisory Boards 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 Advisory Boards, the technical team (Office of Technology), and the individual system teams.

Communication Hierarchy

The communication hierarchy for the RAPIDS, FACTS, and OSCAR teams will help keep the organizations aligned with one another and will allow SMP initiatives to be appropriately aligned between each of the agencies. A representation of the communication hierarchy can be found in the following graphic.

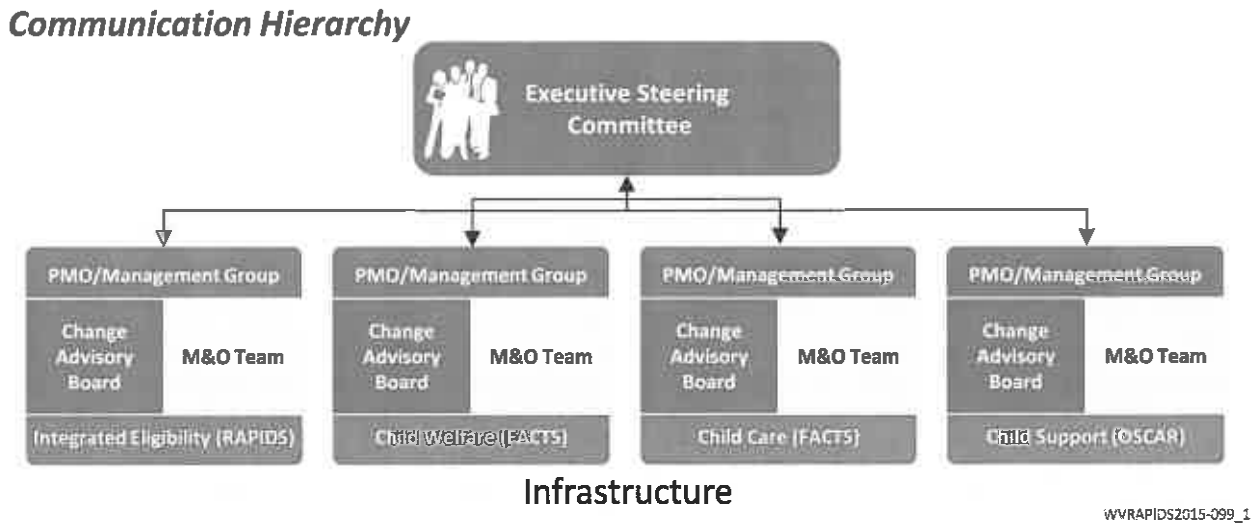


Figure 4.4.1-10. Communication Hierarchy.
The Executive Steering Committee has oversight in terms of project-wide communications; each system controls change through their Change Advisory Boards, and communicates and coordinates with their M&O Teams.

At the top of the communication hierarchy is the Executive Steering Committee. This committee is comprised of key individuals from the Agency IT department, external stakeholders (such as the policy unit or field staff supervisors), internal stakeholders (from RAPIDS, FACTS, and OSCAR), and vendor executive leadership. The Executive Steering Committee approves SMP work and helps to allocate the shared pool of 20,000 SMP hours allotted to the enterprise services. This committee governs the work completed by each of the systems development and operations teams.

The PMO and management groups governing each individual system provide oversight to facilitate coordination and communication between the system's SMP and M&O groups. These groups are comprised of key individuals from both the Agency and Deloitte who make important decisions regarding the work performed by each group and who manage and monitor the progress of initiatives and tasks. The PMO management groups also keep each other appraised of specific tasks happening within their own systems and facilitate communication between the systems when they are working on enhancements or issues that span multiple systems. The PMO and management group for each system meets internally on a regular basis to stay abreast of decisions and issues facing each system.

Prior to communicating directly to the Executive Steering Committee, the Change Advisory Boards are made aware of proposed enhancements and oversee the progress and status of in-progress enhancements more closely on a day-to-day basis. Each Change Advisory Board is responsible for changes that occur to their associated system, including M&O operations, system enhancements, infrastructure changes, data fixes, and configuration management changes. There is an individual Change Advisory Board for Integrated Eligibility, Child Welfare, Child Care, and Child Support, and each Board is comprised of relevant Agency business users, IT representatives, and Deloitte Delivery Managers. The Change Advisory 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 Advisory Boards are having trouble deciding how to allocate hours or how to implement enhancements that span multiple systems, the issues are escalated to the Executive Steering Committee for resolution. By working together, the Change Advisory Boards 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.

In addition to the Change Advisory Boards and the Executive Steering Committee, each system has its own dedicated Maintenance & Operations team, which may include both Agency and Deloitte resources. These teams work on the day to day operations that keep the systems functioning. They are the first line of response for issues and communicate these issues effectively upward in order to mitigate risks and promote transparency. These teams are 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 Advisory Board and the Executive Steering Committee, these teams help to keep initiatives aligned and provide the basis for a stable, efficient system.

Each team is in close communication with the Infrastructure team, shown in the above graphic as surrounding all systems. 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 DHHR Modernization Program 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 from the shared pool of 100,000 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, FACTS, including Child Care, and OSCAR, other stakeholder such as MIS, BCF, BMS	Leadership/Project Manager and project leads	State
Change Advisory Board Meeting	Review and approve SMP work within their respective system	SMP work is prioritized and planned in advance	System manager 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 manager 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 manager 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 manager and leads; End-user representatives.	Project manager and leads	State

Meeting Title	Description/Purpose	Value	State Attendees	Deloitte Attendees	Responsibility for Minutes
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
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
Transition Meeting	Plan and discuss hand-off activities from Deloitte to Agency	Formal transition meeting keeps the status of hand-off tasks clear and helps close-out activities	System Managers; Specialist as needed	Project managers Specialists as needed	Deloitte

Figure 4.4.1-11. List of Meetings for the RAPIDS Project.
Recommended meetings, their purpose, value, and recommended attendees.

Some of the meetings listed above are specific to systems (RAPIDS, FACTS, OSCAR). Additionally, within these systems, initiative specific meetings are held through the SDLC process. These meetings facilitate communication throughout the Systems Development Life Cycle. 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.

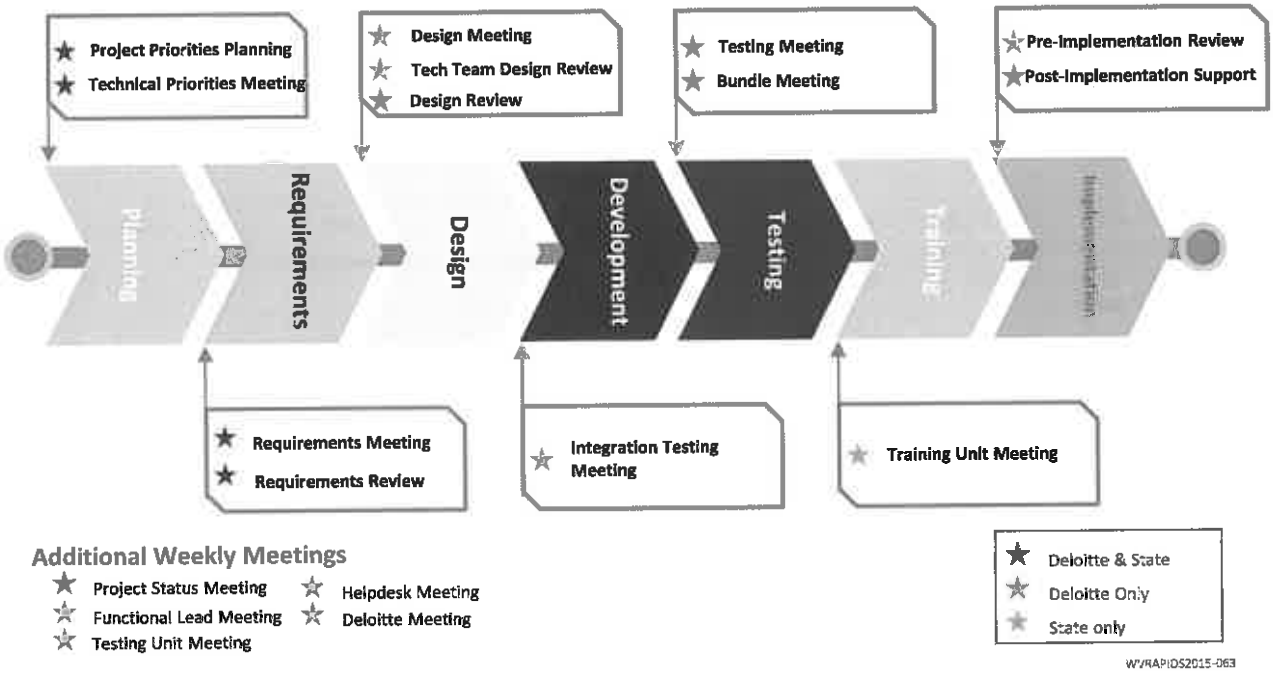


Figure 4.4.1-12. Initiative Specific Meetings.
Initiative specific meetings are important at each step of the SLDC to act as checkpoints and validate the work in progress.

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.

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 this 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:

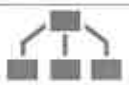
Status Reporting Principle		Description and Benefits to the Agency
	**Document and assign it**	Both status reports and issues are documented and tracked with clear assignment of owners and follow-up steps.
	**Quantify and measure progress**	We measure performance against the project plan, as well as 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 4.4.1-13. 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 4.4.1-14. 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.

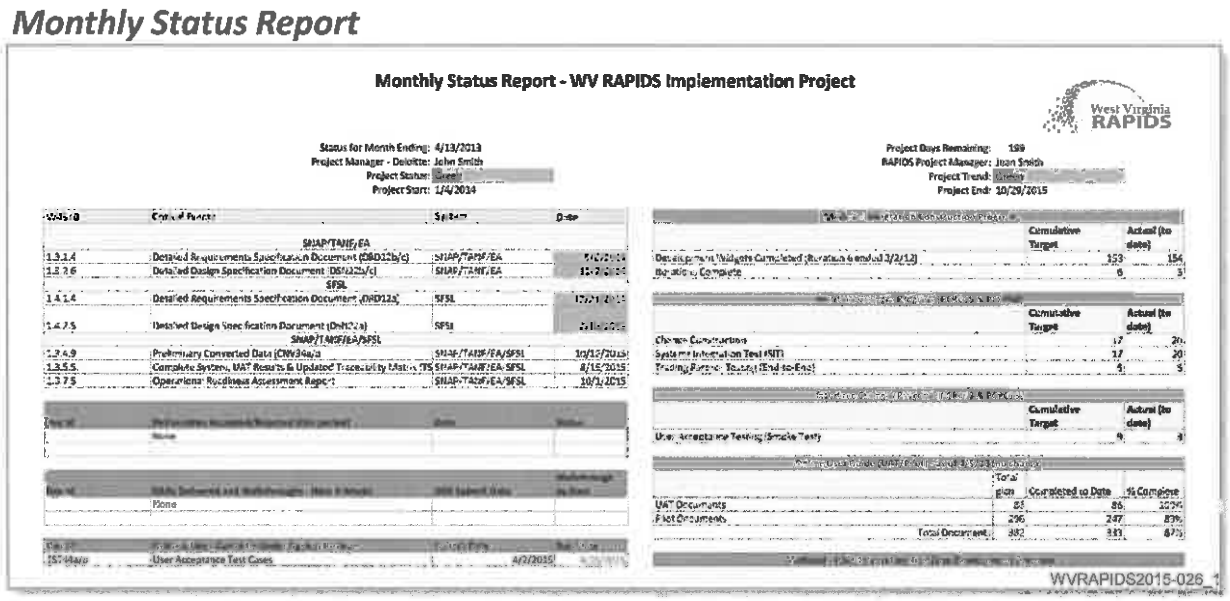


Figure 4.4.1-15. Sample Steering Committee Report.
Sample report that will be customized based on discussions with the Agency

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-monthly PMO Status Reports

Deloitte will provide bi-monthly status reports specific to RAPIDS, FACTS and OSCAR in a template that is customized in collaboration with the Agency. This report provides a summary of project activities for the past two months, including major milestones. It forecasts scheduled activities for the upcoming two months, 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. This enables practitioners to consistently and effectively manage and execute projects.

The following Figure 4.4.1-16 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 4.4.1-16. 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.

Figure 4.4.1-17. 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 4.4.1-18. 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 4.4.1-19. 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 4.4.1-20. 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 4.4.1-21. 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 4.4.1-22. 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 another vendor or to the state. 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.

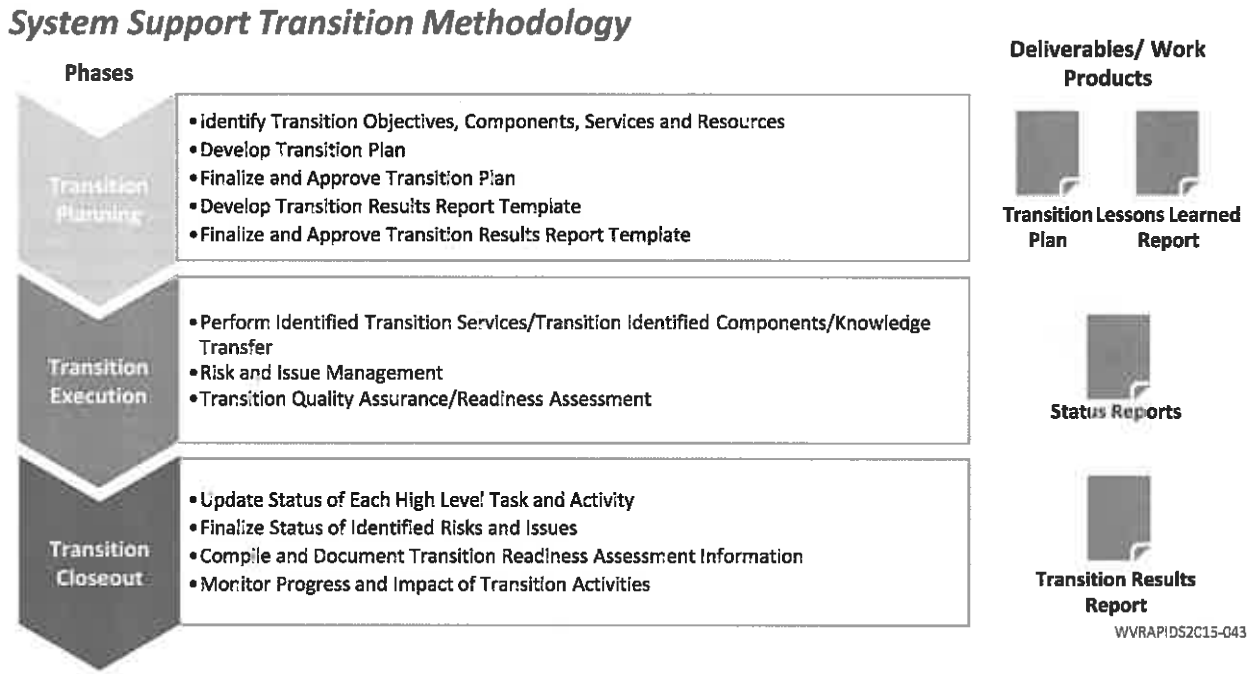


Figure 4.4.1-23. System Support Transition Methodology.
Deloitte's transition methodology for transferring a project to West Virginia or another vendor.

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 4.4.1-24.

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

Figure 4.4.1-25. Snapshot of a Sample Transition Plan.
The Transition Plan details the approach and timeline for transition in a step by step process.

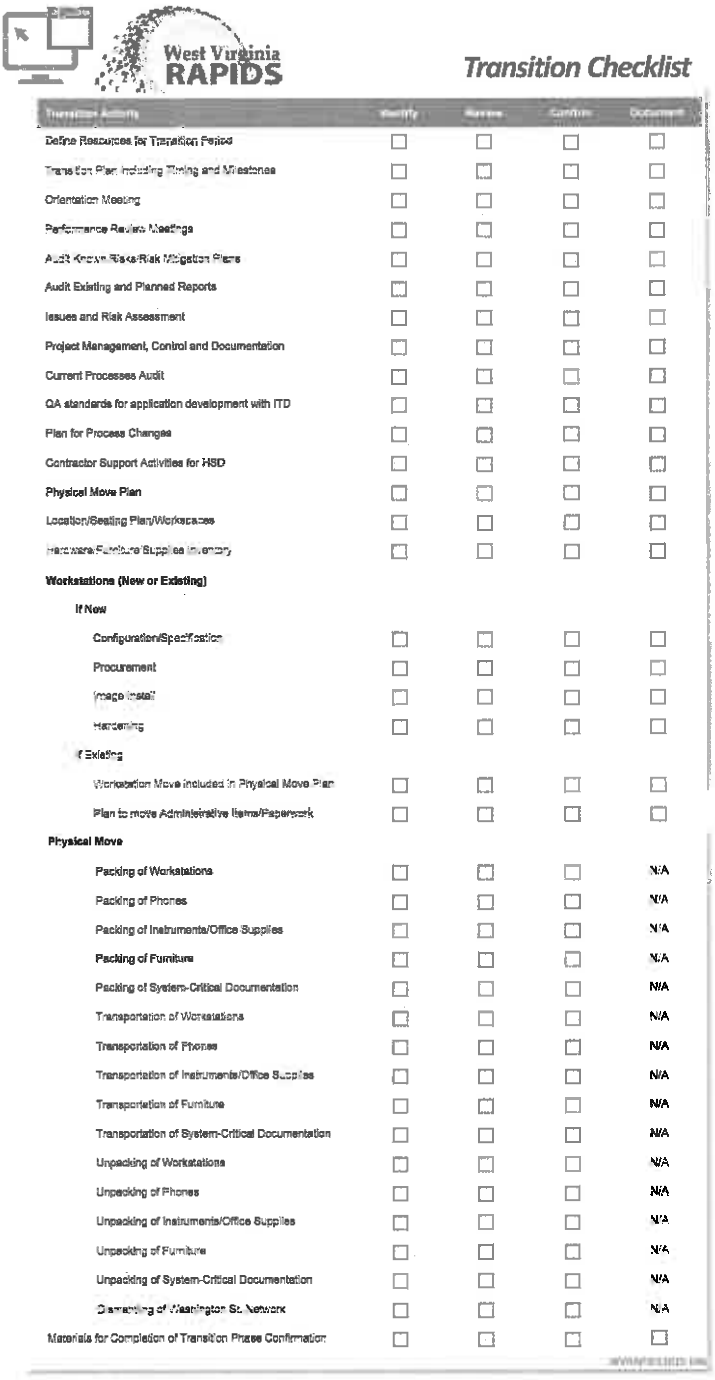
This plan provides a step by step process for transitioning the system to a new vendor, and provides dates by when the transition activities need to take place. This detailed Transition Plan sets the stage for the creation of the Transition Checklist. The Transition Checklist, found in the following Figure 4.4.1-26, 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 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.


West Virginia RAPIDS

Transition Checklist

Transition Activity	Identify	Review	Confirm	Document
Define Resources for Transition Period	☐	☐	☐	☐
Transition Plan including Timing and Milestones	☐	☐	☐	☐
Orientation Meeting	☐	☐	☐	☐
Performance Review Meetings	☐	☐	☐	☐
Audit Known Risks/Risk Mitigation Plans	☐	☐	☐	☐
Audit Existing and Planned Reports	☐	☐	☐	☐
Issues and Risk Assessment	☐	☐	☐	☐
Project Management, Control and Documentation	☐	☐	☐	☐
Current Processes Audit	☐	☐	☐	☐
QA standards for application development with ITD	☐	☐	☐	☐
Plan for Process Changes	☐	☐	☐	☐
Contractor Support Activities for HSD	☐	☐	☐	☐
Physical Move Plan	☐	☐	☐	☐
Location/Seating Plan/Workspaces	☐	☐	☐	☐
Hardware/Furniture/Supplies Inventory	☐	☐	☐	☐
Workstations (New or Existing)				
If New				
Configuration/Specification	☐	☐	☐	☐
Procurement	☐	☐	☐	☐
Image Install	☐	☐	☐	☐
Hardening	☐	☐	☐	☐
If Existing				
Workstation Move included in Physical Move Plan	☐	☐	☐	☐
Plan to move Administrative Items/Paperwork	☐	☐	☐	☐
Physical Move				
Packing of Workstations	☐	☐	☐	N/A
Packing of Phones	☐	☐	☐	N/A
Packing of Instruments/Office Supplies	☐	☐	☐	N/A
Packing of Furniture	☐	☐	☐	N/A
Packing of System-Critical Documentation	☐	☐	☐	N/A
Transportation of Workstations	☐	☐	☐	N/A
Transportation of Phones	☐	☐	☐	N/A
Transportation of Instruments/Office Supplies	☐	☐	☐	N/A
Transportation of Furniture	☐	☐	☐	N/A
Transportation of System-Critical Documentation	☐	☐	☐	N/A
Unpacking of Workstations	☐	☐	☐	N/A
Unpacking of Phones	☐	☐	☐	N/A
Unpacking of Instruments/Office Supplies	☐	☐	☐	N/A
Unpacking of Furniture	☐	☐	☐	N/A
Unpacking of System-Critical Documentation	☐	☐	☐	N/A
Connecting of Washington St. Network	☐	☐	☐	N/A
Materials for Completion of Transition Phase Confirmation	☐	☐	☐	☐

Figure 4.4.1-26. 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.

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 maintaining and enhancing several systems within the RAPIDS project, a transition from one current configuration management system to another will need to take place. As part of their transition plan and checklist, Deloitte will include an item for converting the code base from the current configuration management system to the new one.

The configuration management system is housed in the project's Application Lifecycle Management tool. In addition to just the transition of the code base, Deloitte is prepared to aid in the transition from one ALM tool to another. Deloitte recognizes that the Agency is accustomed to working with one tool, and we will provide the necessary oversight to allow the Agency to become familiarized with the new ALM tool for their everyday use on the RAPIDS project.

Transition from SMP to M&O

At the completion of SMP initiatives, Deloitte transitions the SMP task into the M&O stream for the Agency to manage, monitor, and respond to. These transition tasks are on a much smaller scale than the whole system transition described above. However, a smaller, more focus transition period still needs to happen in order for the Agency to feel comfortable assuming the full responsibility for the new introductions to the M&O stream.

From the start, Deloitte structures the SMP releases so that the Agency is equally involved. The Agency has the primary input into the JAD sessions, guiding and shaping the requirements for the new initiative. Based on the requirements documentation prepared by Deloitte, the Agency then creates the test cases and performs User Acceptance Testing on aspects of the SMP initiative. Once the initiative is migrated and merged into the M&O stream, the Agency is intimately familiar with the changes, the documentation of the initiative, and the impact to the entire RAPIDS system. This transition paves the way for the Agency to assume responsibility of the solution, should that be required.

Subsection 4.2, Goal 2: Technical Approach

RFP Reference: Attachment A, Page 13

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.

Section HIGHLIGHTS

- 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 overall intent is to optimize the manner in which technology is leveraged to support DHHR business processes, thereby facilitating effective and efficient service delivery to West Virginia citizens. It is also clear that the Agency has an enterprise vision that includes the reuse of technology assets while consolidating data assets. This section is thorough and sufficiently detailed to allow the Agency to evaluate how this technical approach is consistent with that vision and supports a broad, yet adaptable operational model.

As an experienced partner, Deloitte intends to be a catalyst to fully realizing DHHR's vision for an enterprise solution. In addition to managing the maintenance and operations of enterprise assets, Deloitte will enable a shared services platform that can be leveraged by multiple bureaus and program areas. Through collaboration and a

structured approach the enterprise will institutionalize sound operational processes that help improve quality, provide transparency, and improve customer service. The 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

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 our team and yours 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.

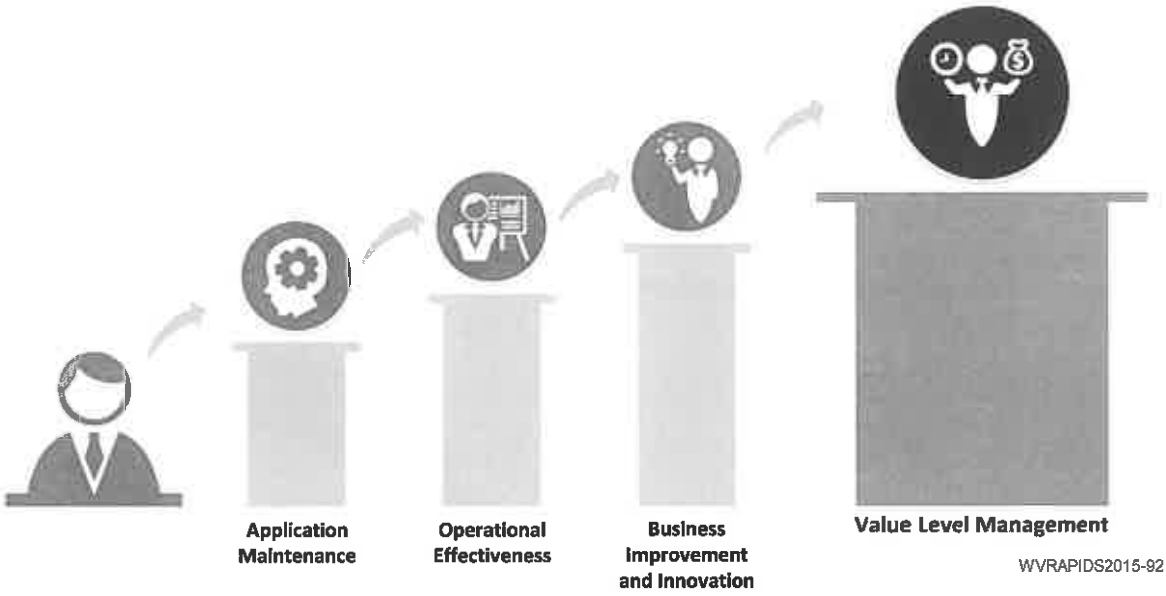


Figure 4.4.2-2. Ongoing Maintenance & System Support.
Value level management describes the objective and measurable value goals of ongoing operations and maintenance support Deloitte delivers to DHHR.

Application Maintenance

The core of the base level of support is performing corrective, adaptive, and preventive software maintenance across each of the component parts of the DHHR enterprise, 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.

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 following attributes to Maintenance and Operations:

- Deloitte currently maintains and operates 26 Eligibility Systems and 23 self-service portals throughout the country.
- That is 26 different states that 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.

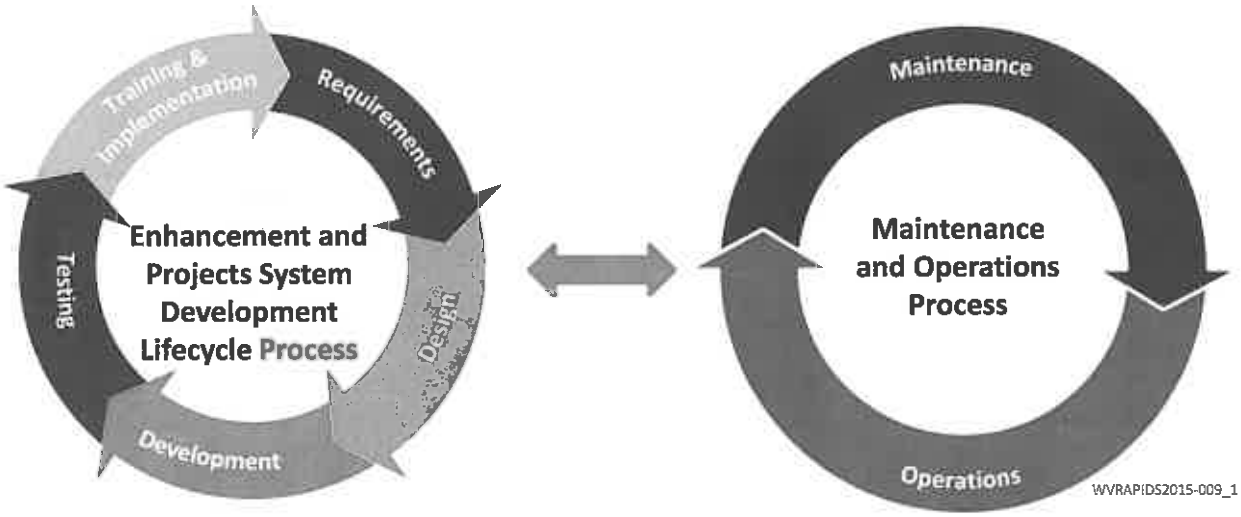


Figure 4.4.2-3. Parallel Activities for Regular Enhancement Releases along with Maintenance and Operations.

4.4.2.1 Routine Maintenance of All Environments

RFP Reference: Attachment A, page 13

- 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, etc.). 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 DHHR enterprise. The following figure depicts the key activities necessary to effectively provide ongoing routine maintenance services for the Agency.

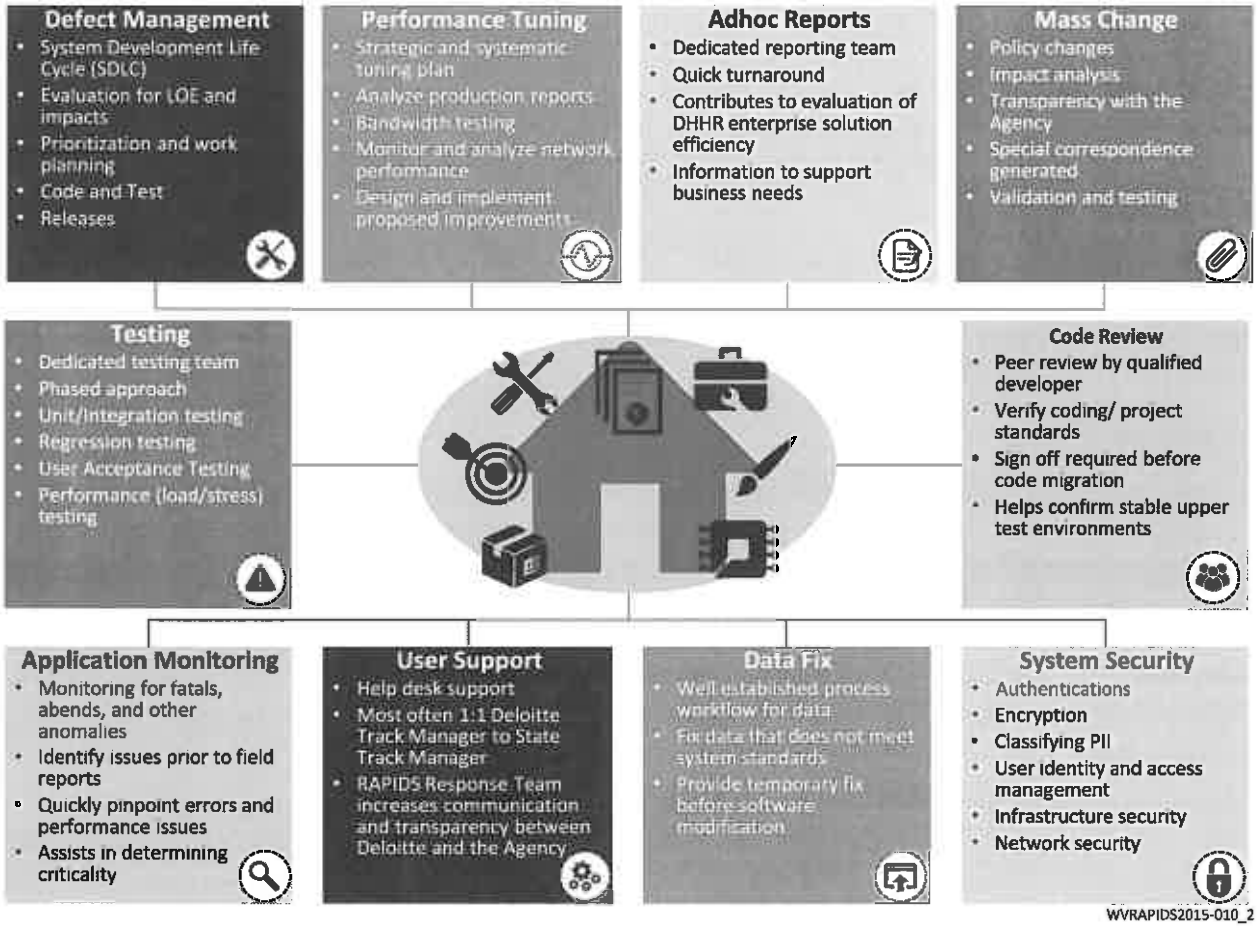


Figure 4.4.2-4. Key Routine Maintenance Activities.

Each of these activities has been elaborated on the following pages in greater detail to help better understand the activities and resources involved.

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 systems. Deloitte's 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. While the RAPIDS program currently uses the Application Tracking System (ATS) as an ALM tool, Deloitte proposes JIRA (by Atlassian) as a replacement for the DHHR Modernization Program. JIRA makes defect tracking personalized and painless, so the team focuses 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 defects 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 fix severe issues. Emergency Releases may not require the preparation and monitoring of the Release Plan by the Release Manager as they will require quick hand-offs between teams. Refer to **Section 4.4.2.2 Emergency Maintenance** for more details on Emergency Releases.

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 **Sections 4.4.2.8 System Management** and Mandatory Requirements **Subsection 5.8: System Monitoring and Performance** for further details on Performance tuning.

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.

Mass Changes

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 having Agency resources re-run eligibility for applicable cases, a Mass Change is executed to update 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 the Agency leadership and policy specialists to define specific eligibility criteria and 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 case loads 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 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.

Refer to Mandatory Requirements **Subsection 5.10: Mass Change and Mass Mailing** for more information about our mass change and mass mailing processes.

Code Review

Code reviews are an integral part of the development and quality assurance processes. Modified code goes through rigorous code review process, which is a form of peer review that allow for a second developer to check that coding standards are being met. 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 Sonar and StyleCheck to efficiently and effectively evaluate the quality of code.

System Security

Keeping the system secure and restricting data to only authorized users is 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. Deloitte staff are required to stay up to date on needed DHHR security trainings in addition to the firm training they receive.

Refer to **Section 4.4.2.11 System Security** for more on our approach to system security.

Data Fix

In certain scenarios, 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, make code modifications to fix the issue, coordinate the UAT, and to obtain approvals to deploy the fixes in production. Deloitte, at times, uses data fixes to ease the urgency of software modifications, thereby allowing more time to provide a thorough fix.

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 4.4.2-6. Deloitte's approach to Develop Application Related Data Fixes.

Deloitte reviews the data fixes that are being performed to identify potential system defects. This on-going task minimizes risks and reduces the number of existing defects that may be in the system but not yet identified.

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, the end-users are directly contacted and communicated through telephone conversations, and emails.

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 4.4.2.10 Staff Support** for more on User Support.

Application Monitoring

Environment and application monitoring is essential to mitigating risks and proactively addressing system constraints before they can become performance issues. The Deloitte process calls for application monitoring and for establishing a standard action plan for when key system metrics reach established limits. The team responsible for monitoring the performance of the system also monitors system logs for fatal errors and other anomalies. While the DHHR enterprise solution is designed to perform in an effective and efficient manner, the environment (i.e., the application server, the web server, the database server, etc.) must be monitored for consistent performance. As a

result of these monitoring techniques, the team is able to promptly assess the situation and take appropriate steps to reduce impacts to the end user. Serious concerns are promptly escalated to Deloitte and Agency leadership.

Testing

In order to successfully deploy a modification into production, sufficient testing is required. In addition to multiple testing environments, our approach includes, Unit, Integration, Regression, Performance and Volume testing. Furthermore, Deloitte is proposing a dedicated testing team to promote stability throughout the testing environments and into Production. Refer to **Section 4.4.2.5 Software Testing** for more details on our testing approach.

4.4.2.2 Emergency Maintenance

RFP Reference: Attachment A, page 13

- 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, all facets of the Deloitte team are required.

Deloitte Team	Role in Emergency Maintenance
Functional	Resolve RAPIDS online 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.
Operational	Monitor batch cycles and interactions with other agency applications for timely processing.

Figure 4.4.2-7. Emergency Maintenance Roles and Responsibilities.

The Deloitte team is 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 right people from the support team to resolve the issue.

The Deloitte Consulting team follows a structured and effective approach to Emergency Maintenance that is depicted in the diagram below:

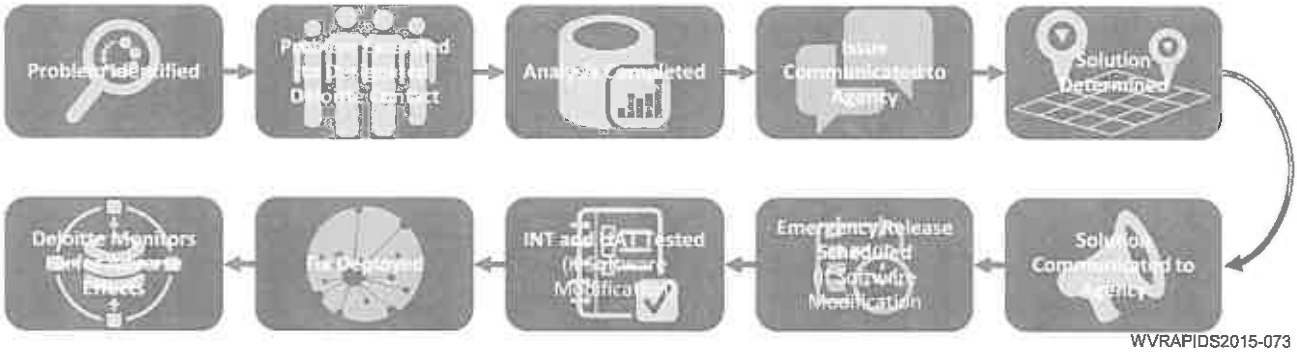


Figure 4.4.2-8. Emergency Maintenance Process.

The steps are further elaborated in the following table below.

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.
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 prevents uninterrupted business service.
Testing (for software modifications)	Once the solution has been completed, the fix is unit tested, integrated tested and acceptance tested.
Fix Deployed	Fix is deployed to the Production region.
Monitoring	Once the release is deployed, Deloitte monitors the fix to mitigate the risk of adverse side effects.

Figure 4.4.2-9. Emergency Maintenance Process

4.4.2.3 System Changes/Enhancements

RFP Reference: Attachment A, page 13

- 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.

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 M&O plan.

The alignment between business and IT objectives is imperative to establishing a value-driven operations model. 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.

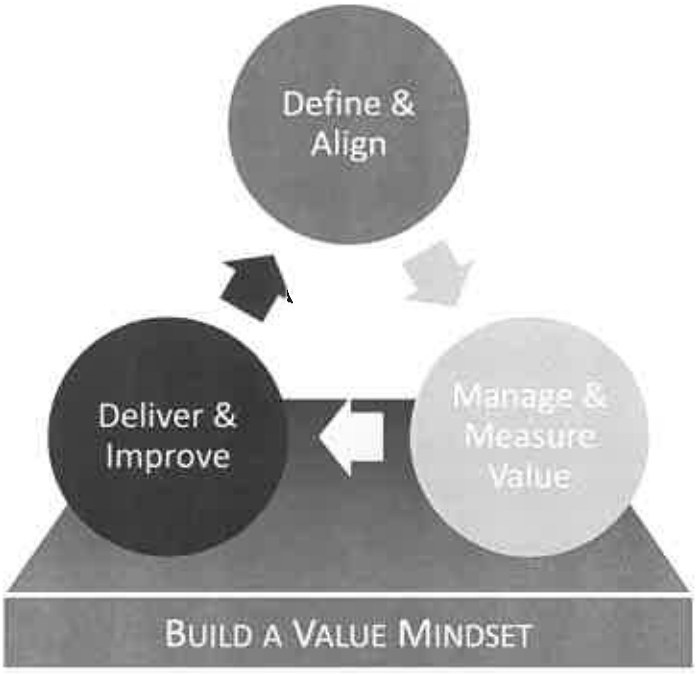


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Figure 4.4.2-10 Build a Value Mindset.
An approach focused on innovation and continuous process improvement.

- Perform operations diagnostic and benchmark performance metrics against established levels and industry standards.
- Determine major variances and set achievable targets for value, quality, risk, and cost. 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.

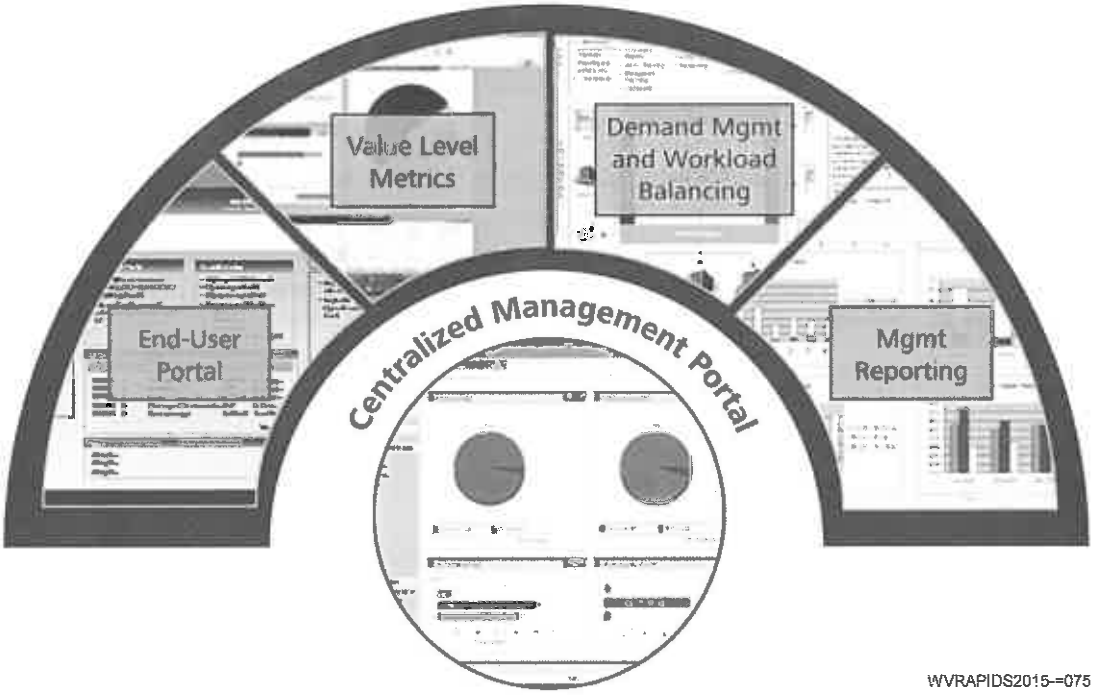


Figure 4.4.2-11. Centralized Management Portal.

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.

What Does this Mean to West Virginia?

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, eliminates 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.

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.

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.

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.

System Development Life Cycle Methodology

The EVD for SI 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.

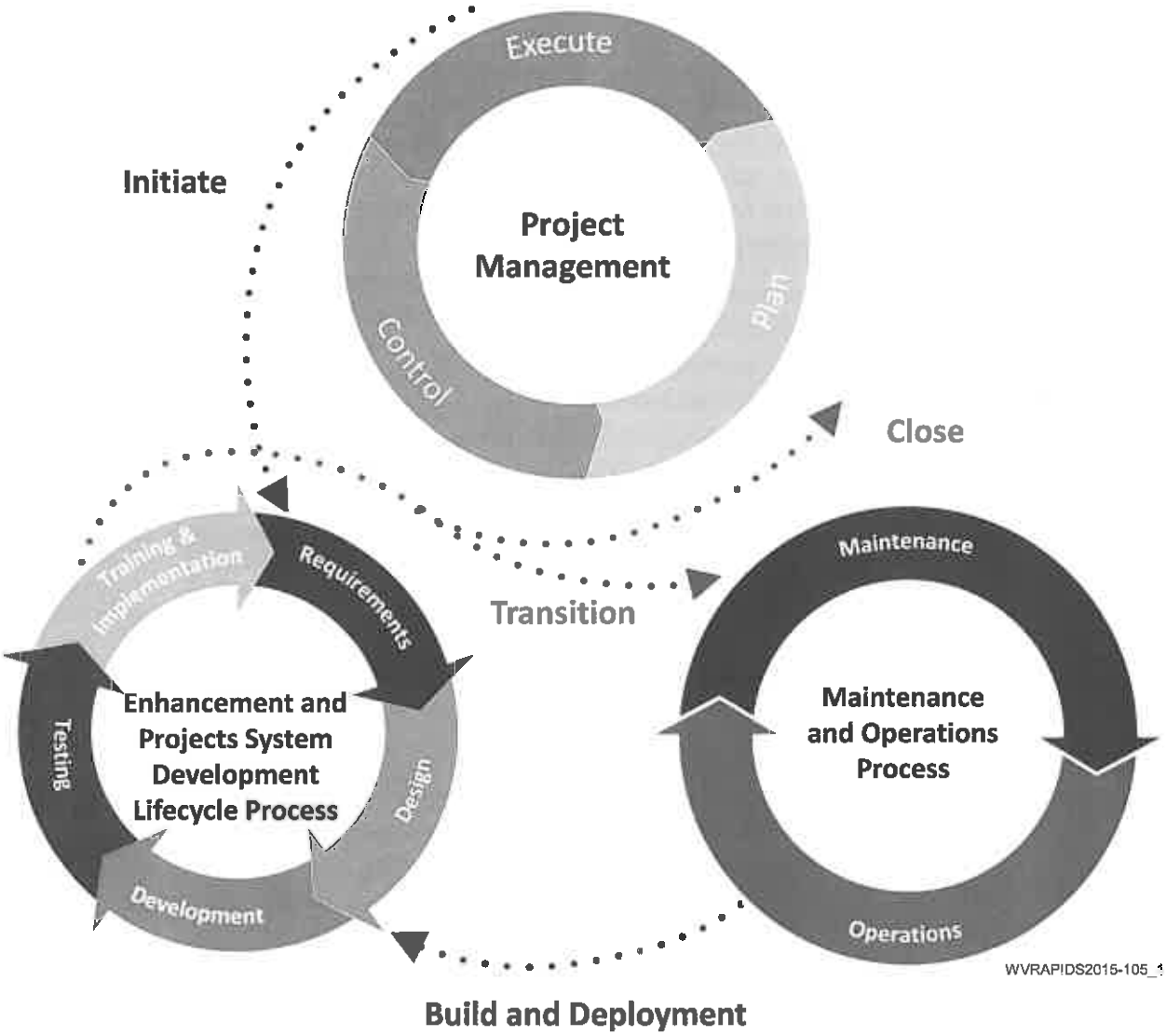


Figure 4.4.2-12. Application Development and Maintenance Methodology.

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 has the final decision on approving the change for implementation. The Change Control Board 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 Change Control Board before work on the change is initiated.

Figure 4.4.2-13. 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 which is reviewed, verified, and validated with the Agency and Deloitte Project Management.

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 4.4.2-14. 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 4.4.2-15. 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 4.4.2-16. 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.

The Testing Phase is a critical time for the enterprise to be regarded as a whole and not as separate systems. The Deloitte Team will facilitate testing efforts amongst systems within the project, including RAPIDS, OSCAR, FACTS and Child Care. 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 4.4.2-17. 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.
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 4.4.2-18. 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 4.4.2-19. Transition and Close.

Managing Necessary Changes to RAPIDS

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.

The difference in the process for defects vs. enhancements is that defects would normally be fixed as the system is not meeting specifications. Enhancements, however, go through an initiation and prioritization process to determine if the enhancement is valid and required, and where it falls in the priority of other project tasks. 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**. Once a change is determined to be required, stakeholders have the final decision on the priority and plan for implementing the change. The steps that are followed when a change request is initiated are detailed in Mandatory Requirements **Subsection 5.3: Software Change Process and Documentation**.

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 minimize risk and provide for successful implementations.

4.4.2.4 Software Releases

RFP Reference: Attachment A, page 13

- Software releases: The vendor should describe the system of controls and the support for new versions of the RAPIDS software.

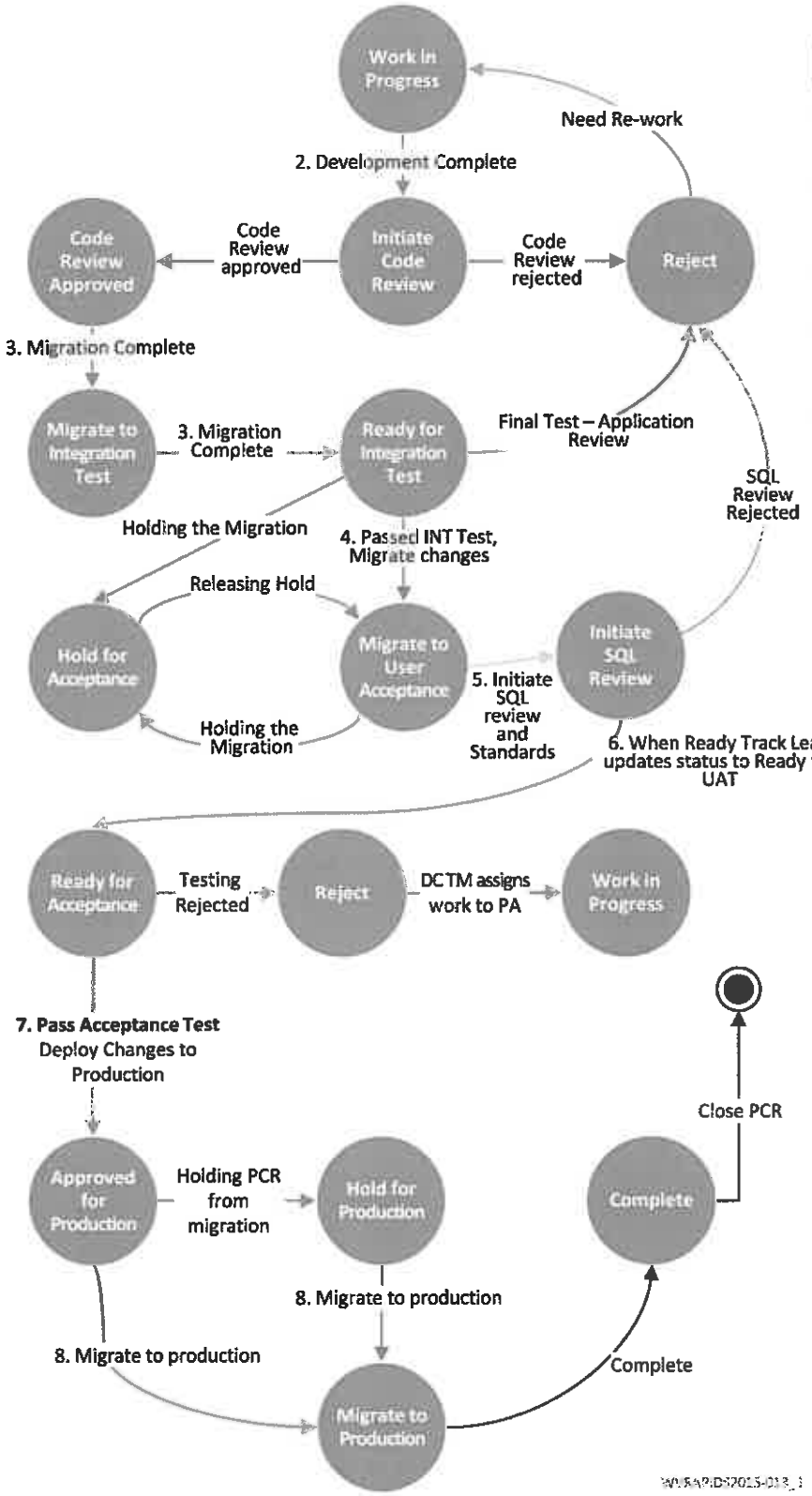
Software Release management is a process that guides IT efforts from application development through testing and into production, helping to focus resources on timely delivery of a feature set that the business needs. Deloitte follows a broad release management process that enables the agency to:

- Improve visibility and insight into project timelines and progress.
- Increase release frequency, to get critical changes and features into production sooner.
- Improved release quality, to increase the number of successful releases and reduced downtime.
- 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.

Analysts perform a Level of Effort estimate for each PCR, which is captured as part of the PCR content. For additional details refer to Mandatory Requirements **Subsection 5.3: Software Change Process and Documentation**. 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 4.4.2-20 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

Figure 4.4.2-20. 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 weekly patches and monthly enhancement releases supported by an automated build and deployment process.

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.

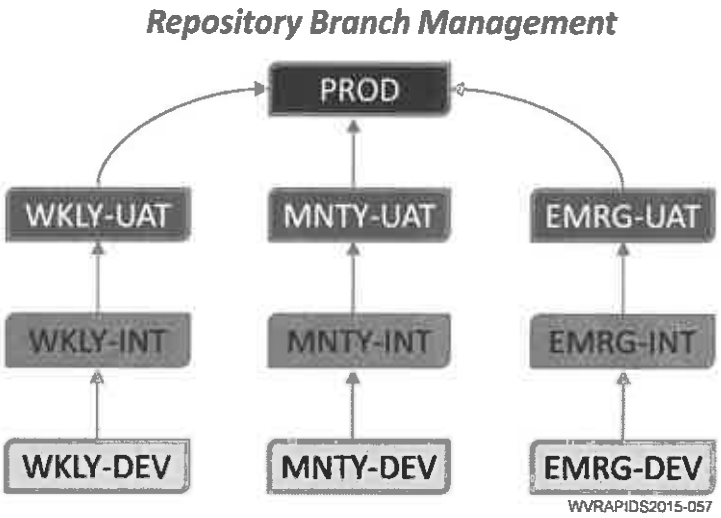


Figure 4.4.2-21. Branch and Merge Process

4.4.2.5 Software Testing

RFP Reference: Attachment A, page 13

- Software testing.

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

Figure 4.4.2-22. 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.

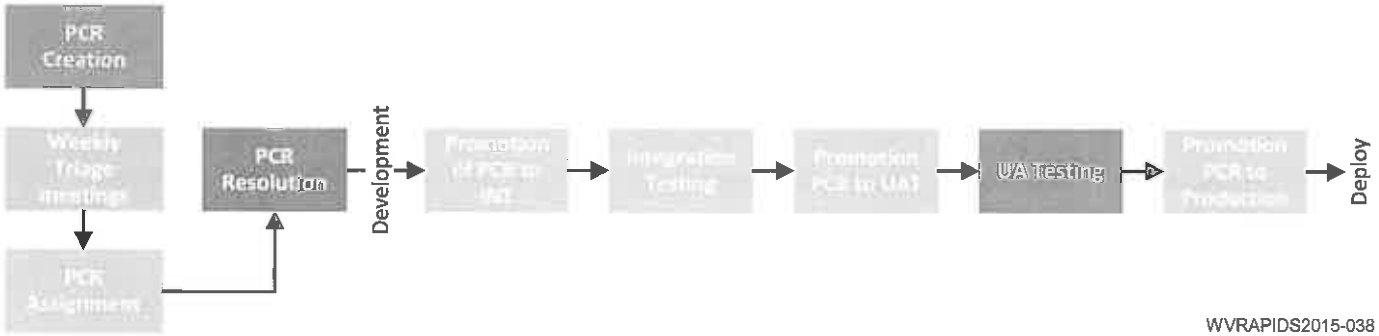


Figure 4.4.2-23. Test Process for defect fixes.

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.

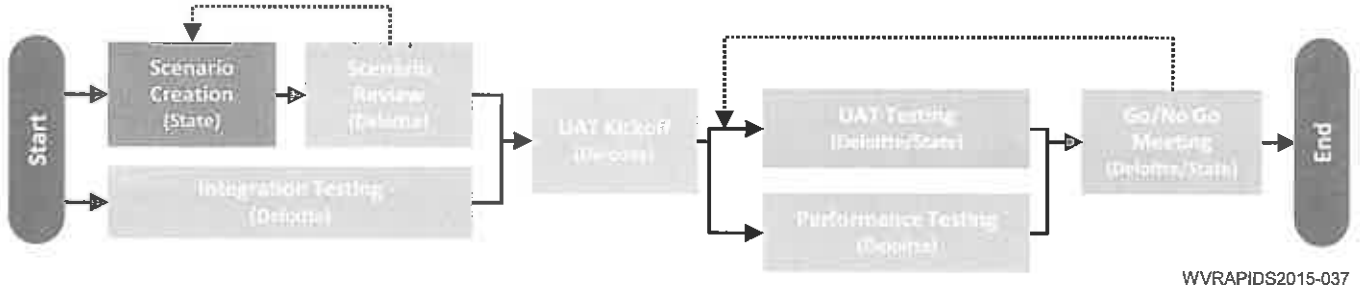


Figure 4.4.2-24. Test Process for major enhancements.

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. 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 4.4.2-25. Testing team roles.

The testing team will also validate 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.

We propose the use of JIRA as the new 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.

We also propose the use of 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. For more information on the data used for testing and for our Quality Assurance approach, refer to Mandatory Requirements **Subsection 5.7: Software Testing and Quality Assurance.**

4.4.2.6 Change Control

RFP Reference: Attachment A, page 13

- 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

Changes should 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. Change Control Board (CCB) Review & Approval
3. Perform Requirements and JADs
4. Implement Change
5. Close Change Request

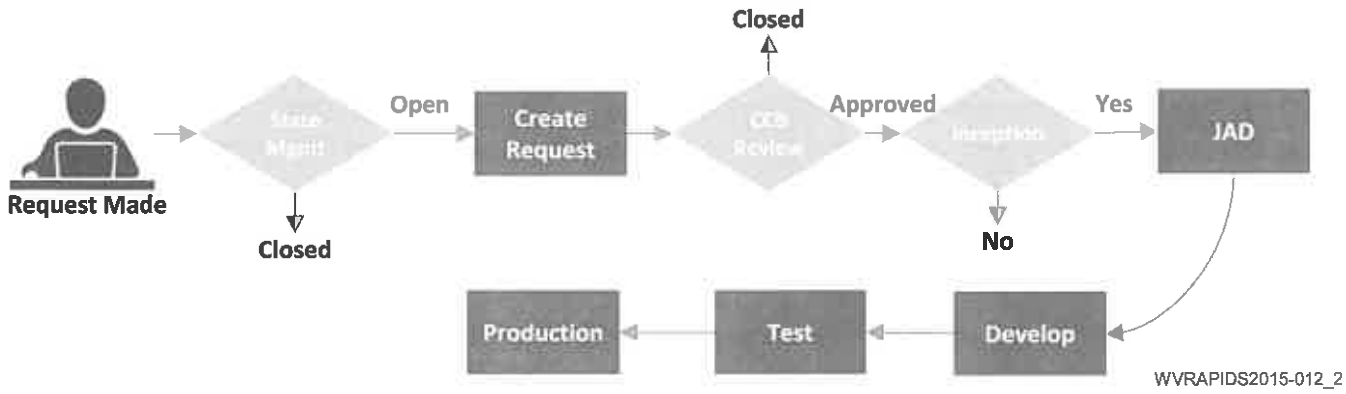


Figure 4.4.2-26. Change Control Process.

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 our 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. CRs that are approved will also be brought up in weekly triage meetings, allowing the team to collaboratively prioritize CRs, based upon Agency testing availability as well as criticality of the issue. The triage meeting is also used to discuss and prioritize defects raised during the past week, giving the involved parties a holistic view of the amount of work to be done at a given point in the future. Only enhancements are required to go through initial management and CCB approval. Defects are raised and automatically go to triage (refer to defect management under **Section 4.4.2.1 Routine Maintenance of All Environments**), without other approval process.

Change Control Board (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 Change Control Board (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 Change Control Board, 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 change control board (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 typically 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.

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. For smaller CRs, the Deloitte project manager may opt to implement the CR using the action item process. In either case, 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.

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.

4.4.2.7 Program Migration

RFP Reference: Attachment A, page 13

- Program migration.

As has been described previously, 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 bi-weekly defect patches and monthly enhancement 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 was 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, 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.

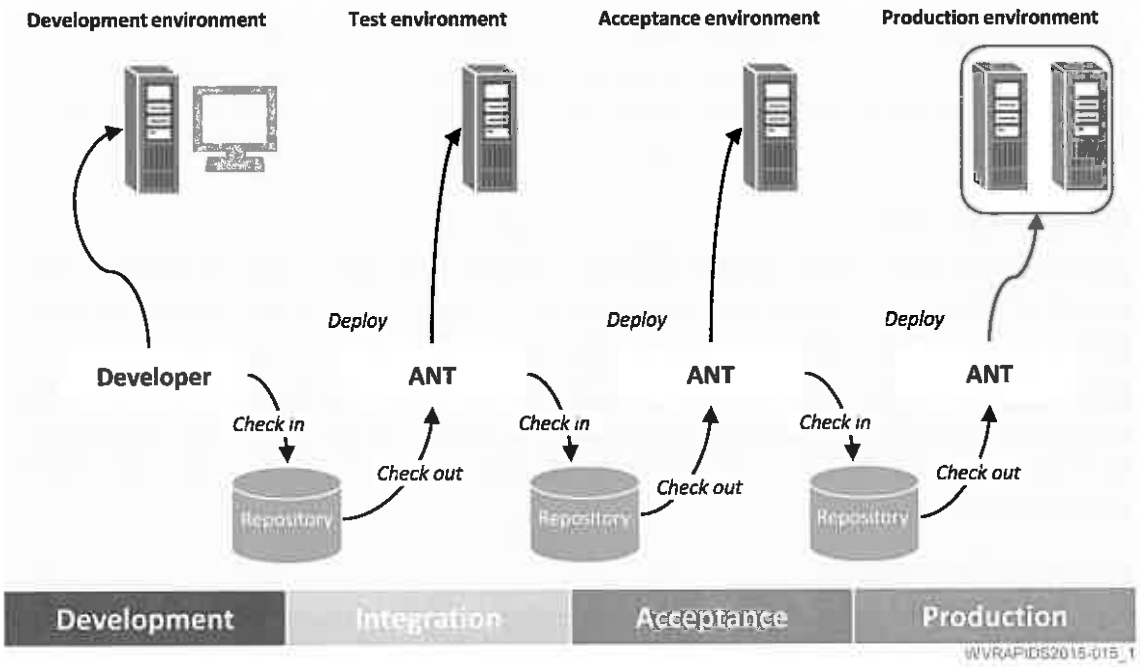


Figure 4.4.2-27. Program Migration Flow.

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.

4.4.2.8 System Management

RFP Reference: Attachment A, page 13

- 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, 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.

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.

The following figure depicts the key activities and tasks for the system management team.

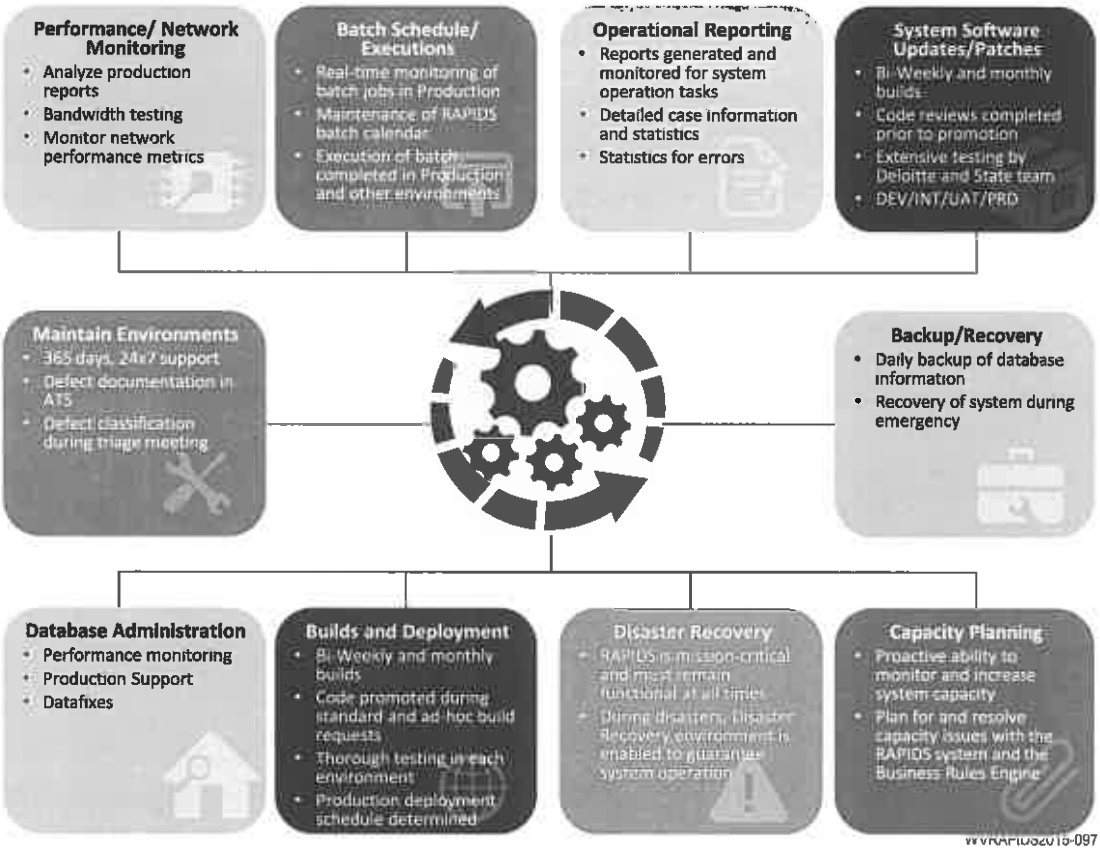


Figure 4.4.2-28. System Management Activities.

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 4.4.2-29. 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 4.4.2-30. Core Components of our System Performance Methodology.

For additional information on performance monitoring refer to Mandatory Requirements **Subsection 5.8: System Monitoring and Performance** and **4.4.2.13 Network Monitoring Strategies**

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.

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.

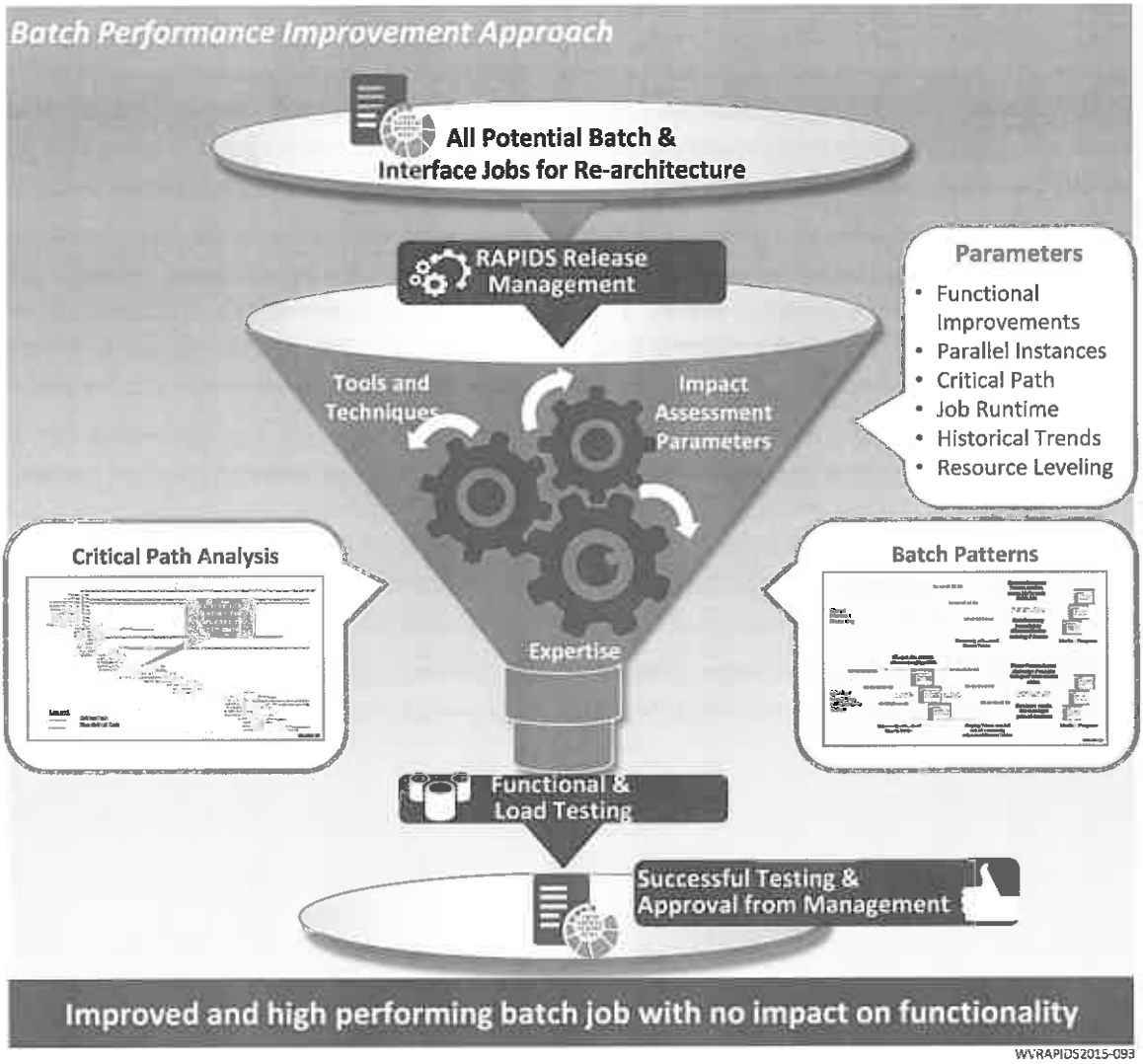


Figure 4.4.2-31. Batch Process Improvement Approach.
Deloitte has a mature process for identifying potential batch processes which need performance tuning and for identifying and implementing improvements.

The following figure 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.
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 4.4.2-32. Batch Process Improvement.

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

System Software Updates/Patches

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.

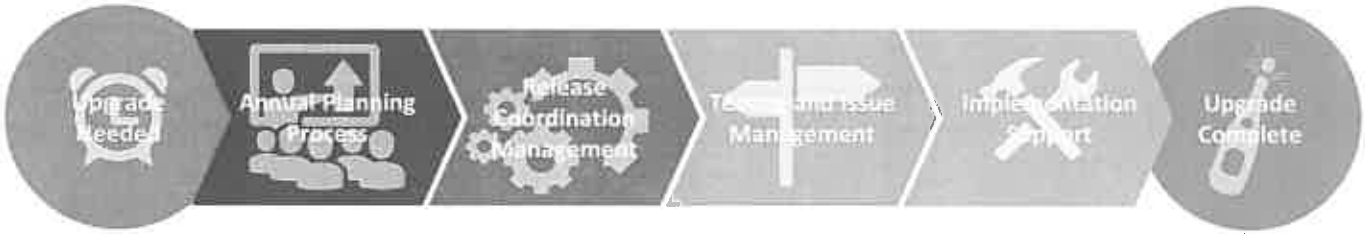


Figure 4.4.2-33. Infrastructure Upgrade Support Process.
Deloitte's process for supporting major system upgrades involves coordinated scheduling, testing, and implementation support.

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.

Backup / Recovery & Disaster Recovery

Refer to Mandatory Requirements **Subsection 5.4: Functional Maintenance and Disaster Recovery.**

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.

Sample Capacity Plan

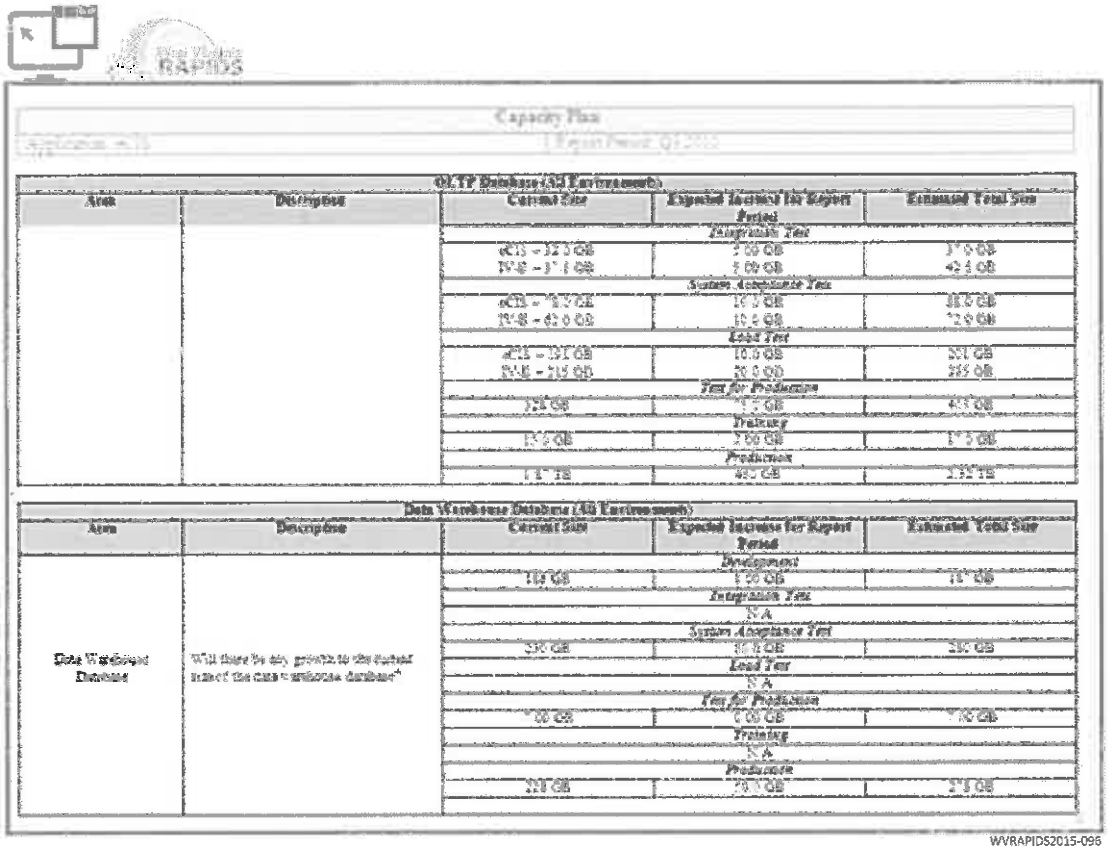


Figure 4.4.2-34. Sample Capacity Plan.
Allows for planning for expanding database and files to avoid problems with expanding files and data in Production.

Builds and Deployment

Refer to **Section 4.4.2.7 Program Migration**.

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 4.4.2.9 Database Administration.**

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 4.4.2-35. RAPIDS Environments.

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 change/configuration management board • Implement the patch or upgrade and validate the system components

Technical/Environment Maintenance Requirement	Deloitte Approach
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 change/configuration management board • 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 change/configuration management board • Implement the change and validate the system components
Hardware swaps	Refer to disaster recovery plan under Mandatory Requirements **Subsection 5.4: Functional Maintenance and 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 change/configuration management board • Implement the change and validate the system components
Disaster Recovery Plan activities	• Refer to disaster recovery plan under Mandatory Requirements **Subsection 5.4: Functional Maintenance and 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 4.4.2-36. Approach to Technical Environment Maintenance Requirement.

System management plans offer transparency to our Agency partner and allow them visibility into day-to-day maintenance and operations tasks. This allows Deloitte the ability to work closely with our Agency partner to

effectively manage enterprise systems. Transparency and cooperative system management minimizes surprises and keeps our Agency partners aware of day-to-day activities taking place. By minimizing surprise and using defined plans, Deloitte's predictability provides the Agency with standardized practices to follow during eventualities that arise. We follow the same set of steps and automate wherever possible to create additional predictability.

4.4.2.9 Database Administration

RFP Reference: Attachment A, page 13

- 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. The team has experience in successfully participating in over 10 disaster recovery exercises conducted by 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 4.4.2-37. Key Database Management Activities.

Database Design Support

As with any project of a size and complexity similar such as integrated eligibility, having clear, well-documented design is crucial for success. 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 **Data Dictionary Management – adherence to naming standards.** **Review logical and physical database designs.** **Assist in developing database related standards and leading practices.**	• **ERwin** Client desktop tool that is used to create and maintain logical and physical data models. • **SQL Developer** Oracle utility that provides a conduit to execute native SQL against an Oracle database. • **Data Studio** IBM client provides an integrated development environment for instance and database administration • **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 4.4.2-38. Design Tools.

Database Operations Support

The second category of database administration is operations support. When new changes need to go through the system, our administrators are able to provide realistic data for testing, 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 **Upgrade Support.** Support in planning and execution of database upgrades Assist in the Database Backup/Recovery and Disaster Recovery processes. Develop database related maintenance processes and/or utilities.	• **SQL Developer.** Oracle utility that provides a conduit to execute native SQL against an Oracle database and migration of data. • **Data Studio** IBM client provides an integrated development environment for instance and database administration, routine and Java application development • **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 DB2 catalog, migrate DB2 objects, DB2 utility executions

Figure 4.4.2-39. Database Operations Support Tools.

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 and every query before it ever moves into the production

environment. By taking a proactive approach, we minimize the risk of system performance degradation while also reducing the amount of time spent debugging production issues.

Additionally, we run OLTP Query Performance Tuning 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 Perform OLTP Query Performance tuning. Perform SQL procedure code reviews to determine code is efficient and adheres to leading practices. Review and optimize Batch queries and processes. Monitor database performance; identify and implement tuning opportunities.	• **TMON for DB2.** Monitoring and Management of IBM DB2 on z/OS with SQL analyzer • **SQL Developer.** Oracle utility that provides a conduit to execute native SQL against an Oracle database and Explain and tune SQLs for cost estimation. • **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. • **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 4.4.2-40. Performance Monitoring Tools.

Information Life Cycle Management (ILM) Support

The final facet of our approach to database administration is ILM support. As data is rarely stagnant, we ensure that the data that we store is relevant, up to date and stored in an efficient manner. To achieve this, we utilize a number of batch processes to purge old, unused data, as well as 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 4.4.2-41. Database Management Tools.

4.4.2.10 Staff Support

RFP Reference: Attachment A, page 13

- 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 necessary 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.

4.4.2.11 System Security

RFP Reference: Attachment A, page 13

- System security.

Deloitte works with the agency to integrate and execute appropriate 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

On 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 necessary 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.

4.4.2.12 Tracking

RFP Reference: Attachment A, page 14

- 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 foster collaboration. The RAPIDS program has been using the Application Tracking System (ATS) for these purposes for over 15 years. New ALM tools such as Atlassian's JIRA provide improved features, while being cost effective. Many Deloitte projects have established JIRA as a standard and report substantial benefits. Deloitte is proposing to move from ATS to JIRA for supporting DHHR enterprise solutions. 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 can employ 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.

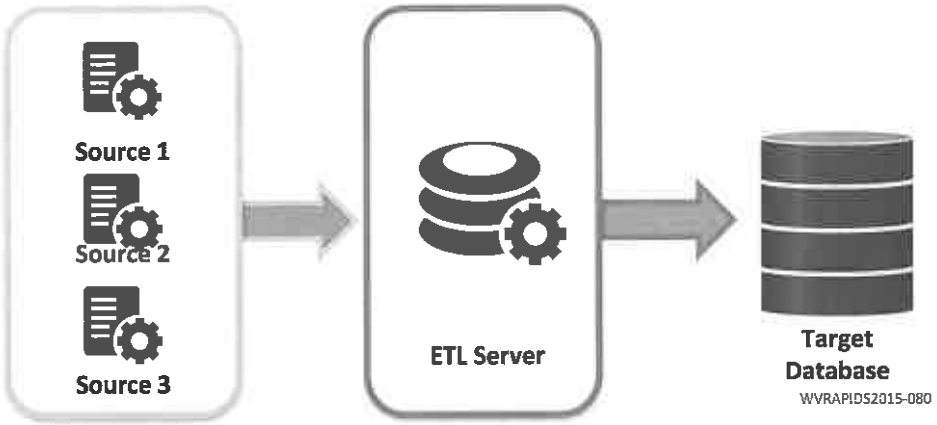


Figure 4.4.2-42. Data migration using ETL tool.

- **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.

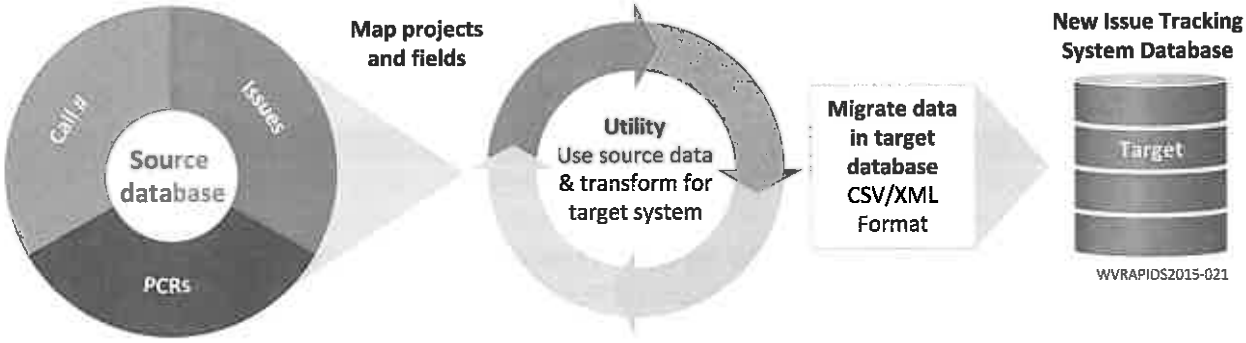


Figure 4.4.2-43. Data migration using csv/xml format.

- **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.

4.4.2.13 Network Monitoring Strategies

RFP Reference: Attachment A, page 14

- 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 HIGHLIGHTS

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

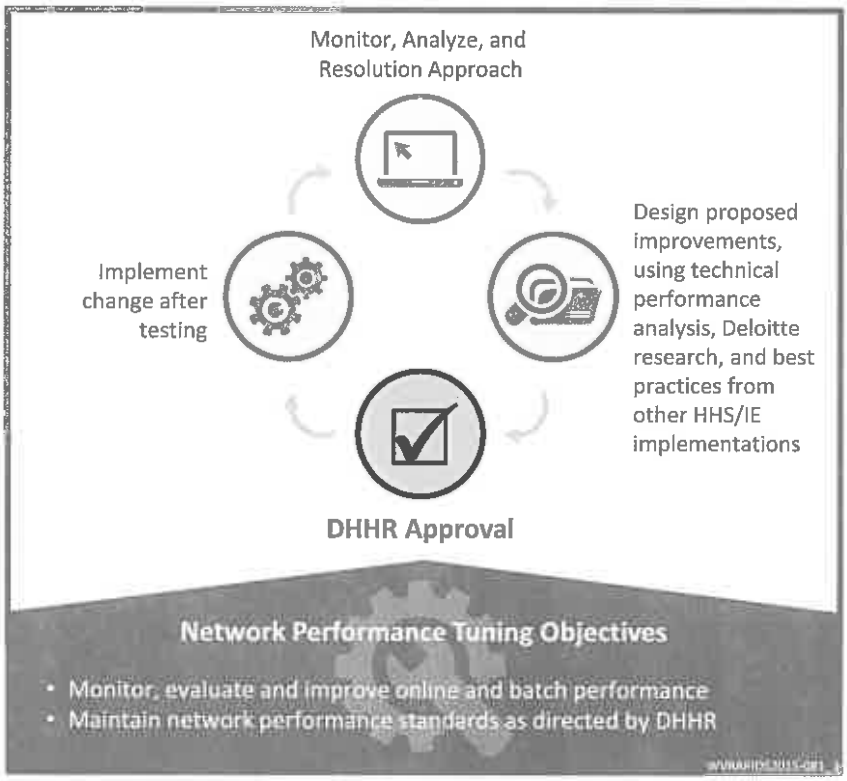


Figure 4.4.2-44. Tuning plan for resolving issues.

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 4.4.2-45. 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 gather 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 those 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 county which has high average page response time and accordingly conduct multiple network related tests on the problematic counties. The Deloitte team proactively initiates tracking and resolve mechanisms to fix the issue.

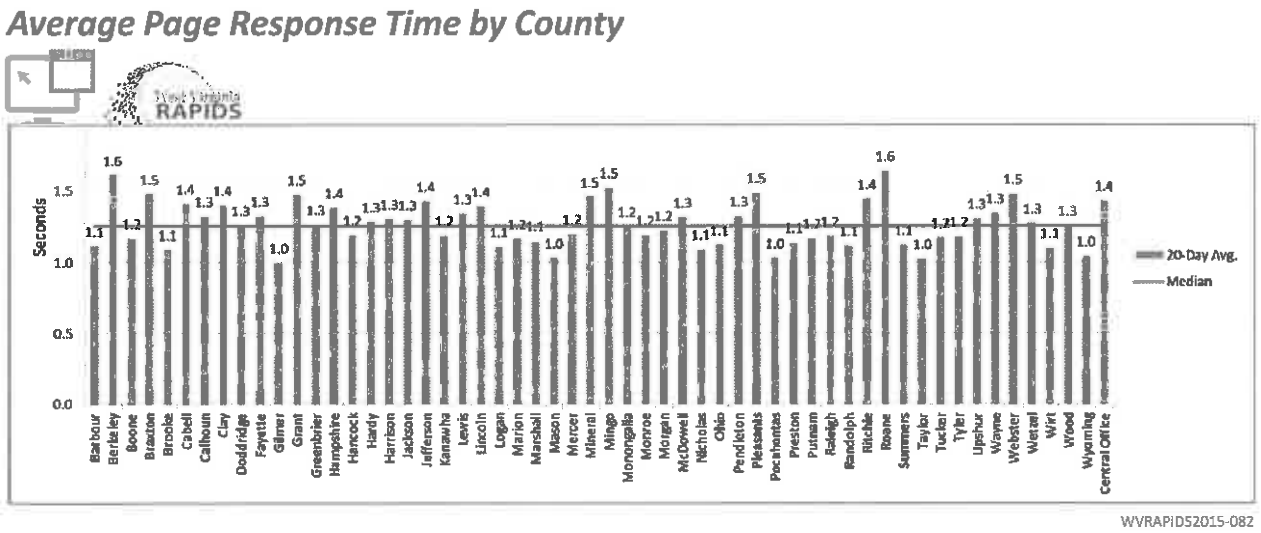


Figure 4.4.2-46. Average Page Response Times.

- **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.

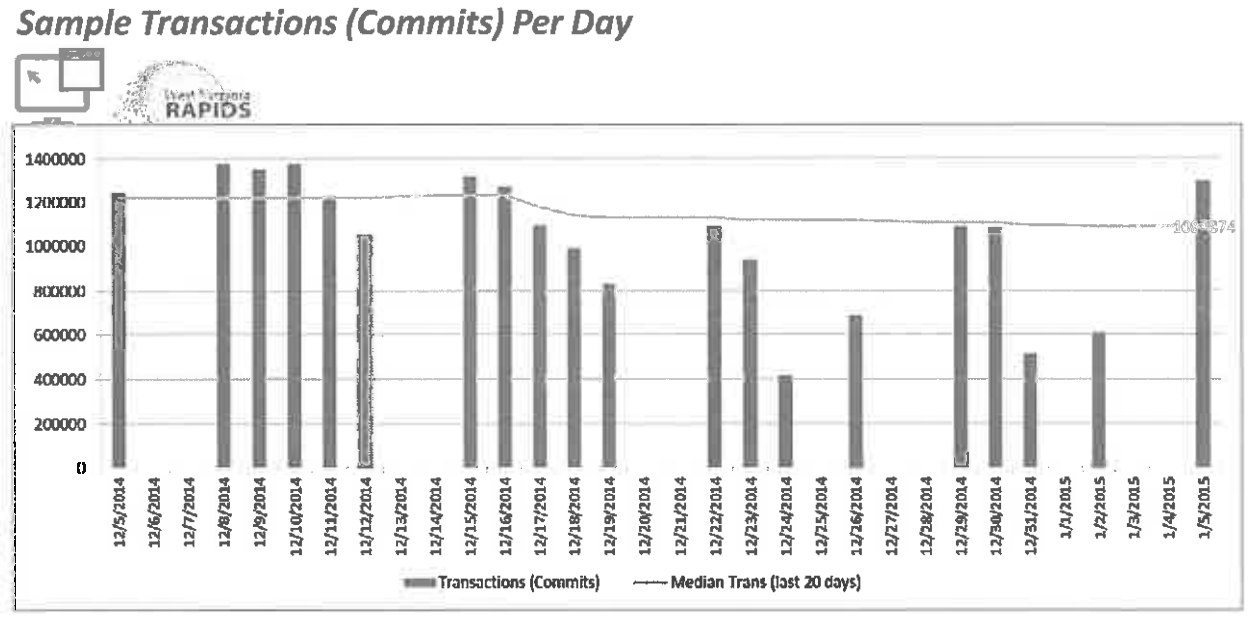


Figure 4.4.2-47. Transaction Per Day.

The network monitoring strategy can be improved and made more efficient with the acquisition of additional tools. Deloitte suggest 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 tea. 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 4.4.2-48. New Relic tool key benefits.

The following is an example of the New Relic application transaction monitoring dashboard.

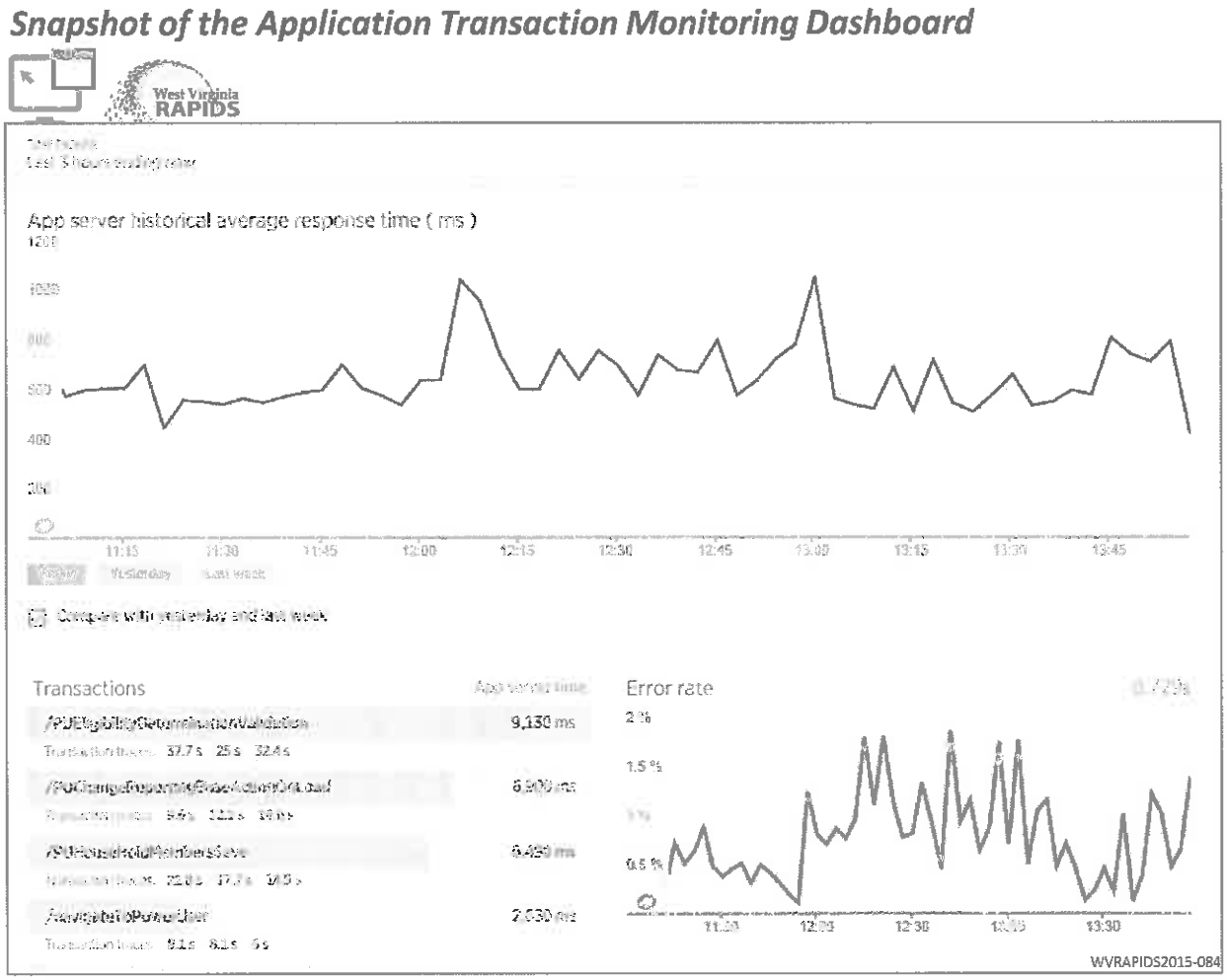


Figure 4.4.2-49. Transaction Monitoring Dashboard.

The proposed network monitoring toolkit provides the Agency a high value, low cost approach to monitor DHHR enterprise assets and stabilize system performance.

REQUEST FOR PROPOSAL

WV Department of Health and Human Resources
Management Information Services
RAPIDS Project
CRFP 0511 HHR1500000009

ATTACHMENT B: Mandatory Specification Checklist

RFP Reference: Attachment B, page 1

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

Section 4, Subsection 5.0: (Mandatory Requirements)

RFP Reference: Attachment B page 1

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 A 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 brings a team with demonstrated experience working with the Agency. We have worked side by side with DHHR for more than 18 years performing and refining critical business and technology processes, from improving system performance to consistent execution of mass changes, from incremental modernization to meeting the requirements for the Affordable Care Act. Deloitte has consistently demonstrated commitment and dedication to the success of the Agency.

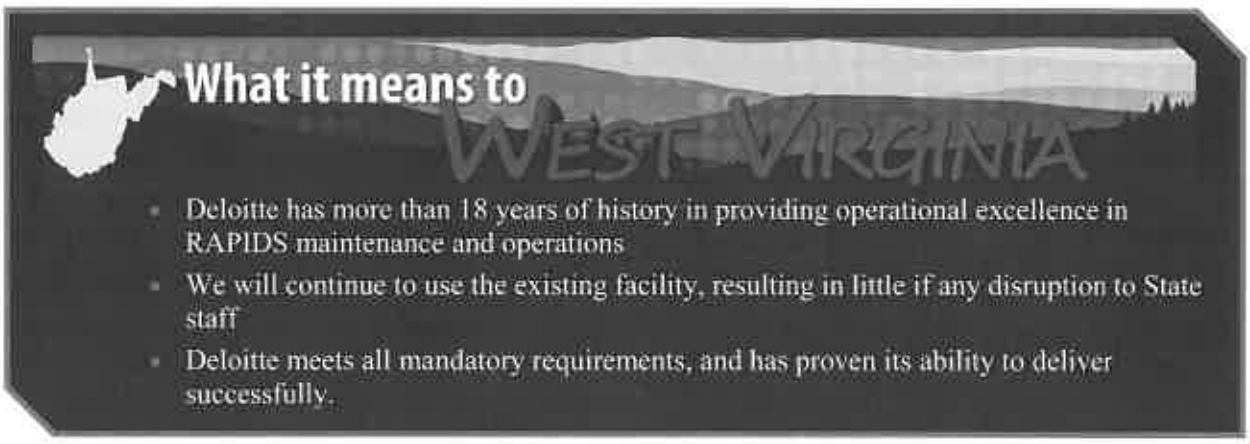
Section Highlights

Deloitte is committed to meeting all mandatory requirements.

- Demonstrated successful track- record in West Virginia.
- Our start-up time is minimized
- We understand your policies and have the proven processes in place to support RAPIDS

Deloitte has read, understands, and meets the requirements specified in the section of the RFP. Our proposed facilities and project office space satisfies the requirements to house the on-site vendor staff plus 25 Agency staff in an environment that is conducive to fulfilling the needs of the project. We have cost estimated new office furniture and general office equipment, and based on your assessment of what meets your "suitably new" definition at the appropriate time, we expect to be able to reduce that cost estimate. We accept and are prepared to meet the project responsibilities that you have laid out as requirements for keeping the system maintained and operating within established performance standards.

Each of the below subsections, includes the list of corresponding mandatory requirements and Deloitte's agreement to meet those requirements



Subsection 5.1: (Facilities and Space Requirements)

RFP Reference: Attachment B, page 1

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. 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. Deloitte proposes the continued use of this 15,178 square foot facility as the RAPIDS project site, after renovation and updating to meet the Agency's requirements per the RFP. The project site will be updated to meet the Agency's requirements for security, space, conference rooms, help desk area, parking and other operational requirements. 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 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 upgrading to new furniture, upholstery and equipment, improving restroom, kitchen and conference room amenities. 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 the facility operational 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 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 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 2

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 State and Deloitte 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 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

RFP Reference: Attachment B, page 2

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 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.

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 new equipment. This equipment shall become the property of the State of West Virginia at the end of the contract.

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	New carpeting and personal color printer in each office including vendor offices (12 total)
☑	**Reception area**	Yes	Fresh paint on current painted areas (including reception area)
☑	**Kitchen**	Yes	Fresh paint on current painted areas (including kitchen)
☑	**Adequate storage facilities**	Yes	Requirement met with proposed facility
☑	**Network server room**	Yes	Requirement met with proposed facility
☑	**Water fountains**	Yes	Requirement met with proposed facility

	RFP requirements	Currently on site	Proposed improvement
☑	**System for hot and cold filtered water**	Yes	Deloitte will contract for these services to meet the requirement at the proposed facility
☑	**Adequate restrooms**	Yes 3 Women's; 3 Men's; 1 Undesignated	Fresh paint on current painted areas (including restrooms)
☑	**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	New telephones with voicemail and caller ID
☑	**Two Fax Machines**	Yes	Two (2) new fax machines
☑	**Networked color copier with scanning capability**	Yes	Deloitte will contract for this product to meet the requirement at the proposed facility
☑	**General office supplies**	Yes	Deloitte will contract with appropriate suppliers for general office supplies to meet the requirement at the proposed facility
☑	**Storage**	Yes	Requirement met with proposed facility
☑	**Janitorial service and supplies**	Yes - included in building rent	Requirement met with proposed facility
☑	**2 conference rooms able to handle 20-30 people; including network connections**	Yes	Requirement met with current provision of four (4) conference rooms; all four will be improved with new Bluetooth ceiling projectors, and pull-down projection screens
☑	**Conference room table**	Yes	New conference tables for each of existing four (4) conference rooms
☑	**Conference room chairs**	Yes	80 new chairs for the conference rooms, including 40 adjustable and 40 fixed
☑	**Visual aids (white boards) for conference rooms**	Yes	New wall-mounted whiteboard in each conference room (4), plus a movable electronic (printer incorporated) whiteboard for each conference room (4)
☑	**Speaker phone with conference call capabilities in each conference room**	Yes	New speaker phone with conference call capabilities in each conference room (4)
☑	**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	New printer
☑	**Fax Machine for Help Desk area**	Yes	New fax machine
☑	**Telephones for Help Desk staff**	Yes	New telephones for Help Desk staff (3)
☑	**Furniture to provide a work area for 3 State Agency Help Desk staff**	Yes	New furniture (desk with drawers; filing cabinet; table for workstation) for each of the Agency Help Desk staff (3)

	RFP requirements	Currently on site	Proposed improvement
☑	**Toll-free line for the Help Desk telephones with rollover and messaging capabilities**	Yes	Deloitte will 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 with need
☑	**Kitchen - Containing a sink, coffee and hot water service for all staff**	Yes	Improvement will include two (2) new tea makers, two (2) new toasters, two (2) new stove/ovens, two (2) new dishwashers; one for each of the two kitchens.
☑	**Microwave for kitchen**	Yes	Three (3) new microwave ovens – two (2) for the 2nd floor kitchen and one (1) for the 4th floor kitchen
☑	**Ice maker for kitchen**	Yes	Two (2) new ice makers – one each for the two kitchens
☑	**Refrigerator for kitchen**	Yes	Two (2) new refrigerator/freezers – one each for the two kitchens
☑	**Office furniture and general office equipment**	Yes	New cubicles (walling); new credenzas (14); new shredders (1 industrial size, 2 personal size); new shelving for individual mailboxes
☑	**Each Agency staff member's cubicles or office must be equipped with the following: desk with drawers; filing cabinet; table for workstation.**	Yes	Replacement of current L-shaped desks suitable for workstation, 2 lateral filing drawers, 2 desk drawers, for all cubicles, offices, and administrative areas; and overhead filing with light underneath for all Agency staff member's cubicles and offices
☑	**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	New touch tone phones with outside line, voice mail, and caller ID for all cubicles and administrative areas
☑	**Speaker phone for the five manager's offices**	Yes	New touch tone phones with outside line, voice mail, caller ID, and speaker capability for all offices
☑	**Cabling for PC's**	Yes	Done at State's prevailing wage rate

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 the condition of newly acquired office accommodations.

As described in the previous table, Deloitte has proposed new furniture and general office equipment, and has included the cost estimate for the same in our **Attachment C – Cost Sheet**. At the appropriate time, and based on your assessment of what meets your "suitably new" definition, we expect to be able to reduce that cost estimate.

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.

Subsection 5.3: Software Change Process and Documentation

RFP Reference: Attachment B, page 2

Project Responsibilities:

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.

Vendor Response:

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.

Deloitte has collaborated with the State to tailor our change request approach to formulate this proven DHHR-specific approach. The established procedures were created by our RAPIDS experienced team of people, based on our refined and proven processes, and are supported by a set of tools customized for RAPIDS. We will continue to use our current RAPIDS structured approaches to system implementation by adhering to the software development life cycle (SDLC) for all system enhancements and changes. Refer to **Goal 2: Technical Approach Section 4.4.2.3 System Changes/Enhancements** for a full description of the standard SDLC. Changes that affect the scope, budget, schedule, and/or effort or requested changes to signed-off deliverables of the project are formally documented, prioritized, analyzed, reviewed, and approved before implementation. Our experience with the Agency change request approach allows for implementations with a high level of transparency and low risk, in order to provide for constant system stability.

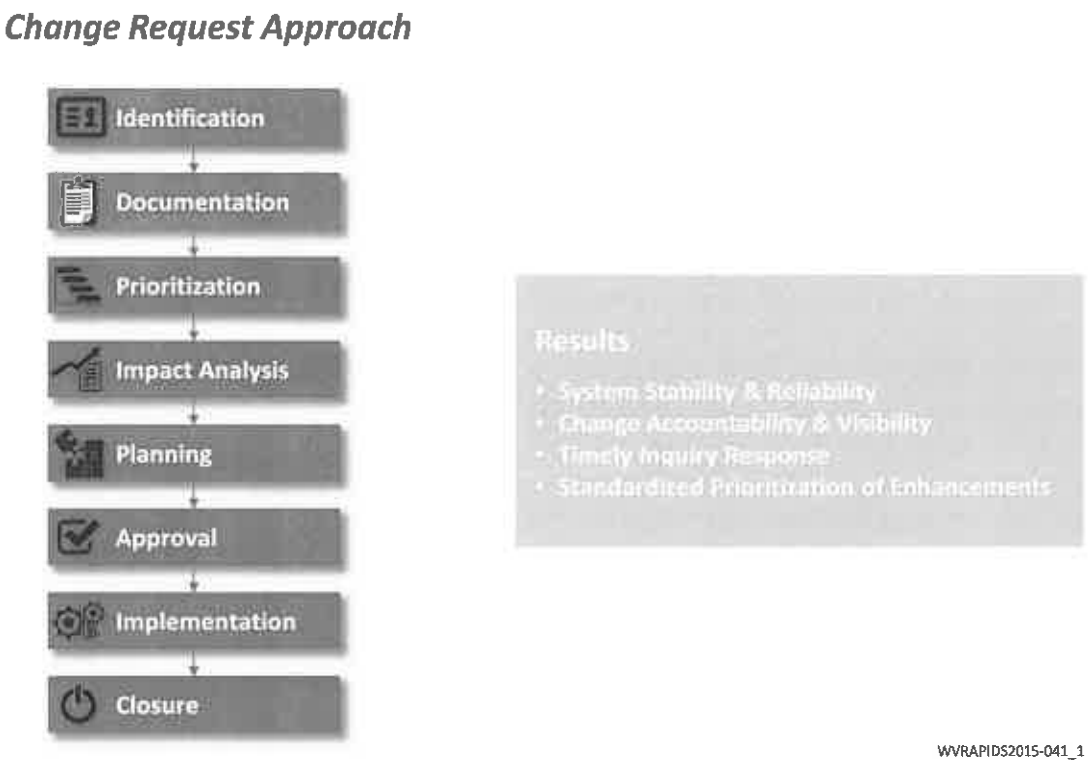


Figure 4.5-2. RAPIDS Change Request Approach.
Change request approach followed by Deloitte and the State team.

The first step in the process of implementing a system change is identification of the change. Although we follow a unified process for all system changes, there are slight process differences that depend on the type of change, be it a defect correction, minor enhancement, or more significant 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 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. 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.

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. 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 any 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 impacts 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 Change Advisory Board (CAB) 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. A full list of documentation created and maintained throughout the SDLC is detailed in **Goal 2: Technical Approach Section 4.4.2.3 System Changes/Enhancements.**

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, anthe proposed timeline and implementation date for the change.	• Created during Impact Analysis

Document Title	Content Description	Created and Updated Phases
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 4.5-3. The main documentation for the change request and the documents that are updated and submitted during the change request process.

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 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. By functional responsibility, Deloitte takes 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.

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 with the State's existing disaster recovery and business continuity plan.

The remaining sections provide additional details regarding our approach to providing functional responsibility for RAPIDS maintained modules, in support of the Agency's Business Continuity Disaster Recovery approach and procedures.

Disaster Recovery and Business Continuity

Deloitte brings experience in implementing successful business continuity and disaster recovery plans from disaster susceptible states such as Florida and Louisiana.

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. We understand that solutions such as the RAPIDS require special consideration in terms of recovery time objectives that focus on supporting the public health and well-being. 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.

Disaster Recovery and Continuity Planning

Deloitte will work with relevant 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.

Section HIGHLIGHTS

- 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.

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 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 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.

System	Critical?	Order	Remarks
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 quickly design, produce and distribute reports to satisfy inquiries and support initiatives within the various bureaus of the Agency.

Figure 4.5-4. DR Related Systems.
Existing DR Plan-System Recovery Order

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 DB2 instances. 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.

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. *Assumption: By stating that we provide complete functional responsibility for network and PC disaster recovery, we assume that you are referring to the network and PCs in the project office that are under Deloitte's control, and not the broader network or PCs that are not under Deloitte's control. To the extent the State's request is broader, the parties will need to clarify the scope in contract discussions.*
☑	The vendor must maintain disaster recovery documentation including the post RAPIDS corrections and findings and the Office of Technology's findings, recommendations and changes.

Subsection 5.5: Data Warehouse

RFP Reference: Attachment B, page 3

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:

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 requirements. These new data element loads will be operationalized by the Deloitte maintenance and operations team as recurring ETL batch data loads.

- 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

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.

Deloitte's deep technical bench strength makes 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.

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.

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 4.5-5. 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

Tool	Purpose	Description
Oracle Ware House Builder (OWB)	ETL tool	Developer tool for creating ETL programs for programmer analysts supporting the RAFT data warehouse

Figure 4.5-6. 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.

Deloitte meets your requirements:

☑ The vendor must populate the data warehouse with the data elements necessary to support reports which are created with Cognos.

Subsection 5.6: RAPIDS Software Deployment

RFP Reference: Attachment B, page 3

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.

For a more detailed description of our software distribution process, please refer to **Goal 2: Technical Approach Sections 4.4.2.4 Software Releases** and **4.4.2.7 Program Migration** of this proposal.

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 comprehensive package of testing data and materials to be used in testing RAPIDS against the baseline requirements. Deloitte will reasonably predict all possible business conditions 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.

Both our Software Testing and Quality Assurance functions are detailed in the following section.

Software Testing

Effective software testing requires documenting test conditions and identifying (or creating) test data to effectively test those conditions. Deloitte has a rich set of test cases that fit various testing scenarios which are used for testing new functionality and for regression testing. This data is present in the integration and user acceptance environments of RAPIDS. The testing team uses these test cases to validate existing functionality and also creates new cases with specific data in order to validate the end results. Furthermore, Deloitte will use the eRASU (eRAPIDS Software Utility) to easily move production cases to testing environments, in the process removing sensitive Personally Identifiable Information (PII) data. In this way, we can mine production for case parameters valuable to a testing effort and use that case for testing.

Using the project ALM, Deloitte maintains an inventory of test cases that are linked to test data to effectively test each requirement which are defined in our Software Requirement Specification (SRS). As new initiatives are performed and the new/modified SRSs are produced, the test cases are revised or supplemented. In this way, the Agency has a broad set of test data for testing RAPIDS.

For more information on our Software Testing approach, refer the Test Plans following section and **Goal 2: Technical Approach Section 4.4.2.5 Software Testing**.

Quality Assurance

Deloitte Quality Assurance Methodology is imbedded in our project delivery approach as depicted in the following figure.

Key Quality Assurance Activities

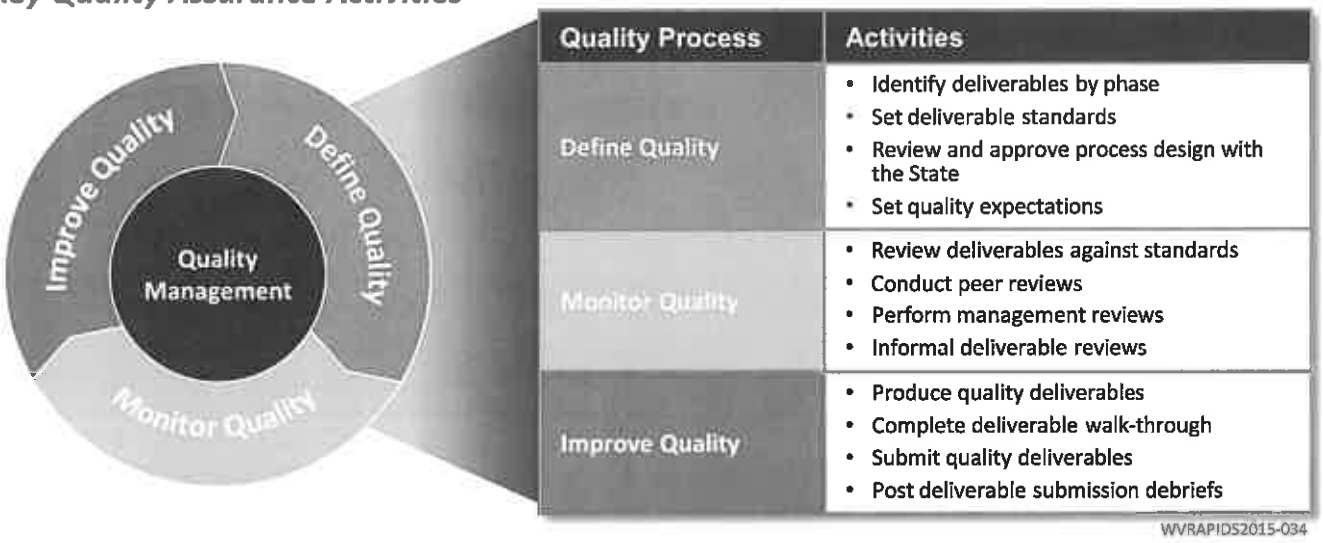


Figure 4.5-7. Quality Assurance Activities.
The figure shows important activities performed during Quality Assurance.

Deloitte plans, executes, monitors and controls project quality and performs activities to verify the project is using the proper methods, templates, standards, and guidelines, as well as practicing the right processes to produce high-quality results. These activities include training the project team on proper usage of the project's methods, tools, templates, and processes. We monitor and make changes so that the project 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:

Section Highlights

- Proactive Quality Management Approach - Deloitte identifies and mitigates risks, through approaches such as requirements traceability, before they turn into issues that adversely impact the project
- Collaborative Quality Management Approach - Deloitte promotes open discussion and identification of potential issues. The collective team increases productivity while mitigating risk and providing deliverables on target.

#	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 4.5-8. Quality Assessment Types.

The following sections detail how our quality management processes are applied in the RFP requested areas:

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 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.

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.

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. 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.

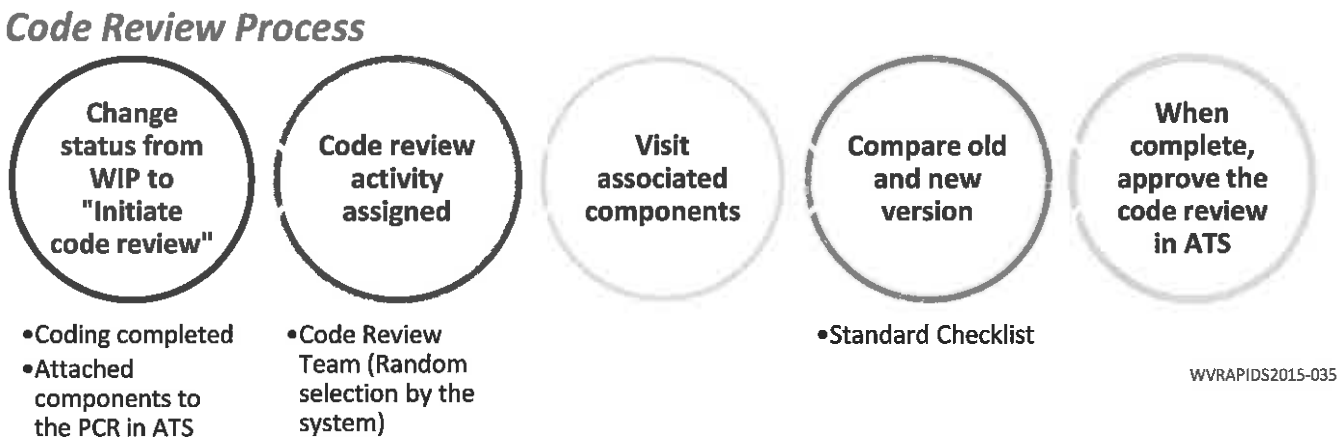


Figure 4.5-9. Code review process.
The existing code review process in RAPIDS.

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 in ROADS citizen portal architectures. He provided invaluable input to enhance the architecture and allow our team to confidently move into the design phase.

Test Plans

Deloitte will verify that 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 testing 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.

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. *Assumption: By stating that we shall be able to accurately predict all possible conditions, plus expected results, for base test and other installations, we assume that such conditions and results are the same as those defined by each and every flow and sub-flow defined by the Use Cases in the System Requirements Specification (SRS) documents, which are in turn described in* ***Section 4.4.2.3****. To the extent the State's request is broader, the parties will need to clarify the scope in contract discussions.*
☑	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.

Subsection 5.8: System Monitoring and Performance

RFP Reference: Attachment B, page 3

Subsection 5.8:

The mainframe 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). 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 or report until it appears in the appropriate queue.

Whenever measurements point out that specific transactions are not meeting their respective performance requirements, the vendor will work with the State to determine the cause of and the solution to the non-performance. Furthermore, the vendor will work with the State to improve functionality to ensure the most cost-effective use of the mainframe network.

The vendor further agrees to 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, the vendor will document the corrective action to be taken and will make the changes in accordance with the documented corrective action plan.

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.

The vendor must ensure that response times meet the following minimum standards:

a. Menus -- The response time must be within three (3) seconds for ninety-five percent (95%) of all these transactions.
b. Simple Inquiries -- The response time must be within four (4) seconds for ninety-five (95%) of all these transactions.
c. Complex Inquiries -- The response time must be within six (6) seconds for ninety-five (95%) of all these transactions.
d. Multi-function Updates -- The response time must be within eight (8) seconds for ninety-five (95%) of all these transactions.
e. Multi-Unit-of-Work Programs -- The response time must be within fifteen (15) seconds for ninety-five (95%) of all these transactions.
f. Web-enabled Programs -- The response times for inROADS and all Web-enabled aspects of RAPIDS must be less than two (2) seconds.

Vendor Response:

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, 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. These make performance and performance monitoring a complex task. In this section we will describe our approach to developing the solution for high performance, our approach to monitoring and addressing performance-related issues, and provide historical information to demonstrate that Deloitte has met or exceeded the performance requirements as set forth.

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 or report 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 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 the Agency.
5. Deloitte will measure evaluate and maintain the application software to meet the following minimum standards:
   a. **Menus.** The response time must be within three (3) seconds for ninety-five percent (95%) of all these transactions.
   b. **Simple Inquiries.** The response time must be within four (4) seconds for ninety-five (95%) of all these transactions.
   c. **Complex Inquiries.** The response time must be within six (6) seconds for ninety-five (95%) of all these transactions.
   d. **Multifunction Updates.** The response time must be within eight (8) seconds for ninety-five (95%) of all these transactions.
   e. **Multi-Unit-of-Work Programs.** The response time must be within fifteen (15) seconds for ninety-five (95%) of all these transactions.
   f. **Web-enabled Programs.** The response times for inROADS and all Web-enabled aspects of RAPIDS must be less than two (2) seconds.
6. Deloitte and the State will work together to develop and agree on the criteria for measuring and evaluating the response times for inROADS and all 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.

Deloitte has proven track record:

- 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.

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

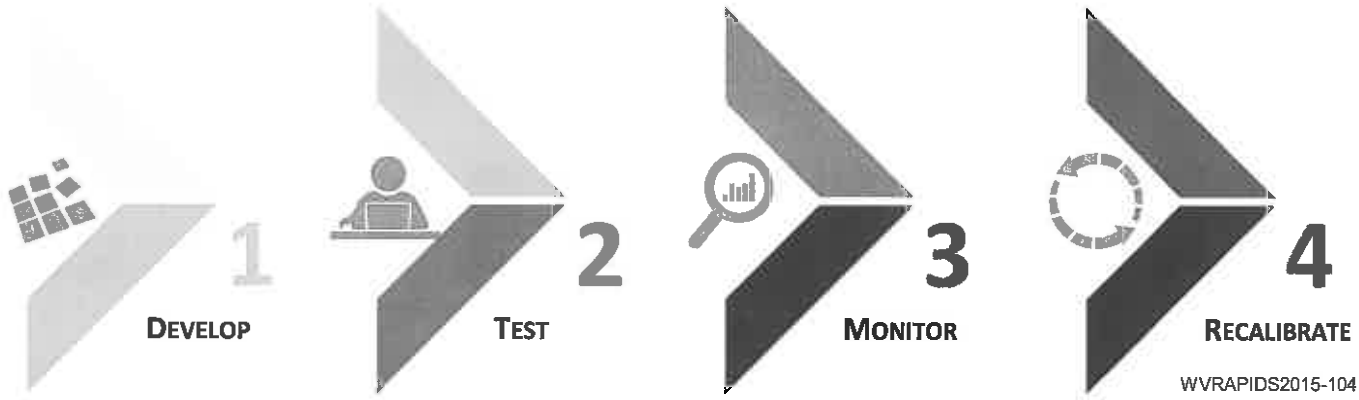


Figure 4.5-10. Standard Monitor and Recalibration Process.
Standard performance improvement processes are built into the development methodologies specified by EVD for SI which defines standards and guidelines for performance improvement, monitoring and recalibrations.

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 etc. 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 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 will 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, batch jobs, etc. 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 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.

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 Monitoring and Management

Regular, proactive, and skilled system monitoring is essential in keeping the pulse of application system to meet the set performance thresholds. This is critical for system health, availability, and functional delivery necessary to meet the Agency's business goals and objectives.

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 4.5-11. 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.

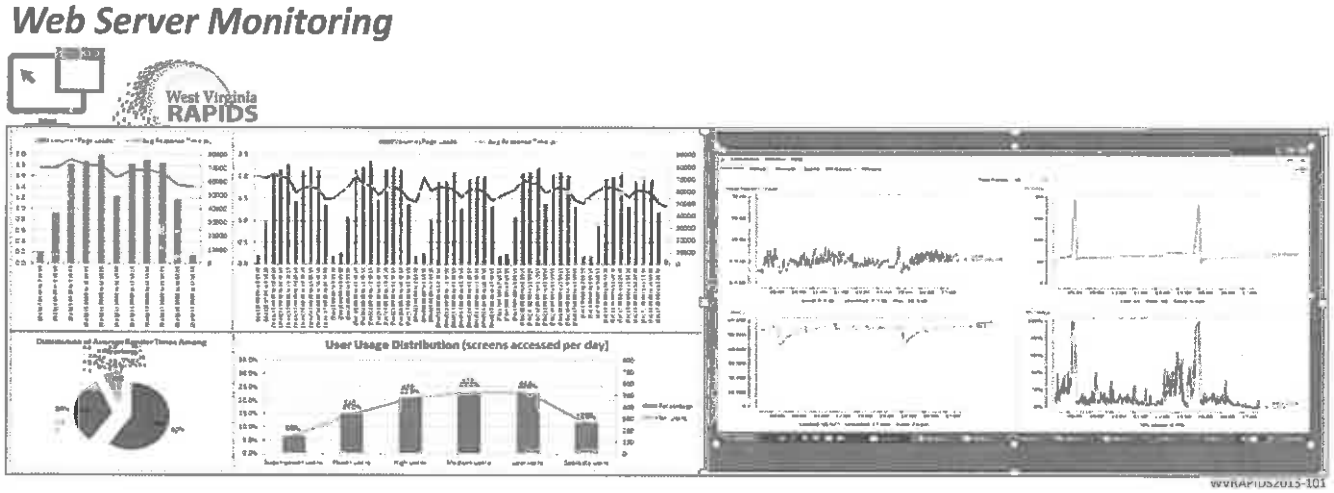


Figure 4.5-12. Web Server Monitoring, Load and Resource Usage in RAPIDS.
Established processes, advance and customized tools provide accurate pulse of the different layers in the enterprise systems. This helps in establishing and meeting performance expectations for enterprise-scale application systems.

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.

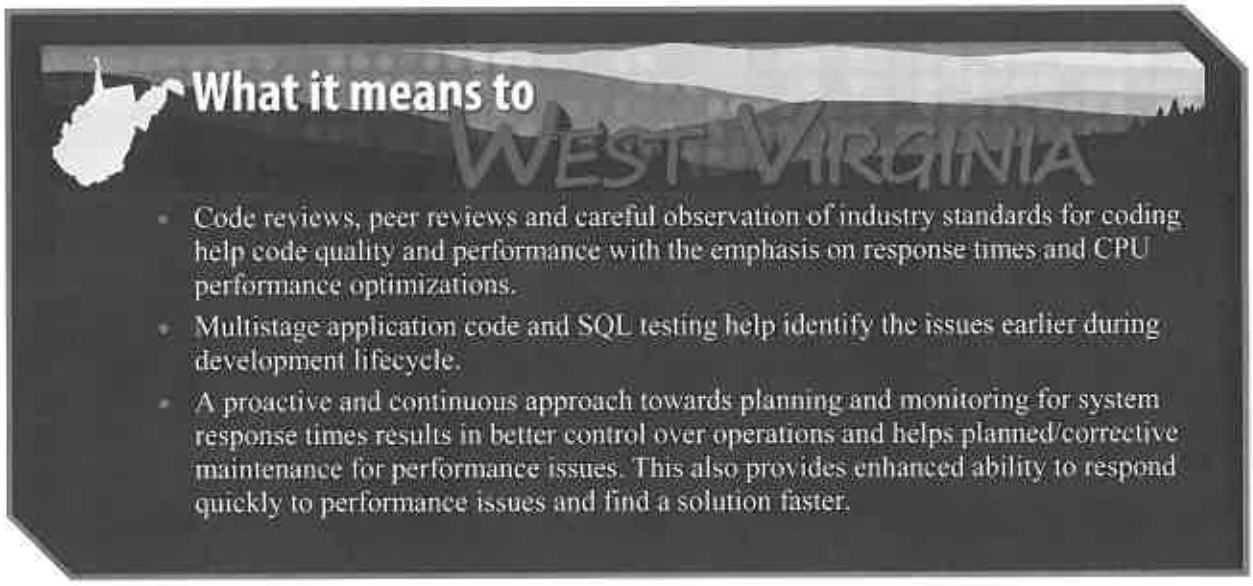
Applied Tools and Technologies

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 all 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
Boomerang	Used to capture periodic system trends and usage by end users, the user distribution, call volumes, error rates etc.

Technology	Usage
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. Deloitte proposes to use NewRelic for system performance monitoring at RAPIDS for next contract period, although the cost for the NewRelic software is not included in our cost bid.

Figure 4.5-13. 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.



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.

Performance Issues Resolution Process

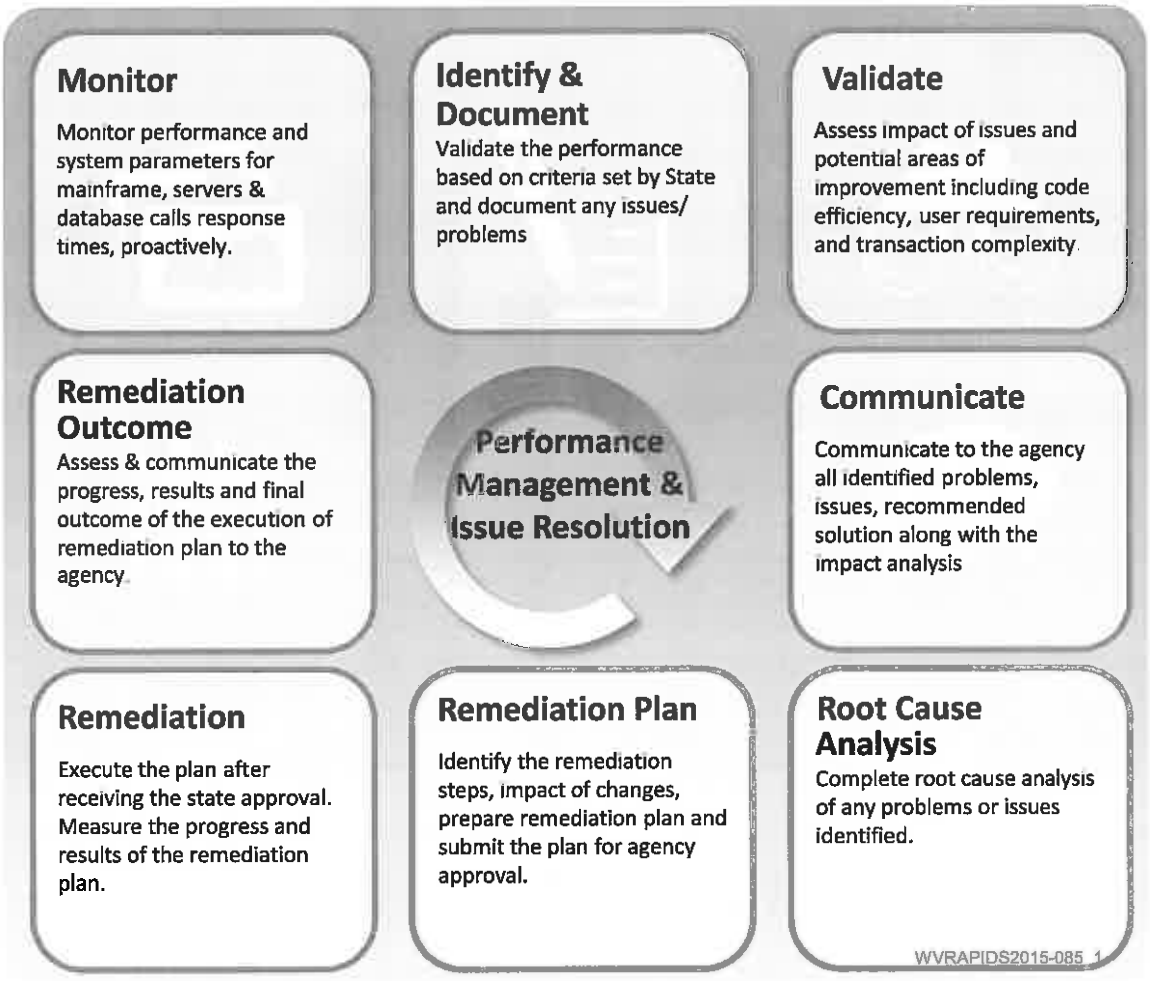


Figure 4.5-14. Performance Issues Resolution Process.
Performance-related issues are identified and documented. Root cause analysis is conducted to identify the problem areas and to help devise a remediation plan.

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.

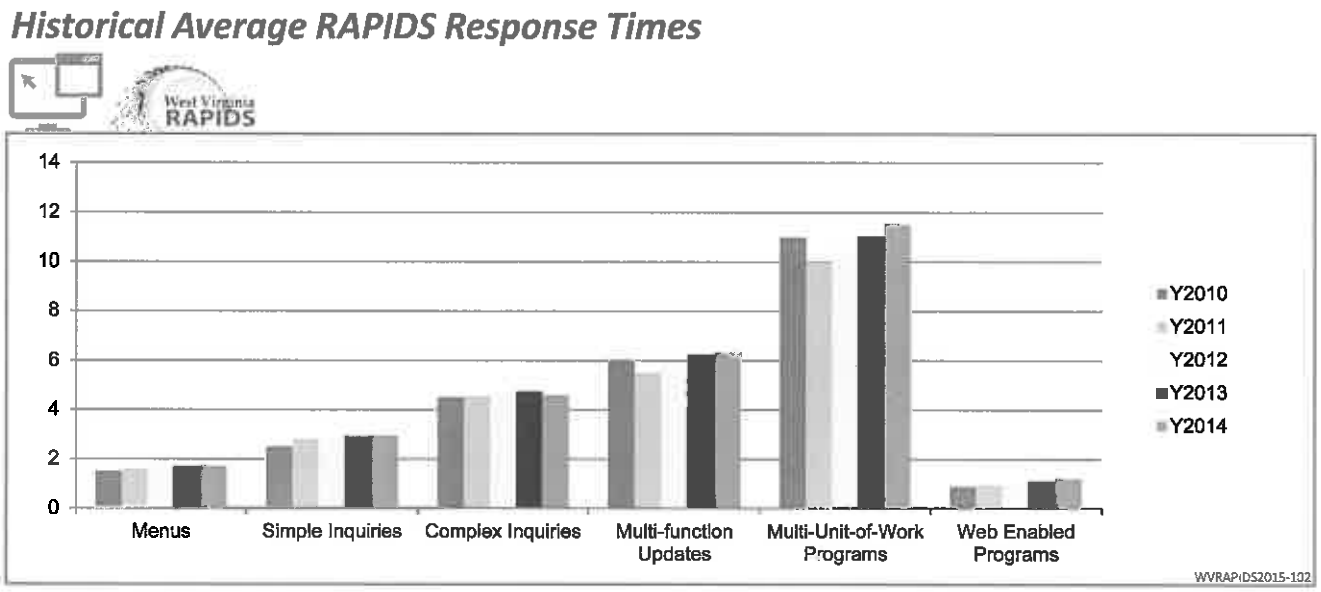


Figure 4.5-15. Historical Average RAPIDS Response Times across Transaction Types.
Deloitte is committed to maintaining system performance up to the Agency standards.

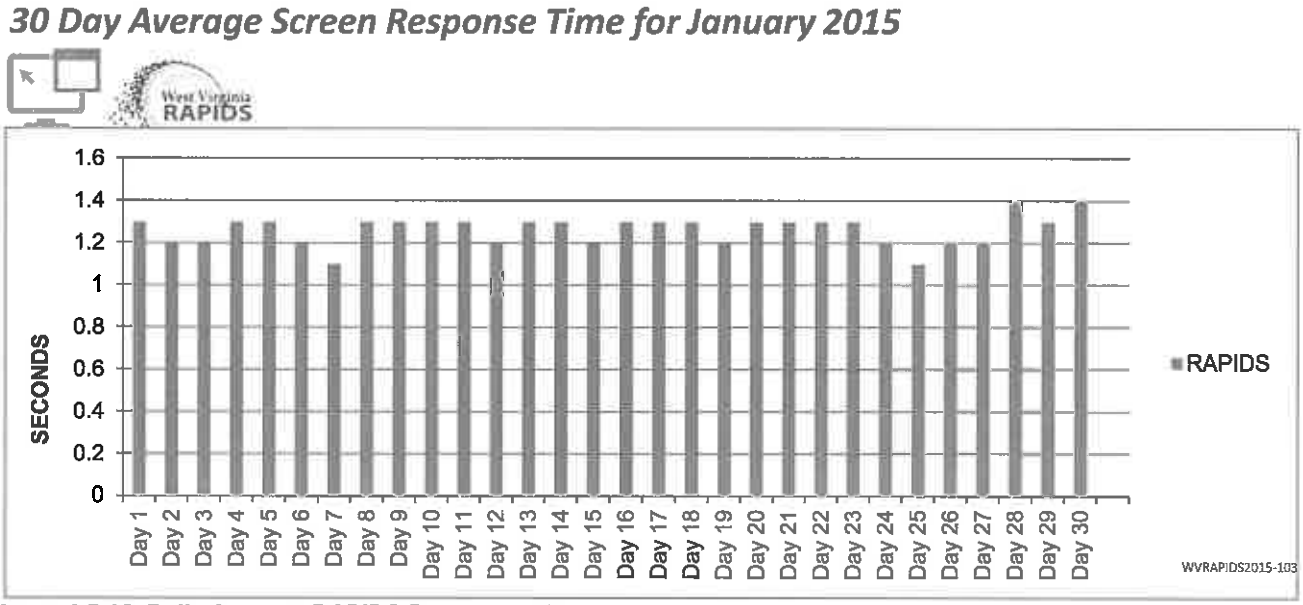


Figure 4.5-16. Daily Average RAPIDS Response Times.
Deloitte routinely monitors a variety of performance-related reports including the one shown here that compares daily response time metrics. When a problem appears, we work diligently to understand the cause and perform remediation if under our control, 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 has been able to deliver 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.

Deloitte meets your requirements:

☑ The mainframe 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). 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 or report until it appears in the appropriate queue. Whenever measurements point out that specific transactions are not meeting their respective performance requirements, the vendor will work with the State to determine the cause of and the solution to the non-performance.

☑ Furthermore, the vendor will work with the State to improve functionality to ensure the most cost-effective use of the mainframe network.

☑ The vendor further agrees to 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, the vendor will document the corrective action to be taken and will make the changes in accordance with the documented corrective action plan.

☑ 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.

☑ The vendor must ensure that response times meet the following minimum standards:

a. Menus -- The response time must be within three (3) seconds for ninety-five percent (95%) of all these transactions.

b. Simple Inquiries -- The response time must be within four (4) seconds for ninety-five (95%) of all these transactions.

c. Complex Inquiries -- The response time must be within six (6) seconds for ninety-five (95%) of all these transactions.

d. Multi-function Updates -- The response time must be within eight (8) seconds for ninety-five (95%) of all these transactions.

e. Multi-Unit-of-Work Programs -- The response time must be within fifteen (15) seconds for ninety-five (95%) of all these transactions.

f. Web-enabled Programs -- The response times for inROADS and all Web-enabled aspects of RAPIDS must be less than two (2) seconds.

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.

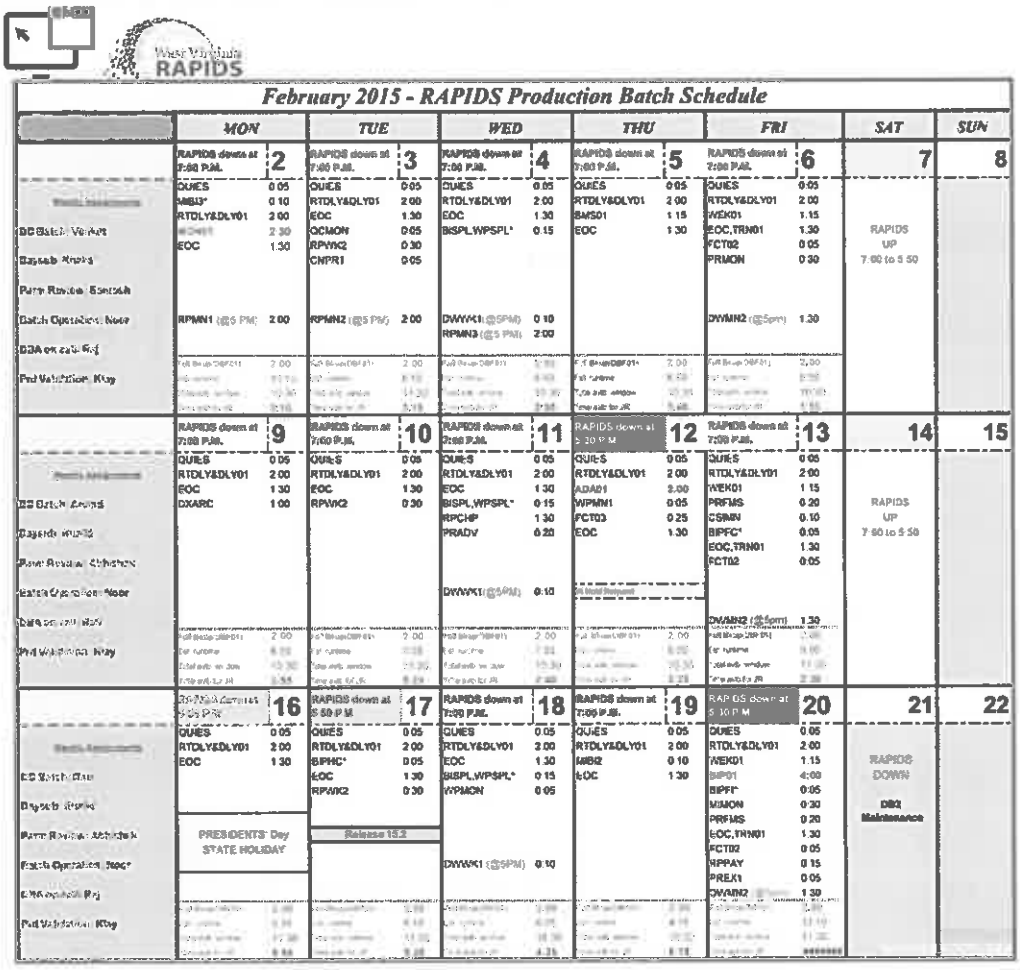
We will maintain RAPIDS online availability from 7 a.m. to 7 p.m. through proactive monitoring of RAPIDS processes, and responding quickly to warning signs and taking corrective action, often before users are impacted. The RAPIDS online application has been available more than 99 percent of the time 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.

- 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 4.5-17.

Sample of RAPIDS Production Batch Schedule



February 2015 - RAPIDS Production Batch Schedule

	MON	TUE	WED	THU	FRI	SAT	SUN
	RAPIDS down at 7:00 P.M. **2**	RAPIDS down at 7:00 P.M. **3**	RAPIDS down at 7:00 P.M. **4**	RAPIDS down at 7:00 P.M. **5**	RAPIDS down at 7:00 P.M. **6**	**7**	**8**
	QUES 0 05 MBU* 0 10 RTDLY&DLY01 2 00 EOC 1 30	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 OCMON 0 05 RPWK2 0 30 CNPR1 0 05	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 BISPL,WPSPL* 0 15	QUES 0 05 RTDLY&DLY01 2 00 BMS01 1 15 EOC 1 30	QUES 0 05 RTDLY&DLY01 2 00 WEK01 1 15 EOC,TRN01 1 30 FCT02 0 05 PRMON 0 30	RAPIDS UP 7:00 to 5:50	
	RPMN1 (@5 PM) 2 00	RPMN2 (@5 PM) 2 00	DWWK1 (@5PM) 0 10 RPMN3 (@5 PM) 2 00		DWMN2 (@5pm) 1 30		
	RAPIDS down at 7:00 P.M. **9**	RAPIDS down at 7:00 P.M. **10**	RAPIDS down at 7:00 P.M. **11**	RAPIDS down at 5:30 P.M. **12**	RAPIDS down at 7:00 P.M. **13**	**14**	**15**
	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 DXARC 1 00	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 RPWK2 0 30	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 BISPL,WPSPL* 0 15 RPCHP 1 30 PRADV 0 20	QUES 0 05 RTDLY&DLY01 2 00 ADA01 2 00 WPMN1 0 05 FCT03 0 25 EOC 1 30	QUES 0 05 RTDLY&DLY01 2 00 WEK01 1 15 PRFMS 0 20 CSMN 0 10 BIPFC* 0 05 EOC,TRN01 1 30 FCT02 0 05	RAPIDS UP 7:00 to 5:50	
			DWWK1 (@5PM) 0 10		DWMN2 (@5pm) 1 30		
	PRESIDENTS' Day STATE HOLIDAY **16**	RAPIDS down at 5:50 P.M. **17**	RAPIDS down at 7:00 P.M. **18**	RAPIDS down at 7:00 P.M. **19**	RAPIDS down at 5:30 P.M. **20**	**21**	**22**
	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30	QUES 0 05 RTDLY&DLY01 2 00 BIPHC* 0 05 EOC 1 30 RPWK2 0 30 Release 15.2	QUES 0 05 RTDLY&DLY01 2 00 EOC 1 30 BISPL,WPSPL* 0 15 WPMON 0 05	QUES 0 05 RTDLY&DLY01 2 00 MBI2 0 10 EOC 1 30	QUES 0 05 RTDLY&DLY01 2 00 WEK01 1 15 BIP01 4:00 BIPFI* 0 05 MMON 0 30 PRFMS 0 20 EOC,TRN01 1 30 FCT02 0 05 RPPAY 0 15 PREX1 0 05 DWMN2 1 30	RAPIDS DOWN DB2 Maintenance	
			DWWK1 (@5PM) 0 10				

Figure 4.5-17. Monthly Batch Calendar for February 2015.
Shows RAPIDS will not be available after 5:50 p.m. on Thursday, February 12 to support "Adverse" action process and available on Saturday February 7 and February 14 between 7 a.m. to 5:50 p.m.

Deloitte's proactive approach towards online availability planning, monitoring and reporting, problem escalation and resolution, and ability to quickly 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.

- 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.

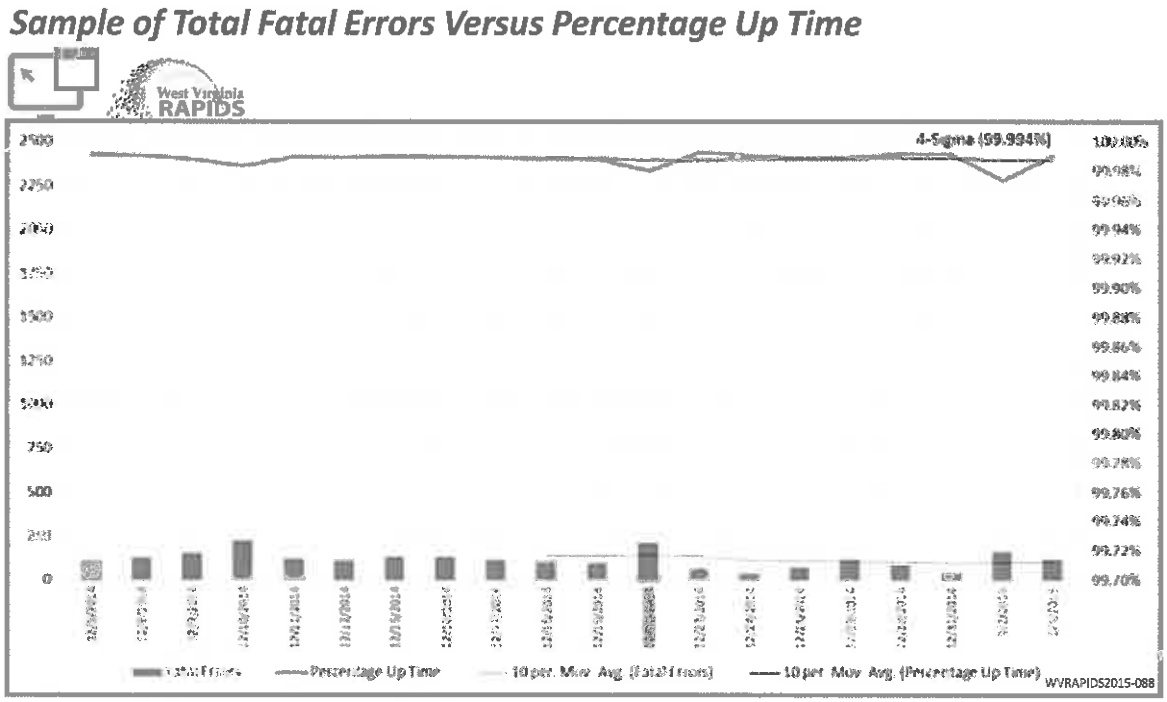


Figure 4.5-18. Trend of system availability.
Shows that RAPIDS was available above 99.96 percent of the time.

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

Cause	Effect
Fatal Application Errors	• Application errors may cause delivery of welfare services to come to a standstill if a worker cannot execute basic transactions

Figure 4.5-19. 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 Nonavailability

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 **Goal 2: Technical Requirements Section 4.4.2.2 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 **Goal 2: Technical Requirements Section 4.4.2.2 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.

This is made possible by the robust escalation process followed by the Deloitte team. Please refer to **Goal 2: Technical Requirements Section 4.4.2.2 Emergency Maintenance** for more details.

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 4

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 update 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.

Building Success in Mass Change Through Proven Processes

A popular adage goes "To Err is Human; To Really Foul Things Up Requires a Computer." Nowhere is this adage more appropriate than in the area of mass change. Mass change performs updates to a large number of cases, up to and including every case in the system, at one time. The stakes are high, as a mistake can mean incorrect benefits for hundreds of thousands of people. And an errant mass mailing can result in confusion and embarrassment to the bureau and department.

Over the past 17 years, Deloitte has achieved a near perfect success rate in more than 77 scheduled mass changes and mass mailings. We have experienced system downtime of just 90 minutes due to a mass change in the past 10 years. Our mass change efficiency has been improved from multiple days to less than six hours including validations.

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 stress on the Agency.

The critical components of a successful mass changes and mass mailings are depicted in the following figure.

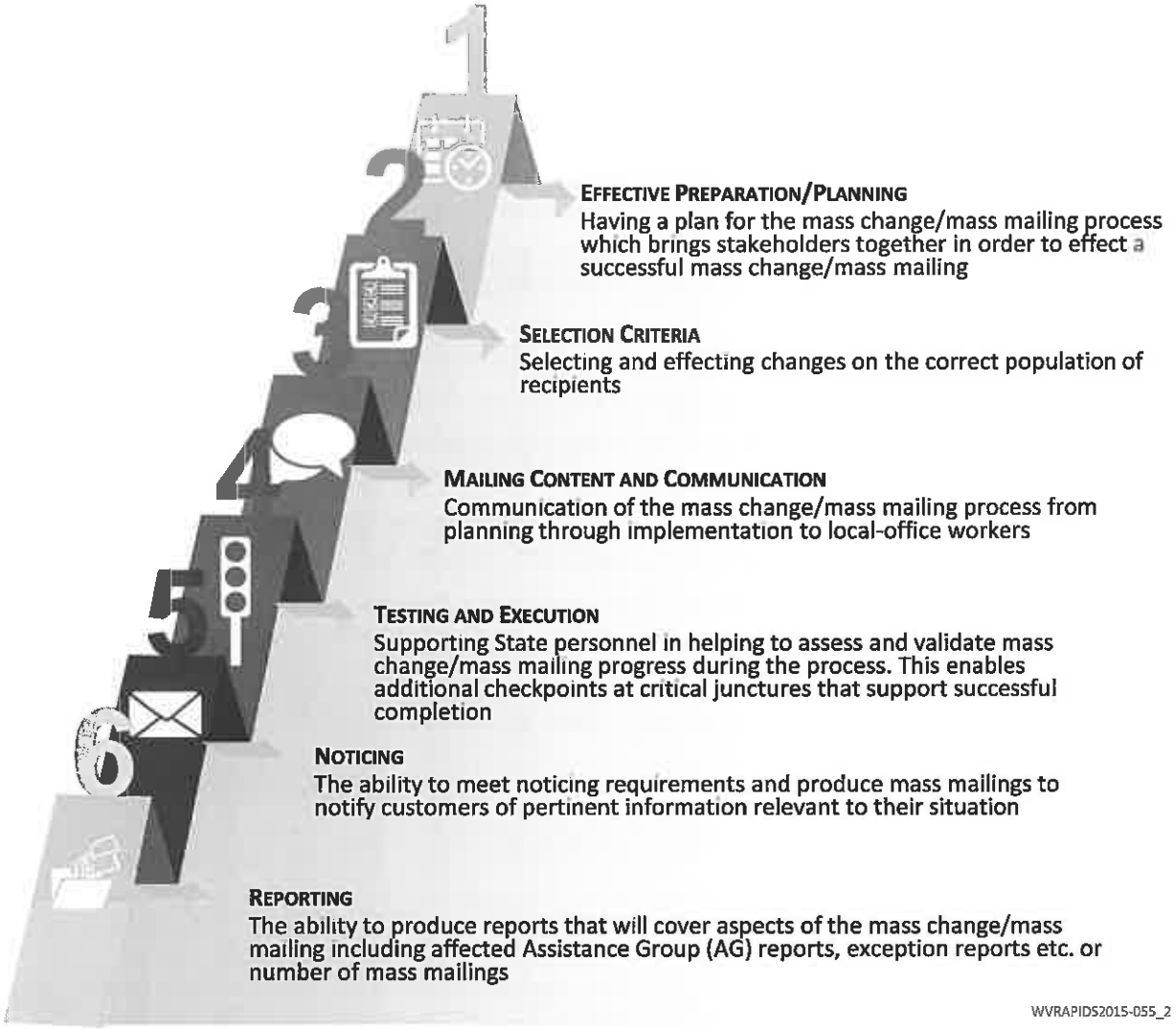


Figure 4.5-20. Structured approach to Mass Change.

Mass Change/Mass Mailing Process

Ordinarily, the architecture behind running mass changes/mass mailings is fairly static, although periodic enhancements and requirement changes do sometimes require a new life cycle of software development to be initiated on Mass Change/Mass Mailings. Deloitte has been operating the Mass Change/Mass Mailing requirements on the RAPIDS project for many years, we have – alongside Agency 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, will define the exact needs for the change. 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 Agency will validate the cases and ensure 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 standard Mass Changes are typically easy processes due to the requirements and selection criteria 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 an SRS may be required for irregular Mass Changes and have all been used in the past. Working with the Agency to define the requirements for ad hoc mass changes/mailings will allow for a baseline understanding on each and every mass change/mailing. Nontransition of existing mass changes/mailings reduces risk of requirements lost during requirements gathering.

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 greatly 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 greatly complex one which 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 which 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 story 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 **Mandatory Requirements Subsection 5.7 Software Testing and Quality Assurance** are adhered to

for Mass Change, although since mass changes often represent merely an implementation rather than new software, validation steps play a more important part in the authentication process.

After completing our unit and integration testing, we work with Agency staff and West Virginia IS&C to determine that the mass change/mass mailing is correctly processed in the User Acceptance Test environment. Further, once the mass change/mailing is completed in production, we verify results to confirm change counts and content of the mailings looks correct. We understand that what is produced from mass change/mass mailing is seen directly by customers, so this piece of verification is critical for 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, as well as 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.

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.

Subsection 5.11: Cost-effective RAPIDS Operation

RFP Reference: Attachment B, page 4

Subsection 5.11:

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.

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:

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.

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.

- 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.

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 Figure 4.5-21 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 4.5-21. 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.

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.

Subsection 5.12: State IT Procedures and Conventions

RFP Reference: Attachment B, page 5

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.

Standards and Conventions in Practice

Examples of the naming conventions employed by RAPIDS are related to our database naming. 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:

Online programs will be named as:

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 4.5-22. RAPIDS Database Naming Standards.

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.

Subsection 5.13: Database Operations

RFP Reference: Attachment B, page 5

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.

RAPIDS and associated components (inROADS, RAFT, MDM, and ESB) currently use two primary databases:

1. DB2 on ZOS Mainframe and
2. Oracle on Red hat Linux servers

Deloitte has IBM-certified DB2 DBA team with knowledge in scheduling database utilities. Our current monthly batch schedule includes database backups and DB2 maintenance schedules. Backup utilities are scheduled at the end of nightly batch schedules. These utility backup jobs are scheduled in Control M batch scheduler as a separate cycle WRCDBF01. Whenever new tables are created as part of application enhancements the corresponding backup and recovery utilities are updated to guarantee recoverability. RAPIDS DBA team performs monthly database maintenance as per the schedule agreed by State. This monthly maintenance includes utilities including reorg, runstats, rebind package, and modify. Apart from the monthly maintenance ad hoc maintenance of database will be scheduled based on daily monitoring of the database health status. These utility schedules are very critical to maintain the performance of database operations and recoverability of data in case of disaster.

We also use unload utilities as part of data warehouse ETL process to extract data from 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.

Deloitte DBAs will perform similar duties for the Oracle databases related to Deloitte managed environments at Agency direction, although many of these tasks are currently performed by the DHHR OMIS DBA team. The Deloitte application DBA team does not have authorization to schedule utilities on Oracle databases. Deloitte application DBA team does perform activities like table definitions, datafixes, monitoring the logs, trace files and table space growth. We work with OMIS DBA team in scheduling backups, reorgs, gathering statistics and other database utilities. Currently Oracle database backups are scheduled on all weekdays.

Deloitte meets your requirements:

The vendor, upon request by the State, must schedule database backups, reorgs, runstats, and other database utilities.