



Sandy Integrated Recovery Operations and Management System (SIROMS) Maintenance and Hosting – Response



**New Jersey Department of
Community Affairs
Bid# 18DPP00226**

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Founded in 1976, CGI is one of the world's largest IT and business consulting services firms. We help clients achieve their goals, including becoming customer-centric digital organizations, through high-end IT and business consulting, systems integration and outsourcing services combined with a unique client proximity model and global center of excellence network.

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The information in this proposal is submitted on May 24, 2018 on behalf of CGI by the following authorized representative:

Paul Doty
Vice President, Consulting Services
CGI Technologies and Solutions
3525 Quakerbridge Road, Hamilton Twp, NJ 08619
(609) 789-2016

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1 FORMS, REGISTRATIONS, AND CERTIFICATIONS (SECTIONS 4.4.1 & 4.4.2)

As directed by Request for Proposal (RFP), CGI has provided all required Forms, Registrations, and Certifications in Volume I of the Proposal. Please refer to this document for CGI's response to the following Forms, Registrations, and Certifications.

1.1 Offer and Acceptance Page

1.1.1 MACBRIDE PRINCIPALS CERTIFICATION

Please refer to the signed Offer and Acceptance page provided below for this Certification and the Offer and Acceptance page uploaded to NJStart with this bid.

OFFER AND ACCEPTANCE

State of New Jersey
 Department of the Treasury
 Division of Purchase and Property
 33 West State Street, P.O. Box 208
 Trenton, New Jersey 08625-0230

Bid Solicitation RFP#: 18DPP00226
 Bid Solicitation (RFP) Title: Sandy Integrated Recovery Operations and Management System
 Blanket P.O./Contract Term: Refer to Section 5.2 of Bid Solicitation (RFP) Open to Cooperative Purchasing

OFFER (To be completed by the Vendor (Bidder))

TO THE STATE OF NEW JERSEY:
 The Undersigned hereby offers and agrees to furnish the goods, products, or services in compliance with all terms of this Master Blanket Purchase Order (Blanket P.O./Contract) as defined in Section 4.04 of the Bid Solicitation (Request for Proposal) (RFP).

Vendor (Bidder): CGI Technologies and Solutions Inc. Title: Vice President, Consulting Services
 Address: 11325 Random Hill Road E-Mail Address: paul.doty@cgi.com
 City, State, ZIP: Fairfax VA 22030 Phone Number: 711-417-1617
 Authorized Signature: [Redacted] Fax Number: [Redacted]
 Printed Name: Paul Doty FEN: [Redacted]

Pursuant to P.L. 2017, c. 95, please indicate whether the Vendor (Bidder) identifies as any of the following as defined in N.J.S.A. 52:23-11:
 Minority-Owned Business Women-Owned Business Not Applicable

By signing and submitting this Offer, the Vendor (Bidder) certifies and confirms that:
 1. The Vendor (Bidder) has read, understands, and agrees to all terms, conditions, and specifications set forth in the State of New Jersey Standard Terms and Conditions and the provisions set forth in Bid Solicitation (RFP) Section 4.4.1.1 MacBride Principals Certification, Section 4.4.1.2 MacBride Principals Certification, Section 4.4.1.3 MacBride Principals Certification, and Section 4.4.1.4 New Jersey Business Ethics Source Certification;
 2. The Vendor's Bidder's failure to meet any terms and conditions of the Blanket P.O. (Contract) as defined in the Bid Solicitation (RFP) shall constitute a breach and may result in suspension or debarment from further State bidding;
 3. A defaulting Vendor (Contractor) may also be liable, at the option of the State, for the difference between the Blanket P.O. (Contract) price and the price bid by an alternate vendor of the goods or services in addition to other remedies available; and
 4. By signing and submitting this Offer, the Vendor (Bidder) consents to receipt of any and all documents related to this Bid Solicitation (RFP) and the resulting Blanket P.O. (Contract) by electronic medium or facsimile.

THIS FORM SHOULD BE SIGNED, COMPLETED AND INCLUDED WITH THE VENDOR'S (BIDDER'S) QUOTE (PROPOSAL).

ADDITIONAL VENDOR (BIDDER) REQUIREMENTS (For State Use Only)

Bid Security Amount: Payment Security Amount:
 Performance Security Amount: Retainage Percentage:

For outside contracts only, a Vendor (Bidder) must be registered with the N.J. Division of Revenue and Enterprise Services, Small Business Registration and MWBE Certification Services Unit. Please refer to N.J.A.C. 17:27-3.1 & 17:27-1.2 for additional information.

ACCEPTANCE OF OFFER (For State Use Only)
 This Offer above is hereby accepted and now constitutes a Blanket P.O. (Contract) with the State of New Jersey. The Vendor (Contractor) is now bound to sell the goods, products, or services listed by the attached Blanket P.O. (Contract) as defined by Section 2.0 of the Bid Solicitation (RFP). The Vendor (Contractor) shall not commence any work or provide any good, product, or service under this Blanket P.O. (Contract) until the Vendor (Contractor) complies with all requirements set forth in the Bid Solicitation (RFP) and receives written notice to proceed.

Blanket P.O./Contract Number:
 Blanket P.O./Contract Award Date: Blanket P.O./Contract Effective Date:
 State of New Jersey Authorized Signature:

1.1.2 NO SUBCONTRACTOR CERTIFICATION

Please refer to the Subcontractor Utilization Plan in Section 1.3 for the participation levels of subcontractors from Blue Streak Technologies LLC and Horne LLP to provide services for this Blanket P.O. Contract.

1.1.3 NON-COLLUSION

Please refer to the signed Offer and Acceptance page of this proposal for this Certification.

1.1.4 NEW JERSEY BUSINESS ETHICS GUIDE CERTIFICATION

Please refer to the signed Offer and Acceptance page of this proposal for this Certification.

1.2 NJ Standard Bid Solicitation Forms Required with the Quote

1.2.1 OWNERSHIP DISCLOSURE FORM

Please note that CGI had previously uploaded this form to NJStart and it is available for reference on NJStart. Since NJStart team notified CGI and other vendors that NJ Start application is currently experiencing technical difficulties with the NJSTART forms functionality (effective 5/14-5/30/2018). Vendors have been directed to the:

“Division of Purchase and Property website for the Division forms required for all Proposal Submissions. Please be sure to also review and include the Bid Solicitation specific form(s), located on the Attachments Tab of the Bid Solicitation, with the uploaded Quote.”

The completed form is provided below. The form along with the attachments have been uploaded as an attachment to the bid.

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY
33 WEST STATE STREET, P.O. BOX 230
TRENTON, NEW JERSEY 08645-0230

OWNERSHIP DISCLOSURE FORM

BID SOLICITATION #: 18DPP0026 VENDOR/BIDDER: CGI Technologies and Solutions Inc.

PART 1
PLEASE COMPLETE THE QUESTIONS BELOW BY CHECKING EITHER THE "YES" OR THE "NO" BOX. ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO COMPLETE THIS FORM PURSUANT TO N.J.S.A. 52:25-24.3. PLEASE NOTE THAT IF THE VENDOR/BIDDER IS A NON-PROFIT ENTITY, THIS FORM IS NOT REQUIRED.

- Are there any individuals, corporations, partnerships, or limited liability companies owning a 10% or greater interest in the Vendor/Bidder? YES NO
If the answer to question 1 is "NO", PLEASE SIGN AND DATE THE FORM.
If the answer to question 1 is "YES", PLEASE ANSWER QUESTIONS 2 - 4 BELOW.
- Of those parties owning a 10% or greater interest in the Vendor/Bidder, are any of those parties individuals? YES NO
- Of those parties owning a 10% or greater interest in the Vendor/Bidder, are any of those parties corporations, partnerships, or limited liability companies? YES NO
- If your answer to Question 3 is "YES", are there any parties owning a 10% or greater interest in the corporation, partnership, or limited liability company referenced in Question 3? YES NO

IF ANY OF THE ANSWERS TO QUESTIONS 2 - 4 ARE "YES", PLEASE PROVIDE THE REQUESTED INFORMATION IN PART 2 BELOW.

PART 2
PLEASE PROVIDE FURTHER INFORMATION RELATED TO QUESTIONS 2 - 4 ANSWERED AS "YES".
If you answered "YES" to questions 2, 3, or 4, you must disclose identifying information related to the individual, corporation, partnership, or limited liability companies owning a 10% or greater interest in the Vendor/Bidder. If one or more of these entities is itself a corporation, partnership, or limited liability company, you must also disclose all parties that own a 10% or greater interest in that corporation, partnership, or limited liability company. This information is required by statute.

INDIVIDUALS

NAME	Secret Godin	DATE OF BIRTH	[REDACTED]
ADDRESS 1	[REDACTED]		
ADDRESS 2	[REDACTED]		
CITY	[REDACTED]		

NAME		DATE OF BIRTH	
ADDRESS 1			
ADDRESS 2			
CITY		STATE	ZIP

NAME		DATE OF BIRTH	
ADDRESS 1			
ADDRESS 2			
CITY		STATE	ZIP

Attach Additional Sheets if Necessary.

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PART 2 continued
PARTNERSHIPS, CORPORATIONS, LIMITED LIABILITY COMPANIES

ENTITY NAME	
PARTNER NAME	
ADDRESS 1	
ADDRESS 2	
CITY	STATE ZIP

ENTITY NAME	CGI GROUP INC
PARTNER NAME	
ADDRESS 1	2711 Convent Road, Suite 400
ADDRESS 2	
CITY	Warren, NJ
	STATE NJ ZIP 07059

ENTITY NAME	CGI GROUP INC
PARTNER NAME	
ADDRESS 1	1300 Three Lakeside Blvd W, 4th Floor
ADDRESS 2	
CITY	Mississauga, Ontario
	STATE Ontario ZIP M5S 1Y4

ENTITY NAME	
PARTNER NAME	
ADDRESS 1	
ADDRESS 2	
CITY	STATE ZIP

Attach Additional Sheets if Necessary.

In the alternative, to comply with the ownership disclosure requirement, a Vendor/Bidder, with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10% or greater beneficial interest in the publicly traded entity as of the last annual filing with the Federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10% or greater beneficial interest, also shall submit links to the websites containing the tax annual filings with the Federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10 percent or greater beneficial interest. N.J.S.A. 52:25-24.2.

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State in writing of any changes to the information contained herein that I am aware that it is a legal obligation to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

[REDACTED SIGNATURE]

[REDACTED TITLE]

[REDACTED PHONE]

Page 2 of 2

<p style="text-align: center;">CGI Technologies and Solutions Inc. Officers Attachment 1 Ownership Disclosure Form</p> <p><u>10% and greater shareholders of a corporation</u></p> <p>CGI Technologies and Solutions Inc. is a wholly owned subsidiary of CGI Group Holdings USA Inc., which is wholly-owned subsidiary of CGI Group Inc.</p> <p>There is no parent corporation to CGI Group Inc., which Class A Subordinate Voting Shares are publicly-traded on the New York and Toronto Stock Exchanges. As of May 24, 2018, the only person(s) who beneficially-owned, directly or indirectly, or exercised control or direction over 10% or more of CGI Group Inc.'s outstanding Class A Subordinate Voting Shares or Class B shares were Serge Godin. No publicly-held corporation owns 10% or more of CGI Group Inc.'s Class A or B shares.</p> <p style="text-align: right;">Page 1 / 1</p>	<p style="text-align: center;">CGI Technologies and Solutions Inc. Officers Attachment 2 Ownership Disclosure Form</p> <table border="1"> <thead> <tr> <th>Officers Name</th> <th>Title</th> </tr> </thead> <tbody> <tr> <td>BESSONNETE, Richard</td> <td>Senior Vice-President, U.S. Industry Solutions</td> </tr> <tr> <td>BOUCHER, Dominic</td> <td>Vice-President, Consumer United States, Commercial & State Government</td> </tr> <tr> <td>BOLLANGER, Francois</td> <td>Executive Vice-President and Chief Financial Officer</td> </tr> <tr> <td>BURNEY, Lynda</td> <td>Senior Vice-President, U.S. Mid-Atlantic</td> </tr> <tr> <td>DELCADO, Dave</td> <td>Operations, Senior Vice-President, U.S. West Operations</td> </tr> <tr> <td>EMRE, Serdar</td> <td>Executive Vice-President, Chief Legal Officer and Corporate Secretary</td> </tr> <tr> <td>HENDERSON, David L.</td> <td>President, United States Operations</td> </tr> <tr> <td>JAMES, Christopher</td> <td>Senior Vice-President, Industry Solutions</td> </tr> <tr> <td>McFADDEN, Eric Lee</td> <td>Vice-President, General Counsel and Assistant Corporate Secretary</td> </tr> <tr> <td>PERRON, Steve</td> <td>Senior Vice-President, Finance and Treasury</td> </tr> <tr> <td>ROGEMAN, John</td> <td>Senior Vice-President, U.S. Central & South Operations</td> </tr> <tr> <td>ROGAN, MAX</td> <td>Vice-President, Legal Affairs and Deputy Corporate Secretary</td> </tr> <tr> <td>SCHINDLER, George D</td> <td>Chief Executive Officer</td> </tr> <tr> <td>STARBUCK, Steve</td> <td>Senior Vice-President, U.S. Northeast Operations</td> </tr> </tbody> </table>	Officers Name	Title	BESSONNETE, Richard	Senior Vice-President, U.S. Industry Solutions	BOUCHER, Dominic	Vice-President, Consumer United States, Commercial & State Government	BOLLANGER, Francois	Executive Vice-President and Chief Financial Officer	BURNEY, Lynda	Senior Vice-President, U.S. Mid-Atlantic	DELCADO, Dave	Operations, Senior Vice-President, U.S. West Operations	EMRE, Serdar	Executive Vice-President, Chief Legal Officer and Corporate Secretary	HENDERSON, David L.	President, United States Operations	JAMES, Christopher	Senior Vice-President, Industry Solutions	McFADDEN, Eric Lee	Vice-President, General Counsel and Assistant Corporate Secretary	PERRON, Steve	Senior Vice-President, Finance and Treasury	ROGEMAN, John	Senior Vice-President, U.S. Central & South Operations	ROGAN, MAX	Vice-President, Legal Affairs and Deputy Corporate Secretary	SCHINDLER, George D	Chief Executive Officer	STARBUCK, Steve	Senior Vice-President, U.S. Northeast Operations
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1.2.2 DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM

The completed form is provided below. The form has been uploaded as an attachment to this bid.

STATE OF NEW JERSEY
 DEPARTMENT OF THE TREASURY
 DIVISION OF PURCHASE AND PROPERTY
 13 WEST STATE STREET, P.O. BOX 139
 TRENTON, NEW JERSEY 08646-0139

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM

WEB SOLICITATION #: 18DPP00226 VENDOR NUMBER: 001 (Corporate/Institutional)

TABLE 1
LEGISLATION
 VENDORS MUST COMPLETE TABLE BY CHECKING ONE OF THE BOXES. FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE BIDDER NONRESPONSIVE.

Parties to Public Law 2018-25, 2018 (enacted on July 26, 2018) that submit a bid or proposal or otherwise propose to enter into or renew a contract that requires the utilization of Iran as a source, under contract or permit, that either the vendor or contractor, or any of its parents, subsidiaries, or affiliates, is located in the Department of the Treasury's Chapter 22 list, are a prohibited party subject to investment activities in Iran. See Chapter 22 for the full list of the prohibited parties. Vendors are required to complete this table to ensure compliance with the law. Vendors should enter this information on the bid form and submit it with the bid. Failure to complete this table will render a vendor's bid non-responsive. If the Director of the Division of Purchase and Property finds a vendor's bid to be in violation of this law, she shall take such action as appropriate and permitted by law, rule or contract, including but not limited to, opening questions, seeking clarification, reviewing proposals, including the party in default and seeking bid return or rescission of the bid.

TABLE 2
PLEASE PROVIDE ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN.
 If you checked Box 1B, identify the individual, corporate and/or partnership of the individual or the partnership, or any of its parents, subsidiaries or affiliates, engaged in the investment activities in Iran by completing the table below.

KEY: NAME: _____
 RELATIONSHIP TO VENDOR/BIDDER: _____
 DESCRIPTION OF ACTIVITIES: _____
 DURATION OF ENGAGEMENT: _____
 ANTICIPATED END DATE: _____
 VENDOR/BIDDER CONTACT NAME: _____
 VENDOR/BIDDER CONTACT PHONE NO.: _____
 (Use 6-AAA and 800-877-XXXX)

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information is true and accurate to the best of my knowledge and that and certify I acknowledge that the State of New Jersey is moving on the information provided herein and that the Vendor/Bidder is subject to investigation through the completion of this certification and the completion of this certification may be subject to the review of any agency in the Department of the Treasury that I am aware that it is a criminal offense to make a false statement or conceal information. If I do not wish to certify compliance with the law, rule or contract, I will not submit this certification and my bid will be considered non-responsive. I will not disclose any confidential information to any third party without the prior written consent of the Vendor/Bidder.

Signature: _____
 Title: *John A. Kelly, Vice President, Consulting Services*
 Date: _____

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1.3 Subcontractor Utilization Plan

The participation levels of subcontractors from Blue Streak Technologies LLC and Horne LLP to provide services for this Blanket P.O. Contract. The Subcontractor Utilization Plan is provided below. The form is also attached to the bid.

1.4 Small Business Subcontracting Set-Aside Blanket PO

No NJ-based small business subcontractors are included in this bid.

1.5 Business Registration

CGI's business registration certificate with the state is provided below.

1.6 Disclosure of Investigations and Other Actions Involving Vendor/Bidder Form

CGI's Disclosure of Investigations and Other Actions Involving Vendor/Bidder Form is provided below. It has been added as an attachment to the CGI bid on NJStart.

CGI Technologies and Solutions Inc. Officers
 Attachment 1
 DISCLOSURE FORM OF INVESTIGATIONS AND OTHER ACTIONS INVOLVING
 THE VENDOR/BIDDER FORM

Officer Name	Title	Address	DOB
BOCCARTE, Ronald	Senior Vice President, U.S. Industry Solutions	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
BOUCHER, Dennis	Vice President, Capital Market Data, Commercial & State Securities	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
BOULANGER, François	Regional Vice President and Chief Financial Officer	1300 Saint-Louisville Blvd 11th 220 Floor Montreal, Quebec H3C 1T4	[REDACTED]
BURKEY, Lynn	Senior Vice President, U.S. Mid Atlantic Operations	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
DELOACH, Dave	Senior Vice President, U.S. West Operations	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
ELBE, David	Executive Vice President, Charlotte/Charm and Corporate Secretary	1300 Saint-Louisville Blvd 11th 220 Floor Montreal, Quebec H3C 1T4	[REDACTED]
FERRELL, David	President, Mid-Atlantic Operations	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
JAMES, Christopher	Senior Vice President, Industry Solutions	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
METZGER, Brian	Vice President, General Counsel and Assistant General Secretary	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
PERSON, Steve	Senior Vice President, Finance and Treasury	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
ROSEBANK, Jeff	Senior Vice President, U.S. Central & South Operations	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]
ROGAN, Max	Vice President, Legal Affairs and Deputy Corporate Secretary	1300 Saint-Louisville Blvd 11th 220 Floor Montreal, Quebec H3C 1T4	[REDACTED]
SCHMIDT, George G.	Chief Executive Officer	1300 Saint-Louisville Blvd 11th 220 Floor Montreal, Quebec H3C 1T4	[REDACTED]
STRAUBE, Steve	Senior Vice President, U.S. Northeast Operations	1102 E. Gordon Hwy Road 2nd Floor Falls, VA 22030	[REDACTED]



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A decorative graphic of a network with orange and red nodes and connecting lines, positioned in the upper left and right areas of the page.

Sandy Integrated Recovery Operations and Management System (SIROMS) Maintenance and Hosting – Response



New Jersey Department of Community Affairs Bid# 18DPP00226

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Founded in 1976, CGI is one of the world's largest IT and business consulting services firms. We help clients achieve their goals, including becoming customer-centric digital organizations, through high-end IT and business consulting, systems integration and outsourcing services combined with a unique client proximity model and global center of excellence network.

PROPRIETARY AND CONFIDENTIAL

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If you have received this document by mistake, note that the reading, the reproduction or the distribution of this document is strictly forbidden. You are hereby requested to inform us by telephone at (609) 789-2016 and to return this document by certified mail.

The information in this proposal is submitted on May 24, 2018 on behalf of CGI by the following authorized representative:

Paul Doty
Vice President, Consulting Services
CGI Technologies and Solutions
3525 Quakerbridge Road, Hamilton Twp, NJ 08619
(609) 789-2016

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1 Executive Summary

Since June 2013, CGI has had the privilege of partnering with the State of New Jersey Department of Community Affairs (NJDCA) to deliver the Sandy Integrated Recovery Operations Management System (SIROMS). Over the course of these past five years, the custom software architected and developed by CGI has been audited, inspected, reviewed, evaluated, and through all of this, SIROMS has successfully and consistently supported the management and tracking of the CDBG-DR recovery funds.

CGI is uniquely qualified to continue to support the maintenance and delivery of this software. CGI combines the size and experience of a large global corporation with the agility and execution of a highly focused disaster recovery practice. This experience is reflected in CGI's delivery of positive recovery results in Louisiana (Katrina) and New Jersey (Sandy), the two most damaging hurricanes to hit the mainland. CGI continues to expand our disaster recovery resume, and increase the number of CGI members with disaster recovery experience. CGI has recently been selected by the government of Puerto Rico to provide holistic Data Management services to help the island recover from hurricanes Irma and Maria, which caused truly catastrophic damage across all of Puerto Rico.

Founded in 1976, CGI Technologies and Solutions Inc., with its parent organization, CGI Group Inc., is the fifth largest independent information technology and business process services firm in the world. CGI provides:

- Extensive Natural Disaster Experience supporting HUD funded recovery programs
- Built-for-government IT solutions with experience managing all elements of protected data associated with disaster recovery programs
- Deep public sector expertise based on partnering with 300 local governments, numerous U.S federal agencies, and 46 states, as well as Puerto Rico
- Pioneers in Agile for Government operational implementation, helping Agencies transition from waterfall to Agile SDLCs
- Experts in Big Data, working across industries to develop KPIs and metrics that highlight delivered value and encourage data-driven decision making
- Broad experience with data visualization, dashboarding, and transparency to help government leaders make sense of complex relational data sets in Disaster Recovery Environments
- High level public sector consulting, advising multiple government agencies on ways to implement innovative web based methods of increasing citizen engagement and transparency



2 Technical Quote (Proposal) (Section 4.4.3)

2.1 Management Overview

Having worked hand-in-hand with NJDCA over the previous five (5) years in support of the State's execution of the Action Plan and administration of the over \$4.1B in HUD CDBG-DR funding allocated for the State's recovery efforts in the aftermath of Superstorm Sandy, Team CGI is the only team with a comprehensive understanding of how the State's recovery efforts have grown and evolved to-date and what the State still aims to accomplish prior to the expiration of the funding allocation in 2022. Through this experience, our team has also built invaluable relationships with NJDCA and other State agency/entity stakeholders responsible for the day-to-day execution and administration of the Sandy recovery efforts, allowing us to tailor and refine our approach to the management of the NJ SIROMS project in order to best meet the needs of NJDCA and its partners. This section, and its subsections, will detail our approach towards the management of the NJ SIROMS project which has been shaped and molded by these relationships and the millions of hours expended by our team of disaster recovery professionals towards designing, developing, testing, implementing, enhancing, and maintaining the SIROMS system to-date.

The subsections below detail our collaborative approach towards the management of the project logistics components denoted in the RFP. These subsections serve to supplement our proprietary Client Partnership Management Framework (detailed in Section 2.2.1) that defines our overall approach to project management which is shared and right-sized globally across all projects managed by CGI.

PROPOSED WEEKLY STATUS SCHEDULE (SECTION 3.3.4)

Team CGI's Project Manager for the NJ SIROMS project, Mr. Vaid Ram, will be available to meet with the SCM within five (5) business days of contract award, prepared with a detailed update on the system status and any outstanding updates being addressed by Team CGI at the time of the meeting, exceeding the State's requirements as defined in the RFP. During this meeting, Mr. Ram will confirm with the SCM, or his/her designee, that our existing Weekly Status Report template (Attachment 2 from the RFP) continues to meet the State's needs and organize any updates to the template as necessary. Upon confirmation of the template, Mr. Ram will facilitate the delivery of the Weekly Status Report to the SCM each Monday, no later than 11AM Eastern Time. Each Weekly Status Report will provide the SCM with the information requested within the RFP, along with any other information

which has been deemed pertinent by Mr. Ram, up-to-date as of the previous Wednesday prior to the issue of the report. This staggered timeframe will allow the CGI NJ SIROMS project management team to compile all of the required updates accurately and assimilate them into the template in a timely manner.

Additionally, Mr. Ram, or his designee, commits to continuing these weekly status meetings with the SCM on a reoccurring schedule as deemed mutually acceptable to both parties in order to ensure proper ongoing governance of all project activities. These weekly meetings and reports will continue to be in addition to Team CGI's commitment to making appropriate resources available to NJDCA for conference calls and on-site meetings as necessary, and to provide meeting minutes for these meetings to pertinent NJDCA stakeholders within two (2) business days of these meetings. As the only team experienced in the management and administration of the NJ SIROMS system, Team CGI is uniquely positioned to provide seamless continuity of system and project management upon contract award, allowing NJDCA to remain focused on its responsibilities towards the execution and administration of the Sandy recovery efforts.

PROJECT COMPONENT MANAGEMENT PROCESS (SECTION 3.3.5)

Team CGI's experience in working closely with NJDCA over the past five (5) years to manage the NJ SIROMS project provides our team with a true understanding of what staffing allocation is required to best meet the business needs of the Sandy Recovery Division (SRD), to support the Solution as described in Section 2.1.1 and its subsections, and to maintain the system to meet the Performance Requirements as defined by the State in Sections 3.4.6.4, 3.4.7, and 5.14 of the RFP.

Based on our in-depth knowledge of the intricacies of the SIROMS suite of application and NJDCA/SRD's business needs and goals, Team CGI proposes the following staffing allocation, leveraging the Staffing Categories as defined in Attachment 06 of the RFP, as best suited to fulfill the scope of the NJ SIROMS project as defined in the RFP. These allocations are estimates and shall be confirmed and/or adjusted via mutual confirmation between the CGI PM and the SCM or their designees:

Year	FTE
██████████	█
██████████	█
██████████	█
██████████	█
██████████	█
██████████	█

Given the Performance Requirements outlined in the RFP, and associated potential assessment of Liquidated Damages should any requirements not be met, should the State desire a reduction in the staffing levels outlined above, the State and CGI will need to agree in writing what the impact, and possible change required, will be to the potential assessment of liquidated damages.

As individual tasks, or Project Components, are defined and prioritized by NJDCA post-contract award, The CGI PM and/or his designee will communicate which individuals from the CGI team will be responsible for the execution of particular tasks in order to provide additional visibility into our team utilization approach. Should shifts in task priority be communicated by the SCM, the CGI PM will update the SCM as necessary should the particular staff assigned to the task change.

VENDOR {CONTRACTOR} LOGISTICS (SECTION 3.3.6)

In line with CGI's client-proximity based delivery model, Team CGI has made a concerted effort to both recruit talent locally and transition roles to members local to the Trenton Metro Area wherever possible. Team CGI understands that members who live in and around the communities which our clients serve are often best-suited to understand their priorities and goals of their clients. Our management of the NJ SIROMS project for the past five (5) years was one of the primary driving factors in the decision to open a CGI office in Hamilton, NJ in 2016, and Team CGI will continue to leverage our staff and facilities located in Hamilton to execute the tasks which have been defined by NJDCA as in-scope to the NJ SIROMS project per the RFP.

At the same time, CGI understands the unique challenges which are associated with the execution and administration of Natural Disaster Recovery programs and is committed to continuing to provide NJDCA with access to our disaster recovery Subject Matter Experts (SMEs) located across the country. The CGI PM will facilitate the communication of the on-site support schedule for any remote team members currently engaged on the NJ SIROMS project and work closely with the SCM to ensure that the appropriate staff members are available to NJDCA on-site or remotely when necessary. The CGI PM will also be responsible for the coordination of any additional logistical items such as office space, desks, telephones, network connections, and parking for when members will be performing project work on-site at the NJDCA offices in Trenton.

TEAM CGI

Considering the complex nature of the SIROMS initiative, CGI has teamed with a group of highly successful organizations that have the right skills and experience to support the State on the SIROMS initiative. Our team is made up of the following organizations:

CGI: PRIME CONTRACTOR

As prime contractor, CGI will provide and be responsible for overall project execution, management oversight and technical solution components. All the technical solution components will be hosted in CGI's secure cloud computing environment. CGI has been working with the State of Louisiana on the Road Home project, an initiative similar to the SIROMS initiative.

HORNE, LLP: SUBCONTRACTOR

Horne, LLP is a financial services firm specializing in CDBG-DR related business services. Horne will be providing subject matter expertise and financial services necessary as part of the SIROMS program. In addition to partnering with CGI to support the State of New Jersey SIROMS program since 2013, Horne has been supporting the States of Texas and Mississippi with CDBG-DR services and has extensive experience in CDBG-DR regulations and business processes. Horne will work with CGI to confirm that the SIROMS program is designed to achieve program integrity, transparency and audit compliance.

BLUE STREAK TECHNOLOGIES: SUBCONTRACTOR

Blue Streak Technologies (Blue Streak) is a software development partner that specializes in the OpenText Metastorm BPM (MBPM) technology suite, which is the backbone of the CGI-DRS. MBPM is a feature rich, stable, mature, and proven rapid application development platform with an active development community and planned support through 2022, at least, for the current version. OpenText has additional planned releases for new versions of the software in 2018 and 2019/2020, and should continue to provide functional and technical support well into the future. Blue Streak, an OpenText Select partner, has worked as a CGI partner and has been instrumental in the implementation of MBPM-based applications on both the New Jersey SIROMS and Louisiana Road Home projects. Blue Streak will provide MBPM development and implementation expertise on the CRRO project.

BLANKET {PO} CONTRACT CLOSEOUT (SECTION 3.3.12)

Upon conclusion of the Contract, the CGI PM will work with the SCM to organize and conduct a closeout meeting or series of meetings. During this/these meeting(s), the CGI PM will provide a Status Report, in a format to be mutually agreed upon by SCM and CGI PM, that details the completeness of each deliverable successfully completed during the period of performance of the associated contract. Upon approval of this report, the CGI PM and SCM will mutually agree to a schedule in which all project documentation will be handed over to the State and the format in which it will be turned over.

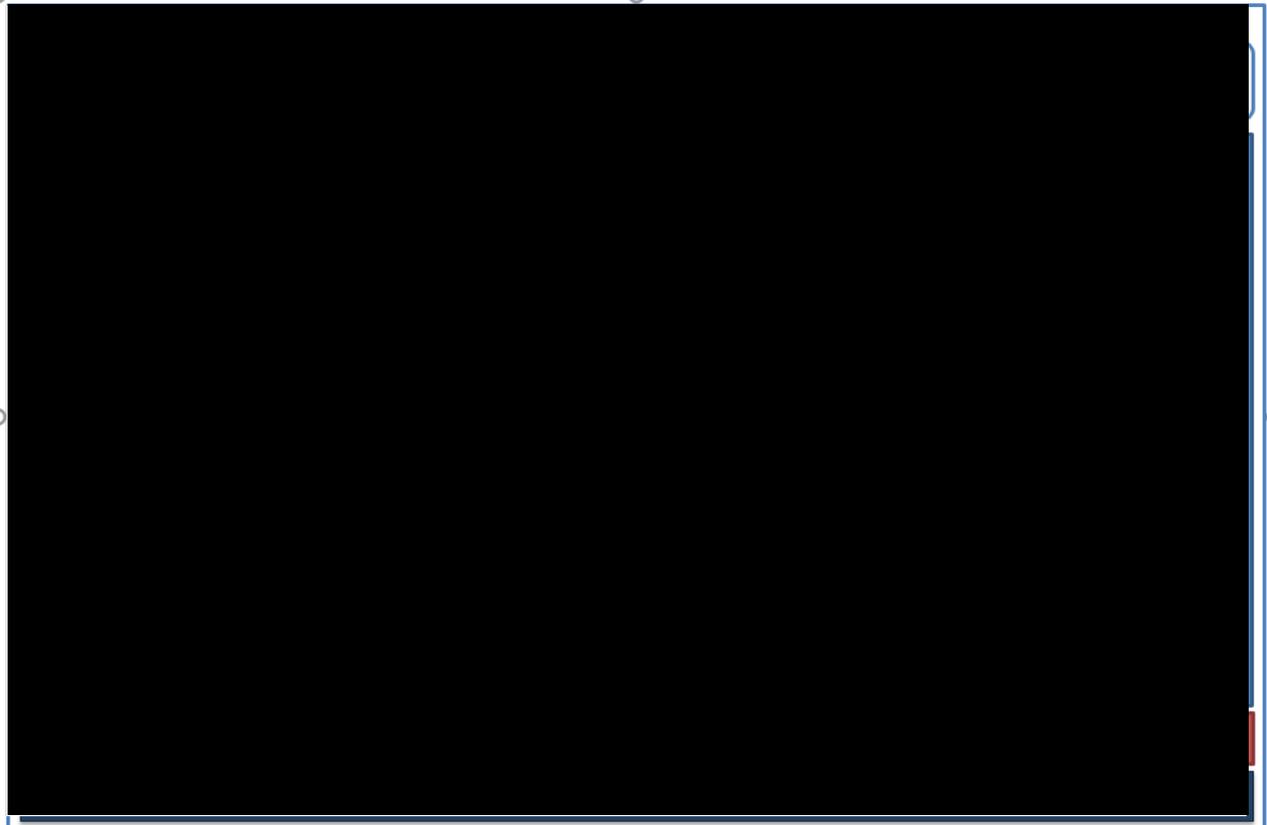
Per the requirements of the RFP, CGI also agrees to supply the State with forty (40) user licenses to each core software component for three (3) years beyond the conclusion of the contract. The costs for the licenses which will be transferred to the State upon closeout and valid for three (3) years thereafter will be invoiced to NJDCA during the contract closeout process and are accounted for in the Price Schedule as prescribed by the RFP.

2.1.1 SOLUTION OVERVIEW

Based on our understanding of the State's requirements for the SIROMS system as defined in the RFP, and our unique understanding of the inner workings of the SIROMS system's functionality and infrastructure as the only Vendor with experience in designing, implementing, maintaining, and enhancing the SIROMS suite of applications, Team CGI has laid out in detail in the subsections below a thorough description of the SIROMS solution and how to best maintain the suite of applications over the next six (6) years. Team CGI is confident that our approach is best suited to support the State's execution of the Action Plan and the associated compliance and reporting activities which will persist after individual recovery programs are closed out. Figure 1 below provides an illustrative overview of the current state of the SIROMS solution.



[Redacted]



[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

2.1.1.1 CLOUD COMPUTING BUSINESS PROCESS MANAGEMENT (BPM) SYSTEMS (SECTION 3.2.1)

Team CGI built the NJ SIROMS system using proven technologies, such as Business Process Management (BPM), and Microsoft .NET, to meet the fast moving and scalable needs of a Disaster Recovery program. The core of the back-office functionality of the NJSIROMS is built upon OpenText Metastorm BPM product. **BPM provides workflow-driven management of the business processes of any DR program or administrative function, providing clear visibility into the progress, status, and task ownership for any given record.** BPM also facilitates rapid system design and development; this allows us to reuse specific modules and use these building blocks to build additional financial and grant management solutions as needed. Team CGI has utilized the .NET Framework on components of the CGI-DRS which require less complex workflow and greater flexibility from a User Interface (UI) perspective. **Utilizing an agile approach to the Software Development Life Cycle (SDLC), with a focus on deep collaboration with program management and staff,** Team CGI will continue to work with DCA for maintenance of NJSIROMS and phased implementation of any changes required by DCA.

The OpenText MBPM suite consists of a graphical design studio, an application processing engine, a .NET web portal for both desktop and mobile browsers, integration tools for optional client development in .NET or Java, and components for use in SharePoint. Team CGI will continue to leverage the following BPM capabilities within SIROMS:

- A process management engine designed to drive the progression of work in structured or unstructured processes or cases; The BPM platform in SIROMS has a comprehensive rules engine that allows implementation of workflows with dynamic roles and conditional action to allow the end user to determine the path of the process
- A graphical model-based environment for designing processes and supporting activities; Team CGI has integrated standalone .NET components within the BPM framework to create user-friendly interfaces and flexible user designs
- Capabilities to manage business rules to ensure regulatory and program compliance
- Integration with OpenText Content Server for document management capabilities to store files such as PDF documents and images in compliance with the record retention requirements established in the RFP
- Ability to link processes to the resources they control such as proposals, grant activities, grantees and fund disbursements; Data captured through form interaction are stored in the repository along with the relevant system generated information about the process such as status, current assignment, and event history
- Web-based interaction portals that allow staff and grantees to interact with the processes they are involved on; SIROMS has customized the To Do and Watch lists

- to help users understand the tasks that are assigned to them and require action for continuation in a process
- Tighter integration with external application and data sources; NJSIROMS has multiple integration points with NJCFS, DEP, BOFA, Housing contractor systems and also with other internal sources
 - Active analytics engine for monitoring performance in areas such as processes, resources, grant activities and fund balances
 - Management and administration. The NJSIROMS solution includes a management portal for administering users, roles, and deployed processes. These administrative forms allow for the delivery of user supported business rule settings, search interfaces, management of lookup tables, etc.
 - Reporting to provide decision support for program stakeholders
 - Exportable data in common formats for ETL processes and advanced analytics

2.1.1.2 INTERFACES (SECTION 3.2.2)

The SIROMS integration services are built on Apache Camel, to construct and implement interfaces and integration across disparate systems. The Apache Camel framework provides the flexibility necessary to implement and manage interfaces with disparate data sources hosted by other State departments/authorities and third-party contractors.

The following interfaces are currently implemented through SIROMS:

- Interface 71
 - Purpose – Transmit grant information and Right of Entry Information to contractors.
 - Type – Call to Contractor’s web service
 - Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program
 - Landlord Rental Repair Program (LRRP)
 - Low to Moderate Income (LMI) Program
 - Successfully completed transactions to date:
 - 8,170
- Transmissions Interface 7
 - Purpose – Receive Initial Site Inspection Results from contractors and make the information available in SIROMS.
 - Type – Web service hosted by SIROMS
 - Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program

- Landlord Rental Repair Program (LRRP)
- Low to Moderate Income (LMI) Program
- Successfully completed transactions to date:
 - 11,489 Transmissions
- Interface 8
 - Purpose – Receive Development Cost Information from contractors and make the information available in SIROMS.
 - Type – Web service hosted by SIROMS
 - Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program
 - Successfully completed transactions to date:
 - 1,036 Transmissions
- iDone
 - Purpose – Receive Closeout Documents and Information from Contractors and make the information available in SIROMS.
 - Type – Web service hosted by SIROMS
 - Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program
 - Landlord Rental Repair Program (LRRP)
 - Low to Moderate Income (LMI) Program
 - Successfully completed transactions to date:
 - 6,188 Transmissions
- DEPOut
 - Purpose – Transmit grant information and Right of Entry Information to the Department of Environmental protection.
 - Type – Call to DEP’s web service
 - Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program
 - Landlord Rental Repair Program (LRRP)
 - Low to Moderate Income (LMI) Program
 - Unsafe Structure Demolition Program
 - Lead Hazard Reduction Program (LHRP)
 - Successfully completed transactions to date:
 - 8,489 Transmissions
- DEPin
 - Purpose – Receive TierII Verification Result the Department of Environmental Protection and make the information available in SIROMS.
 - Type – Call to DEP’s web service

- Supported Grant Management Programs:
 - Reconstruction, Rehabilitation, Elevation and Mitigation (RREM) Program
 - Landlord Rental Repair Program (LRRP)
 - Low to Moderate Income (LMI) Program
 - Unsafe Structure Demolition Program
 - Lead Hazard Reduction Program (LHRP)
- Successfully completed transactions to date:
 - 8,225 Transmissions
- Treasury A1
 - Purpose – Transmit Funds Request information to the NJCFS system for payment.
 - Type – FTP send
 - Supported Grant Management Programs:
 - Funds Request
 - Successfully completed transactions to date:
 - 41,438 Checks
- Treasury WREC/OPVL
 - Purpose – Receive Check Number, Check Date, and Check Status information from NJCFS.
 - Type – FTP receive
 - Supported Grant Management Programs:
 - Funds Request
 - Successfully completed transactions to date:
 - 41,371 Checks
- Bank of America Interface
 - Purpose – Transfer funds from homeowner and CDBG escrow accounts to Homeowner, builder, NJCFS, and GFI accounts.
 - Type – SFTP send
 - Supported Grant Management Programs:
 - Funds Request
 - Successfully completed transactions to date:
 - 4,117 Transfers
- INCLL Funds Request Interface
 - Purpose – Generate Funds Requests from INCLL data.
 - Type – Direct JDBC connection
 - Supported Grant Management Programs:
 - Incentives for Landlords
 - Funds Request
 - Successfully completed transactions to date:
 - 194 Funds Requests

- INCLL QPR Interface
 - Purpose – Retrieve financial information from INCLL for QPR.
 - Type – Direct JDBC connection
 - Supported Grant Management Programs:
 - Incentives for Landlords
 - Measure Reporting
 - Successfully completed transactions to date:
 - 14 Quarters processed
- INCLL Outbound Interface
 - Purpose – Transmit financial information for INCLL.
 - Type – FTP send
 - Supported Grant Management Programs:
 - Incentives for Landlords
 - Funds Request
 - Successfully completed transactions to date:
 - 189 Funds Requests

2.1.1.3 SIROMS HELPDESK (SECTION 3.2.3)

Team CGI understands the important role the SIROMS helpdesk performs when called upon to respond to an incident. It is our belief that when a user reaches out for assistance, the SIROMS helpdesk will be ready, available, and knowledgeable in all areas to either resolve the issue reported (Tier 1) at hand or route it appropriately and efficiently to CGI teams (Tier 2/3) who can. CGI continuously trains all helpdesk staff on all aspects of the SIROMS modules including applications, reports and interfaces. Helpdesk staff attend functional team meetings to understand the business priorities, organizes internal training sessions in the form of instructional meetings and hands-on exercises in CGI testing environments, documents helpdesk team best practices to follow, and perform knowledge transfer during Helpdesk team meetings in areas of strength. The SIROMS helpdesk staff also participate in major production environment events such as software upgrades, release shakedown testing, and disaster recovery failover testing.

LOCATION/HOURS OF SERVICE

The SIROMS Helpdesk is staffed and located at the NJDCA at the following address:

101 South Broad Street, 7th Floor, Trenton, NJ 08625

Standard hours of operation are from 8:00am to 5:00pm, Monday through Friday during all state work days.

PRODUCTION SUPPORT/STAFFING

Staffing for the SIROMS Helpdesk is based on the service levels and the amount of user support anticipated for the project. Examples of support would include:

- Inbound calls, emails, and walk-ups for Tier 1 Support
- Escalation and response for Tier 2 and Tier 3 support including:
 - Support for defects
 - Training
 - Documentation
 - Usability of systems or reports
- Scalability during critical outages as well as planned system updates and maintenance

TRAINING

Helpdesk utilizes the following training methods and processes to assist in day-to-day training:

- Real-time training/shadowing
- Prebuilt Incident Templates
- Escalation support guides
- Test environment to run scenarios and test issues
- Documentation/user guides
- On-site support from CGI team members to field questions when needed

DOCUMENTATION

Helpdesk creates, updates, and maintains documentation pertaining to all relevant functions including, but not limited to:

- Incident management
- Process flow
- End user support
- Security
- Application support
- Escalation support
- Organizational charts
- Email support
- On-site support
- Phone support

- Remote support

SOFTWARE

SIROMS Helpdesk staff use ManageEngine ServiceDesk Plus software to track and route incidents, send email notifications, provide notice on software updates and resolution of reported issues., ServiceDesk Plus provides the SIROMS Helpdesk the functionality to be an exceedingly responsive resource that benefits SIROMS end-users by maintaining their productivity and focus on their mission—assisting State residents impacted by Superstorm Sandy. Helpdesk technicians use this web-based portal to capture of all incidents reported via email, phone call, or walk-up. The ServiceDesk Plus provides a centralized repository to manage and track end user, development and implementation service requests. It also allows the help desk to track user acceptance, incidents and events and manage the priority, status and scheduling of service requests.

SERVICEDESK PLUS CAPABILITIES

ServiceDesk Plus dashboard provides the following capabilities.

- Ability to view the summary of current requests
- Ability to submit incident tickets:
- View status of tickets and solutions to common issues:
- All submissions should include all pertinent information to allow the Helpdesk to troubleshoot and resolve issues. In the instance that the reported incident is missing pertinent information or the described issue is unclear, the ServiceDesk Plus software enables the Helpdesk team to change the ticket status (e.g., on hold, pending customer, in progress) and reach out to the users to request the required information needed.
- Users can also view status and history of their incidents in a variety of ways using the drop down values
- ServiceDesk Plus provides access to customizable reporting to measure performance across a broad spectrum of requests, incidents, changes, and surveys. Provides information on all incident in any status (i.e., Pending, On Hold, In Progress, etc.) or other parameters such as Priority, Department, Technician, and Requester just to name a few.
- These features allow Helpdesk to provide reporting on work performed. Reports can be provided based on many factors which include: Requestor information, assigned

technicians, start times/closing times, and request types (by Category, Sub Category, Priority, etc.).

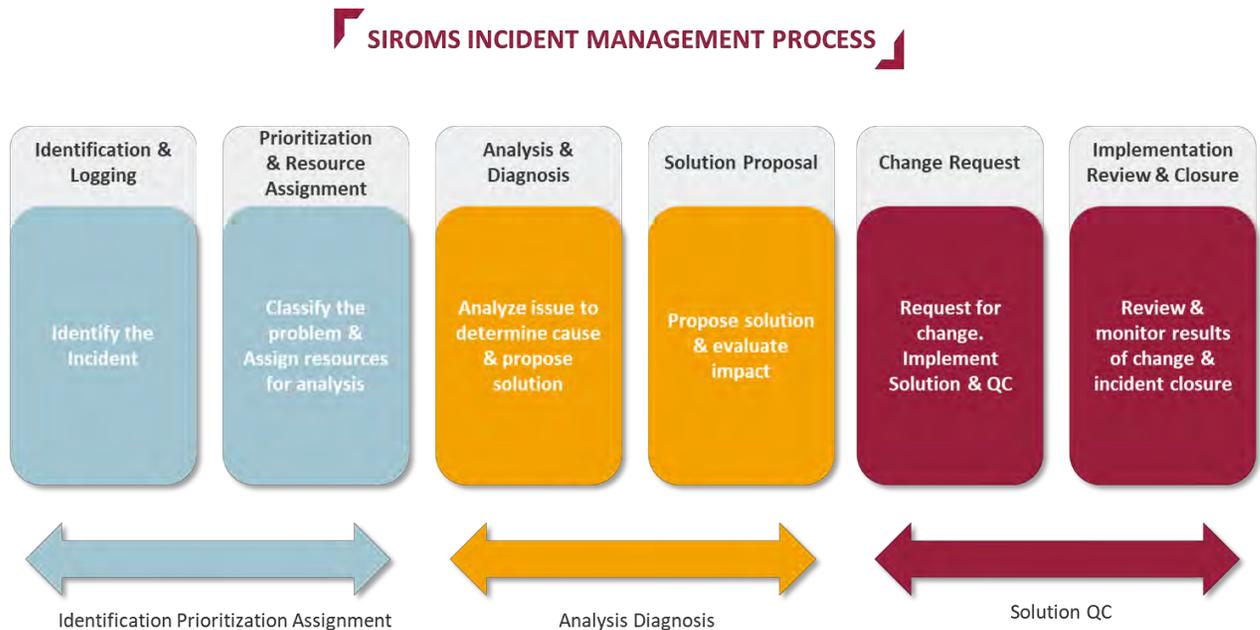
- Currently, the SIROMS Helpdesk provides weekly reporting for the state located in one centralized location. All Helpdesk reports are stored on www.siroms.com and updated on a weekly basis.

SIROMS INCIDENT MANAGEMENT PROCESS

The SIROMS incident management workflow conforms to the following process utilizing these steps:

- Incident identification
- Incident logging
- Incident categorization
- Incident prioritization
- Incident response:
 - Diagnosis
 - Escalation
 - Investigation/analysis
 - Resolution
 - Closure

Figure 2 - SIROMS Incident Management Process



Due to the complex nature of software issues, each incident is handled according to the tier level of support required. Based on the complexity, they will either be resolved by Tier 1 Helpdesk staff or escalated to Tier 2/Tier 3. All incidents escalated beyond Tier 1 will have regular follow-ups documented in addition to system user updates.

Requests are categorized or grouped using the following attributes: Service Category, Category, and Sub-categories. Service Category forms the top level in grouping of requests with Category, and subcategory. As an example: A request to move an application to the next stage can be put under the request Service Category as Software, Category as Data Update, and Sub-Category as RREM. Similarly, if there is a problem in the way an application is functioning, it can be categorized under the Service Category as software, Category as Process Issue, and Sub-Category as CIM.

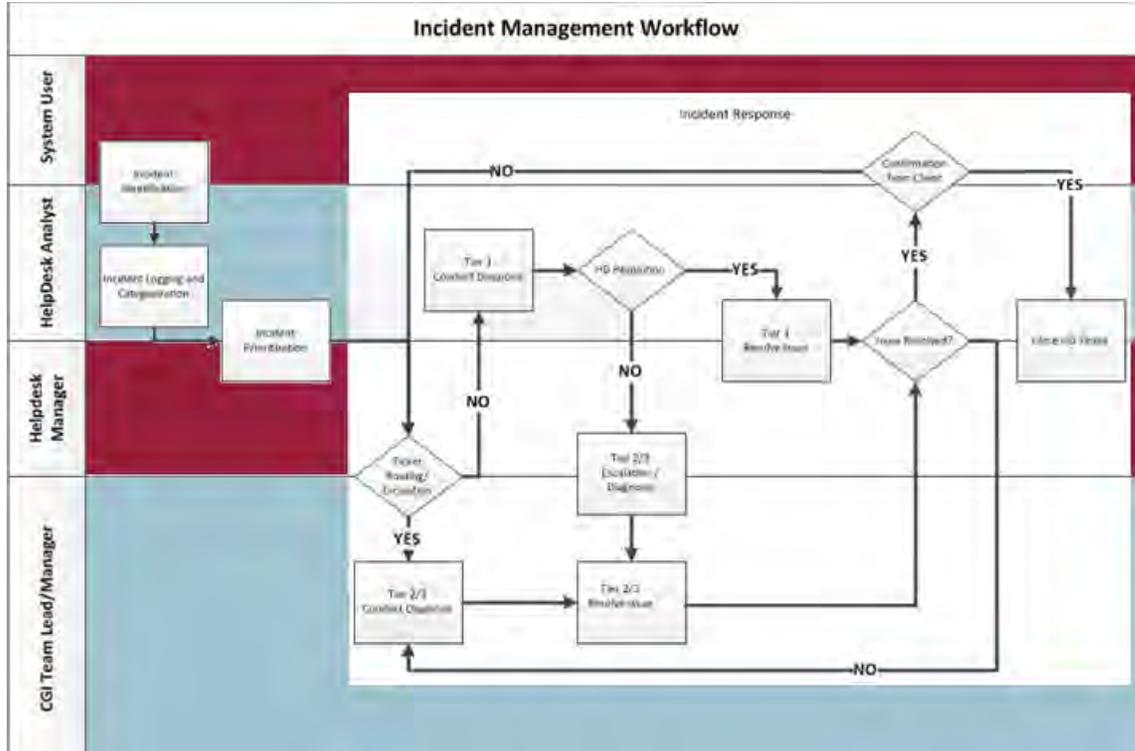
The SIROMS Helpdesk has created numerous service categories, categories, and sub-categories for the SIROMS project. These service categories, categories, and sub-categories will be listed under the respective drop-down menus available in all new request forms.

These categories help enhance the metrics, organization, and reporting required. These further improve the ability to provide statistical information, which allows the Helpdesk to keep on top of SLAs, and allow fast and timely access to building reports that display a variety of metrics.

SIROMS INCIDENT MANAGEMENT WORKFLOW

The SIROMS incident management workflow conforms to the ITIL standards. The following figure represents the incident management workflow through which all Helpdesk tickets are processed.

Figure 3 - Incident Management Workflow through Which all Helpdesk Tickets are Processed



INCIDENT IDENTIFICATION

In addition to the details of the reported incident, the SIROMS Helpdesk categorizes the incident based on incident prioritization (High, Medium, Low), on the service required (Functional or Technical), request type (Bug Fix, Data Fix, Change Request), and the affected SIROMS modules. Once an incident has been reported (email, walk-up, or phone call), the SIROMS Helpdesk then starts the process to categorize the incident.

In addition to the current monitoring and alerting checks in place, the SIROMS Helpdesk runs scheduled reports to spot trending issues to forecast potential issues. Forecasting potential issues allows the SIROMS Helpdesk to manage and assign staff to support accordingly when unplanned event arise. For planned events such as software upgrades or release deployment, the SIROMS Helpdesk prepares appropriately to support the planned events.

INCIDENT TRACKING

The SIROMS Helpdesk maintains a complete history of records for all incidents reported. All incidents are classified and prioritized to assist with incident tracking and routing. In accordance with the SLAs defined in the RFP, the SIROMS Helpdesk follows up on aging tickets and provides status updates in the notes and resolution section of the ticket. Any

aging tickets are routed to managers for immediate escalation. Relevant tracking details that are tracked include, date/time stamping, user information, descriptions, related tickets and incident resolution details.

INCIDENT INVESTIGATION & ANALYSIS

Once an incident has been recorded, incident investigation and analysis begins. A SIROMS Helpdesk technician will troubleshoot, test, and check possible scenarios to come to a resolution. If a resolution cannot be reached by Tier 1 staff, it is then escalated and assigned to the next Tier. The SIROMS Helpdesk continues to maintain communication with all Tiers to coordinate the tasks required and provide feedback to the end user.

INCIDENT ASSIGNMENT & ESCALATION

When the helpdesk technician has exhausted all attempts to resolve the incident, the incident will be escalated accordingly until a resolution is determined and then put in place. The escalation and assignment of a particular incident is dependent on the nature of issue, complexity of issue, and whether all pertinent information has been given to the CGI team to allow proper troubleshooting.

INCIDENT RESOLUTION

After determination of a resolution, if the SIROMS Helpdesk technician can resolve the reported incident, the technician will facilitate communication with the end-user who reported the incident and obtain confirmation from the end-user that the incident has been resolved. In the event that a software fix may be needed, the SIROMS Helpdesk will facilitate discussions with the appropriate SIROMS teams to ensure the appropriate resolution of the incident. Upon successful resolution of the incident, a technician will communicate appropriate instructions to verify that the incident has been resolved to the end-user who reported the incident. Once confirmation of resolution has been received by the SIROMS Helpdesk, the ticket will be marked as resolved. A follow-up email will be sent to the client for resolution confirmation.

INCIDENT CLOSURE

Once the client has verified the solution, the incident can then be closed. The technician will ensure that the initial classification details are accurate for future reference and reporting.

END USER SURVEY

After completion/closure of incident a link to our End User Satisfaction Survey is sent out to determine overall satisfaction with the helpdesk service delivery. SIROMS uses a number of best practices to formulate the user satisfaction survey including but not limited to:

- Explain the purpose of the survey
- Easy to use rating system
- End user comment section

SIROMS SYSTEM OUTAGE AND ESCALATION PROCEDURES PLAN

The SIROMS technical team has tracking measures in place to actively monitor both known and unknown issues that may negatively impact system performance over the course of the project. In the instance of an outage, the SIROMS System Outage and Escalation Procedures Plan provides the overall guidance for CGI actions/processes, communication, and identifies key roles/personnel during an unplanned system outage. This plan will be triggered by any reported system interruption of service and will be in effect until SIROMS system performance is restored to full capacity.

Notifications

The CGI Team considers any unplanned system outage as a critical incident. An incident ticket in ServiceDesk Plus will document the issue the user is experiencing, record which user reported the incident, and log the time and current status of the outage. Once the ticket is logged, an internal notification will be sent to internal CGI Team to assess the issue reported and confirm a system outage. Upon confirmation a notification will be sent to DCA SCM within 30 minutes to notify of an outage and provide any known details regarding the issue. Additionally an email communication to SIROMS system users will be sent to notify DCA SIROMS staff and end users of a system outage. Once the issue is resolved and the system is functioning as normal, an email will be sent notifying the DCA SCM and all SIROMS end users. Each notification will be sent via the ServiceDesk Plus ticket or mass email notification, including outage status updates, and resolution.

Incident Ticket Tracking

Due to the complexities with the SIROMS technical architecture and functional programming, an incident may require multiple CGI Teams to investigate the true nature of an issue's cause. In logging the initial incident, the SIROMS Helpdesk will open a ticket that will function as the "parent" incident ticket. All subsequent tickets that will be created for teams (Functional, Development, Infrastructure, and Reporting) to track any related work associated with identifying the cause and resolution will be linked to the 'parent' ticket. This process identifies related tickets to ensure accountability, that all required analysis is completed, logged, and referenced in the event a similar incident is recorded in the future. The parent ticket will be disclosed to the SCM for reference.

Key Roles and Responsibilities

During a system outage, timely and factual communication is essential to the effort of returning SIROMS back to full capacity. The CGI Team recognizes that it is a collaborative effort in returning the system back to normal and identifies key roles and responsibilities for both DCA and CGI below.

DCA SCM (State Contract Manager)

- The DCA SCM acts as the first point of contact for the CGI Team to report a recorded outage and confirmation within 30 minutes.
- DCA SCM is responsible for approving any necessary actions or emergency system changes related to the unplanned outage.
- In the event that the DCA SCM is unavailable, CGI Team will notify the designated replacement.

CGI Project Manager

- The CGI Project Manager acts as the first point of contact for information regarding the outage and will provide the DCA SCM with known details as they are validated and confirmed.
- The CGI PM may designate a communication lead for an outage and shares the responsibility of communication regarding updates with the SIROMS Helpdesk Manager.

Helpdesk Manager

- Create and update incident ticket and responsible for coordination communication to system users within 30 minutes after verification of outage.
- Verify outage and updates CGI Teams required to assist in resolving the incident.
- Open a parent incident ticket and links all related incident tickets to the parent.
- Communicates to all relevant CGI teams' ticket number.

Programmer/Technical Lead/Incident Coordinator:

- Communicates updates to relevant teams regarding progress and when resolution has been found.

HELPDESK SERVICE LEVEL AGREEMENT (SLA)

All issues will be addressed in accordance with the Service Level Agreements for user reported helpdesk incidents. Issues reported which prevent a user from conducting their business as usual will be acknowledged within thirty minutes and include an estimated timeframe for resolution or workaround.

The ability for the SIROMS Helpdesk to provide quick turnaround for access requests has many elements outside of CGI control. Provisioning for general User Access, Reporting, Development, Database, Software, and Maintenance requests will vary as they are dependent on:

- Time of request submission
- Approvals from DCA management
- Client verifications

Overall, the SIROMS Helpdesk staffed by Team CGI has significant experience over the previous five (5) years working with NJDCA end users and providing Tier 1 support.

2.1.1.4 IT INFRASTRUCTURE (SECTION 3.2.4)

CGI has hosted and managed the technical and application infrastructure for SIROMS for the past five years. CGI has increased its stability yearly to achieve industry standards for uptime. We have acquired a wealth of experience in SIROMS operations and developed numerous tools and health checks to proactively monitor the current SIROMS infrastructure. While the section below contains an overview of these details, the *SIROMS infrastructure – 2018* document can be found in Appendix H.

There are several points of clarification we would like to make regarding the newly proposed contract terms.

- Since CGI is hosting the PaaS environment, DCA is renting the infrastructure from CGI and not actually purchasing it. Consequently, at the end of the contract no physical infrastructure can be turned over to the State.
- CGI expects no additional hardware devices, not hosted within the PaaS, to be purchased by the State in conjunction with SIROMS.
- State-owned software licenses will be removed from all CGI serves. CGI will investigate options for transferring licenses that were purchased through CGI on the State's behalf. However, licenses that are part of the overall infrastructure, such as operating systems and SQL Server are non-transferrable and are considered a managed services license that is integrated into the hosting charge.
- As indicated in the SIROMS Infrastructure document (see Appendix H), CGI maintains several different environments for the SIROMS project including Production, Disaster Recovery, UAT, and Development. No separate Reporting environment exists, however reporting databases exist within each of the aforementioned environments.
- To save cost for the State, the SIROMS Development environment is not located within a FedRAMP moderate level hosting facility and consequently no non-obfuscated production data can be used in the Development environment.
- The UAT environment is refreshed from production on an as needed basis depending upon the type of change requests that are being tested. CGI is prepared to refresh the data in the UAT environment on a monthly basis, but the timing of the refreshes needs to be chosen carefully each month. The timing needs to take into account any system or report testing that is currently in progress and refreshes should be

avoided the week after a production deployment to ensure a stable UAT environment is available after a production release.

- Production data used in other environments (with the exception of Disaster Recovery) are obfuscated to protect Personal Identification Information (PII).

The Bid solicitation indicates that the expected number of SIROMS users will reduce each year. To compensate for this user reduction, CGI recognizes that the SIROMS infrastructure might also be reduced. However, in order to continue providing high-availability, meeting service level goals, and providing a disaster recovery region, CGI cannot guarantee that the infrastructure size will decrease exactly as Attachment 3 of this Bid Solicitation suggests. As part of our price proposal, CGI will present cost options to the State when reducing SIROMS infrastructure components.

2.1.1.4.1 State Technology Requirements and Standards

SIROMS is currently hosted within the CGI Federal Cloud environment which is fully FedRAMP certified. This includes all of the controls mentioned below as well as many others. The environment is audited every year by FedRAMP, ISO, and third party auditors for SSAE18. Here is the list of certifications and their references:

- FedRAMP Certified - pATO package F1206061350
- FISMA Mod Compliant
- NIST 800-53r4 Moderate Compliant
- HIPAA/HITech Certified
- Payment Card Industry PCI Certified
- IRS 1075 Compliant
- SOC 1 Type II – Successfully Completed 2016 (formally SSAE 16, SAS70) Certified
- SOC 2 – Client Specific – Certified for specific clients
- Mars e2.0 – Client Specific

If requested by the State, CGI will be an active participant and provide any existing architecture documentation to NJDCA in support of NJOIT's System Architecture Review process. In addition, CGI will support the State in any audits conducted for SIROMS.

2.1.1.4.2 System Design

SIROMS is a proven system for managing thousands-to-millions of emergency funding applications and disbursements, while enabling federal compliance. Team CGI understands well how the SIROMS system is adaptable to unique program requirements

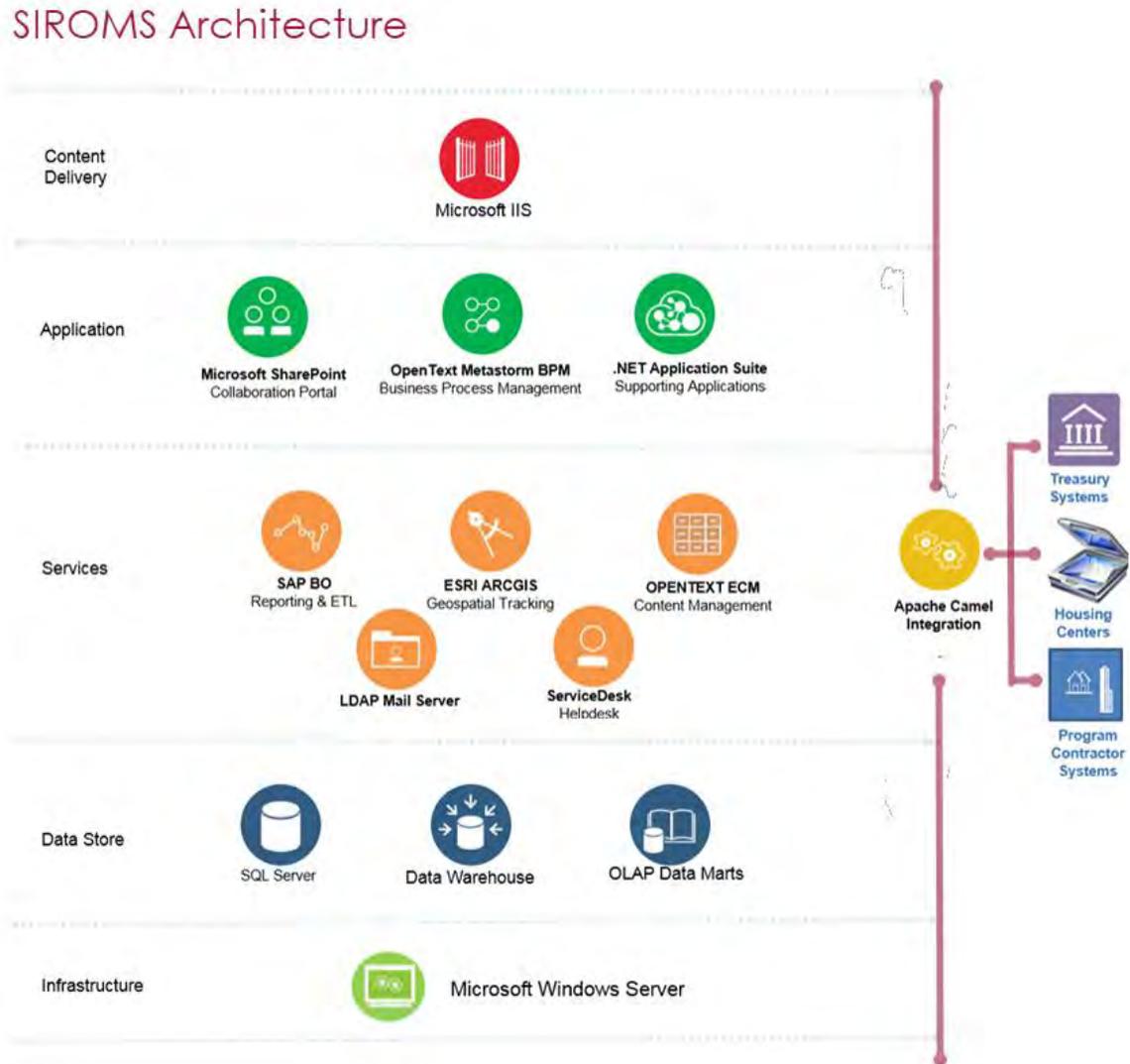
and will be able to leverage our expertise and institutional knowledge to take advantage of the following features:

- A web-based portal to simplify management of funding requests while enabling citizens to complete applications for assistance and track status online
- A collaboration portal allowing other state contractors and departments receiving CDBG-DR grants and other disaster recovery funding to provide reports necessary to accomplish and fund their projects
- Business process management software integrated with data warehouse and business intelligence systems for in-depth analysis of funding distribution and outcomes
- Financial management integrated with the State Treasury system
- A full lifecycle grant management system allowing the State to track an application from intake through closeout
- CGI's secure government cloud infrastructure which reduces setup time and complexity, and provides the 24/7 reliability needed for a large-scale disaster recovery program.
- Highly-automated workflows to minimize application processing time, enforce compliance, and report program results to federal agencies
- Comprehensive, ad-hoc and pre-built reporting to support Sandy recovery programs
- Single virtual file for tracking and managing all data for an application, ensuring consistent records for auditing and reporting purposes

The SIROMS system is built using proven technologies, such as OpenText Business Process Management (BPM), and Microsoft .NET, chosen by Team CGI to meet the fast moving and scalable needs of a Disaster Recovery program. The core of the back-office functionality is built on BPM. **BPM provides workflow-driven management of the business processes of any DR program or administrative function, providing clear visibility into the progress, current status, and task ownership for any given record.** BPM also facilitates rapid system design and development; this allows us to reuse specific modules from the existing SIROMS software base to create new modules when necessary. Team CGI has also utilized the .NET Framework on components of SIROMS, which require less complex workflow and greater flexibility from a User Interface (UI) perspective.

CGI will continue to implement the following SIROMS Architecture that has facilitated the successful management of the New Jersey Sandy Recovery programs.

Figure 4 - SIROMS Architecture



2.1.1.4.3 Hosting and Backup Services

CGI hosts SIROMS within a cloud infrastructure that achieves a FedRAMP Moderate certification. Other certifications attained by this cloud infrastructure can be found above in section 2.1.1.4.1 and within section 2.8 of the attached *NJ SIROMS Security Plan - 2018 document*.

CGI provides comprehensive backup services in the form of database backups via MS SQL Server and full and incremental system backups using the CommVault tool. Data can be provided to the State at any time in the form of MS SQL Server database backup files and database log files. The full details of these backup services, including monthly system

backups of all production virtual machines, can be found in the attached *SIROMS Infrastructure - 2018* document.

2.1.1.4.4 Extranet Plan

Per the requirements of the original SIROMS RFQ, CGI currently maintains two external MPLS circuits between its primary site in Phoenix and New Jersey's primary OIT site located at Trenton, NJ and between CGI's disaster recovery site in Philadelphia, PA and New Jersey's secondary SAC data center in Trenton, NJ.

Currently the MPLS circuits are being used for only the NJCFS integration. Because NJCFS could only support FTP transmission, the data was forced to remain on the Garden State Network and the MPLS provides a virtual private network directly to the CGI cloud. However, due to more stringent file transmission requirements included in this new RFP, the NJCFS interface must be revisited in order to remove the use of the unencrypted FTP. SIROMS already provides a secure transport mechanism through its Secure FTP (SFTP) server although this server is accessible over the internet. If NJCFS can be convinced to use the existing SFTP server for encrypted file transport, there would be no use for the MPLS circuits within the SIROMS infrastructure allowing the State to realize monthly cost savings. More details about MPLS and the NJCFS interface can be found in section 3.2.1 of the *SIROMS Infrastructure – 2018* document (Appendix H).

2.1.1.4.5 Transmission of Files

SIROMS data is currently hosted on Windows 2008 R2 and Windows 2012 R2 servers, which require SFTP for secure transmission of data. Our Cerberus SFTP server has been set up and tested in both the production and DR environments allowing secure synchronous data transfer between the CGI and the State. This allows CGI to send and receive data on demand. If the state should ever require a repetitive transfer of data, this could be scheduled to meet the state's requirements. SIROMS does not currently have a requirement to provide asynchronous file access.

In addition, SIROMS system files, in the form of VMWare virtual disk files, are created on a monthly basis and transmitted using an AWS Snowball device. Details of the current method of transmission of files can be found in section 3.2.2 of the *SIROMS Infrastructure - 2018* document (Appendix H).

2.1.1.4.6 Systems Performance, Availability and Reliability

Reliability and availability of the SIROMS application suite is crucial to DCA's success for continuing to provide the citizens of NJ the much-needed financial relief resulting from Superstorm Sandy. CGI's experience hosting and maintaining SIROMS since its inception has allowed the team time to develop and refine effective methods monitoring the system. Due to these battle tested methods, the availability and reliability of the SIROMS application and infrastructure over the last couple of years has been very high. In order to achieve a 99.7% production uptime, CGI will introduce additional proactive monitoring and health check procedures. Please see the *NJ SIROMS Performance Management Plan - 2018* for further details. The SIROMS infrastructure will continue to reliably operate 24 hours a day, 7 days a week except during scheduled maintenance and application upgrade periods that have been mutually agreed to by CGI and the State. CGI defines the SIROMS system as "not available" if:

- Ten or more separate end users have reported to the Help Desk that they cannot login to the BPM or SharePoint applications within the same 60-minute window; or
- Three or more separate end users have reported to the Help Desk that a SIROMS BPM module does not function as the latest design dictates.

CGI can only accept responsibility for an outage if the failure occurs within infrastructure components controlled by CGI. Infrastructure components outside CGI's control include, but may not be limited to:

- GoDaddy domain hosting and
- Internet service providers (ISP) outages

In addition to reliability and availability, the performance of the SIROMS applications is also very important. Page load times form a user's initial perception of performance, and thus is an important metric of the application. However, equally important from an overall system performance perspective is the user's throughput. For example, if the SIROMS BPM application provides an automated way of fulfilling a funds request that used to be a time consuming manual process, higher page load times may be more palatable because the overall throughput of processing funds requests is much higher than the manual process. We must take both page load and throughput parameters into account when interpreting and assessing SIROMS system performance. Measuring the system performance should be collected while operating under *concurrent* user load. DCA has defined *concurrent usage* when more than one SIROMS user actively logged into the system at the same time. Consequently, performance testing should occur while the expected number of production users are all logged into SIROMS concurrently.

CGI recommends the use of Apache JMeter to conduct stress tests and analyze results. JMeter is a free, open source tool that can operate outside or inside the SIROMS application infrastructure. If DCA prefers another stress testing tool, CGI assumes that DCA will procure the software and all user licenses whenever stress testing is required and permit CGI to use that tool at no additional cost. CGI assumes stress testing only pertains to those applications that interact with end users. Specifically, this includes the SIROMS BPM and any active .NET applications. CGI will work with the State to determine the appropriate number of concurrent users for each .NET application as each application will have a different user community. CGI assumes that during an annual stress test, each of the aforementioned end-user SIROMS applications will undergo an automated stress test. The stress testing will be performed separately for each end-user application. However, as new functionality is introduced into a SIROMS application, only the newly introduced or modified screens will be part of a stress test prior to be promoted into production. This will increase the duration of change requests because newly created application screens or modified screens must undergo automated test script development in order to stress test the new or modified application features.

In prior years, there was no requirement for SIROMS applications to undergo a comprehensive stress test. Only the Funds Request module within the SIROMS BPM application was previously required to undergo stress testing. Consequently, CGI requests that as the system undertakes its first series of comprehensive stress tests, up to 120 days be provided to address any issues that fall below agreed upon performance requirements without incurring any liquidated damages. For all future stress tests, CGI accepts 30 business days for turning around issues found within 5% of agreed upon performance requirements or a 5-business day turnaround if performance results fall beyond 5% of agreed upon performance requirements unless otherwise mutually agreed upon between both CGI and the State.

2.1.1.4.7 Automated Records Management/Storage Systems and Related Services

Any requests for SIROMS information falling under the Open Public Records Act (OPRA) is recorded as a Help Desk ticket so the work required to service the request can be properly tracked and audited. An email will be sent to the SCM in order for any OPRA request to be fulfilled by the State OPRA Custodian.

Procedures for document retention and long-term storage can be found in section 4.8 of the *SIROMS Infrastructure* document. In addition, the most recent DORES certification is documented in *ImageProcessingReg-20170208 v2*.

2.1.1.5 DATA WAREHOUSE ENVIRONMENT (SECTION 3.2.5)

The SIROMS data warehouse, built by CGI, is a comprehensive and integrated environment for consolidating various data sources and systems. The SIROMS data warehouse makes it easier to access data needed for various stakeholder levels, audits, and operational reporting needs.

The data warehouse, in conjunction with the SIROMS Integration Engine and Extract Transform and Load (ETL) functions, is capable of bringing in data from federal DRGR systems, State Treasury Systems, and partner program systems as flat files, database/cloud connections, or open data.

2.1.1.5.1 Data Warehouse Components and Features

The SIROMS data warehouse, at its core, is built on MS SQL Server using SQL Server Integration Services for ETL and SQL Data replication for real time data. The data warehouse simplifies and speeds up data retrieval by using the concept of Business Process Views. The process views are similar to the OLAP (Online Analytical Processing) data models, which makes it easier to report on a large volume of data. The following components help in building and maintaining the data warehouse:

- **SQL Server Integration Services ETL** - SQL Server Integration Services (SSIS) is a powerful ETL tool, which is included with the MS SQL Server Enterprise Edition License. The capabilities of the tool range from building simple ETLs, using drag and drop to build powerful transformations using PLSQL, .NET, or other modern scripting languages. The ETL helps to intake data from external or internal systems and transforms the datasets to build a data repository, tailored for reporting needs. The data is de-normalized to facilitate better support for reporting queries and increased performance. In addition to the intake of data, SSIS also has the ability to send data out to external systems. Notification emails for acknowledgements are also generated to keep the user acknowledged and informed of the status of the upload. ETL helps keep the data warehouse current with information from both external and internal systems, which provide critical data, needed for SIROMS Reports.
- **SQL Server Replication** – SQL server replication is a powerful way of extracting real time data for reporting needs. Replication allows the Online Transaction Processing (OLTP) system to free up resources, needed for the front end applications, while allowing the data warehouse to use real time data. Replication, along with ETL helps in keeping the data warehouse in sync with the OLTP as well as the external systems.

- **SIROMS Integration Engine** – The SIROMS Integration engine, built by CGI, is a proven and trusted approach to transfer data needed for the data warehouse. The ability to create inbound and outbound interfaces to complex systems makes it a critical component. The integration engine allows the users to drop files through FTP or SharePoint to leverage the ETL intake process. Data related to interface transfers are also captured in the data warehouse.
- **MS SQL Server Agent** - The SQL Server Agent is a tool used in scheduling ETLs and SQL jobs, required to maintain and refresh the SIROMS data warehouse. The SQL Server Agent helps in refreshing the data warehouse based on a specified job frequency. Typically all the tables in the data warehouse are refreshed from the OLTP on a daily basis.
- **Data Warehouse Security** – The data warehouse is hosted in firewall controlled FEDRamp certified environment with users requiring 2 factor authentication. The end users of the system will not have direct access to the data warehouse environment. Data dumps for specific tables, can be generated for selected third parties, as directed by SCM.

2.1.1.5.2 SAP Business Objects Reporting

In addition to a powerful data warehouse, SAP Business Objects is used for generating reports for the end users and executive management.

SIROMS REPORTING ENVIRONMENT FEATURES:

- CGI utilizes the capabilities of SAP Web intelligence and SAP Business Objects platform to create and deliver a large volume of reports.
- CGI uses SAP Business objects universes as a metadata layer to generate the web intelligence reports. The SAP Business objects universes simplify the data model, making it reusable and modular.
- The reports can be saved and exported to Excel, PDF or CSV formats.
- The reports are scheduled to the approved end users in Excel or PDF formats. Scheduled reports are delivered via email to the end user's inboxes and to a SharePoint reporting library.
- The SIROMS BPM application is integrated with SAP Business Objects for certain reports. These linked reports can be requested to be delivered to the user inbox, from the SIROMS BPM User Interface.
- At a high level the following types of report are created from the system:
 - **Ad-hoc Reports** – During the course of the SIROMS contract from inception till date, CGI has been able to deliver close to 2000 ad-hoc reports. CGI maintains frequently requested ad-hoc queries in a separate Business Objects Universe so that the queries can be reused if needed. The volume of ad-hoc report requests increases significantly during the audit process and CGI

has consistently demonstrated the ability to turn around ad-hoc requests within the timeframe requested.

- **Canned Reports**

- **Executive Level Dashboards** – CGI has built numerous dashboards, which have helped in providing summaries to executive management. These dashboards are created at various levels to ensure that all of the metrics needed are captured. The executive dashboards include all of the financial and operational metrics needed to track the progress of the particular program.
- **Operational Support Reports** – Operational reports, which show the operational status of each application or a financial transaction, helps provide data needed for the day to day activities of the end users.
- **Audit Reports** - These reports include data needed to support quarterly audits by HUD and help to gather information from partners agencies
- **System Assurance Reports** - System assurance reports include data related to interface transfers or any other data needed to ensure the data integrity of the system.

2.1.1.6 TECHNICAL SERVICES (SECTION 3.2.6)

Based on our years of expertise, developed by working closely with the State of New Jersey, CGI will provide a team with the capabilities needed to maintain SIROMS. The team is experienced in designing, developing, testing, and supporting software, specifically for disaster recovery program management for New Jersey's Department of Community Affairs. This understanding of disaster recovery program management, at all phases of the software development life cycle, provides additional verification at every step to ensure that changes are being developed in a way consistent with the needs of the project.

The business analysts on the team have a deep knowledge of the goals of the individual programs and the federal requirements that need to be met while achieving these goals. They continuously leverage this knowledge first to work closely with state program and finance representatives to suggest ways in which the SIROMS solution can be employed to solve the State's challenges and design the system functionality that is agreed upon to address the challenge.

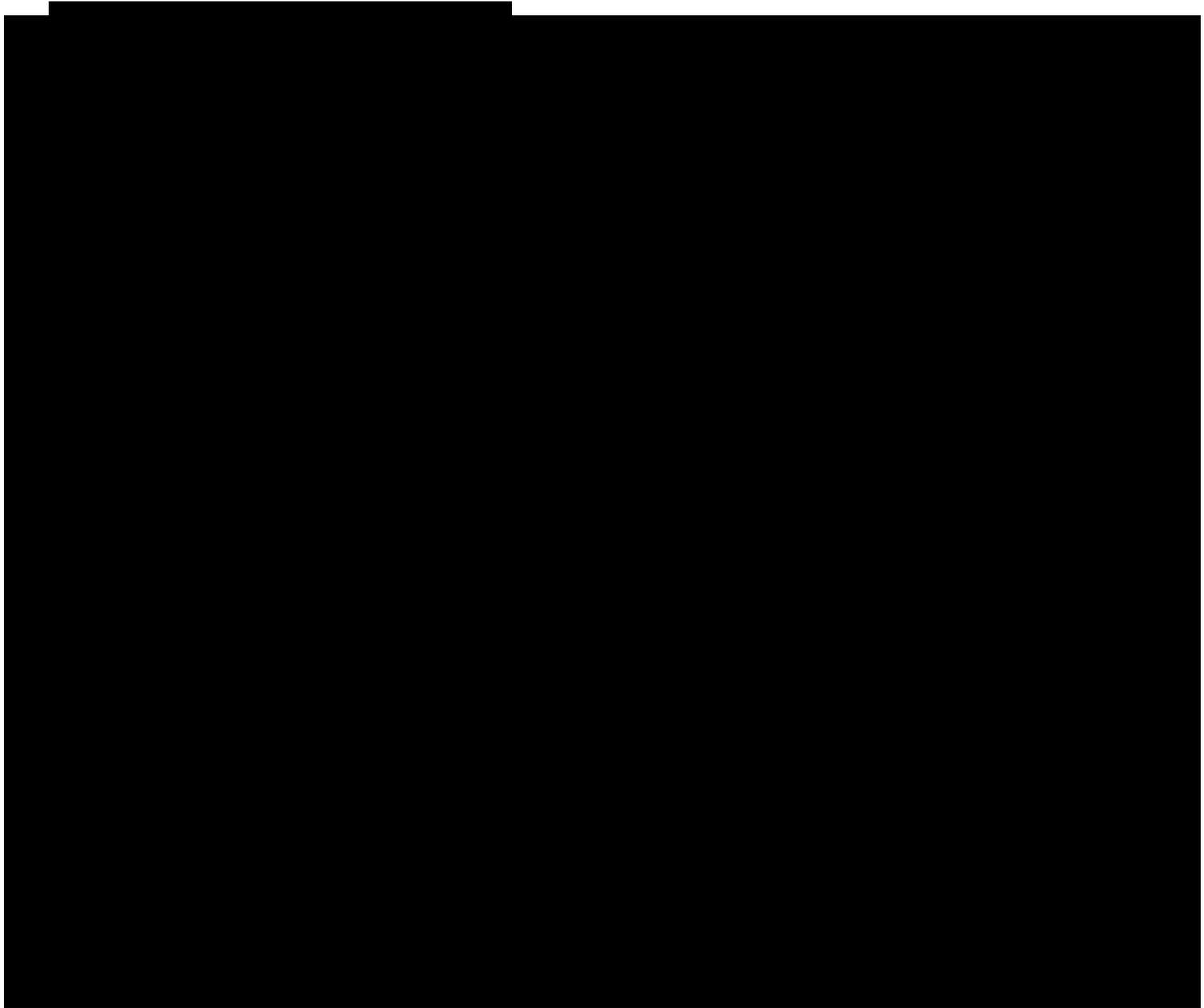
During the process of supporting DCA's disaster recovery objectives, CGI assessed New Jersey's disaster recovery program, along with any legacy information and record keeping systems and provided an action plan targeted to provide rapid deployment of the CDBG-DR Programs to assist State residents impacted by Superstorm Sandy. Features developed by CGI to support these objectives include:

- Comprehensive Financial Management system with ability to link to State Treasury systems, banks, and applications for electronic funds disbursement

- Financial Management capability to manage disparate funding sources, allowing the primary Grant recipient to combine data for holistic recovery reporting, while maintaining the ability to track, manage, and report on each funding source results individually.
- Multiple Full Life Cycle Grants Management systems that includes public facing application intake systems, application randomization, eligibility determination and scoring, at-a-glance workflow status, document repository (record retention), complex grant award calculations, system generated grant award agreements, status and history tracking to provide clear audit trail of all actions taken within the system, and direct integration with the State treasury for funds disbursement
- Integration with major federal grant management systems to support federal and programmatic reporting requirements
- Program administration and policy information support
- An integrated data warehouse containing consolidated data provided by all partner agency sub-grantees driving multiple transparency portals including the Governor's Office of Recovery and Rebuilding (GORR) and the Office of the Comptroller
- Statistical analysis and forecasting methodologies which have helped the State identify bottlenecks in operations, provide estimates on program completion, plan for resource allocations, and project the rate of grant disbursements through the life of the programs

2.1.1.6.1 System Change Request Process

CGI utilizes the System Change Request module that is built into SIROMS for the purposes of tracking potential challenges that SIROMS may be modified to solve. This module allows the SCM to track the progress of every proposed change through the System Change Request process and to approve or reject the change at multiple points in the process. The SCM can have the change request put on hold, to temporarily prevent any further work from being done on it while further review is done, or withdraw the change to permanently prevent further work from being done. The image below shows the life cycle of a System Change Request from creation to release for production. Note that maintenance change requests require approval by the state program manager and enhancement change requests require approval by the state program manager and the SCM.



notification UT Email

[Redacted line]

relevance to the SCM.

Field	Description
[Redacted]	[Redacted]

Field	Description
Cost Estimate	The actual estimated cost. This is provided after the BFRD has been approved
Document Attachments	This can be used to attach as multiple files to the change request. All versions of the BFRD should be attached to the change request

2.1.1.6.2 Change Control

The CGI team uses the Subversion change control tool to maintain an organized repository of the versions of all application code, integration code, reports, and deployment scripts that are deployed to the SIROMS production environment. Before a team member starts modifying a module for a change that they have been assigned, they have to first get a lock on the code in Subversion, to prevent other users from making simultaneous modifications to the code. If a hot fix is required on a file that has been locked for development, the development manager is notified so that they can prioritize the changes, coordinate the modifications, and assess the schedule impact of the changes. Before any code can be deployed to production it is checked into the production branch and tagged for future tracking.

2.1.1.6.3 Configuration Management

Configuration Management is described in detail in section 3.9 of the attached SIROMS Security Plan (Appendix G).

2.1.1.6.4 Data Exchange

SIROMS currently automates the exchange of data with multiple internal and external applications. The following mechanisms have been implemented in SIROMS for data exchange:

- WSDL based web services – example: receipt of data and files through the iDone interface.
- Direct database calls – example: Applicant Interactions generated from the Constituent services application.
- File Exchanges – example: Transmitting A1 files to NJCFS.
- Internal MBPM inter module calls – example: Generating a Funds Request from RREM.
- ETL – import and export data from DRGR and NJCFS systems using a combination of FTP and ETL processes.

CGI will continue to work closely with the State of New Jersey to modify these existing interfaces and develop new ones to meet their business needs. Developing a standardized

method of exposing the application's data for exchange with other systems has the potential to reduce the efforts of future integration tasks. To successfully implement this change, several key decisions would need to be made:

- **Interface mechanism** – One of the existing mechanisms could be utilized for this purpose or it could be developed as a RESTful web service. The primary factor in this consideration will be the capabilities and accessibility of the system that the exchange will be performed with.
- **Structuring of the data** – Developing a consistent data structure of the various parts of SIROMS to ease the effort for other applications to consume the services being exposed.
- **Error reporting** – Developing a consistent mechanism to alert other applications or any validation or system errors that may occur during the processing of a data exchange.
- **Security** – The data exchange service will need to verify that the application transmitting the request is authorized to access the data exposed by the data exchange.
- **Data Integrity** – Throughout the life of SIROMS, the State of New Jersey and CGI have worked to develop a comprehensive set of validations to ensure that only appropriate actions can be taken by users in the system. A method would need to be developed to ensure that any data entered into SIROMS by another system meets the application rules.

CGI's team has the understanding of the SIROMS underlying data and validation rules to work with the state to design and implement a standardized data exchange.

2.1.1.7 IT PRACTICES, DATA SECURITY AND INTEGRITY (SECTION 3.2.7)

CGI's enterprise security management services encompass the governance, strategies, frameworks, plans and assessments necessary to create and manage an effective enterprise-wide security program. Our focus is to work with our customers to articulate the appropriate governance and policies to achieve enterprise goals. With our systematic approach, CGI establishes an overall risk management framework that takes into account the unique risk profile of the NJ SIROMS solution and the associated regulatory and privacy requirements.

Security management goes beyond the physical levels that provide the access and control mechanisms for the facilities or infrastructure. It applies to protection of the software, applications, and data from corruption, or unauthorized intrusions, in order to maintain integrity. Dealing with these possibilities involves the analysis of potential threats and requirements surrounding the level of protection needed by the State to ensure data confidentiality and integrity as well as service availability.

2.1.1.7.1 Personally Identifiable Information (PII)

The CGI team will continue to work closely with the State of New Jersey to properly secure the PII stored in SIROMS including the requirements specified in N.J.S.A 56:8-161 through

N.J.S.A 56:8-166. In addition to these requirements, all systems are categorized based on which do or do not contain PII. All databases containing PII use transparent data encryption to ensure that data at rest is encrypted.

2.1.1.7.2 Disaster Recovery

Disaster Recovery is described in detail in section 7 of the SIROMS Business Continuity Plan (Appendix F).

2.1.1.7.3 Backups

Database and Infrastructure backups are described in detail in sections 4.7 and 4.8 of the attached SIROMS Infrastructure document (Appendix H).

2.1.1.7.4 Encryption

Encryption of transmitted data is described in section 3.6.1 of the attached SIROMS Security Plan (Appendix G).

2.1.1.7.5 Data Center Infrastructure

The SIROMS infrastructure is a private cloud server infrastructure maintained in two FedRamp/FISMA moderate compliant physical environments. This environment is routinely referred to as platform as a service (PaaS). The UAT environment for testing and the production environment are located at the CGI PDC located in Phoenix, Arizona. The disaster recovery environment is maintained in Philadelphia, PA. The operating system on all servers is either Windows 2008 R2 or Windows 2012 R2. These logical servers are running on ESXi physical hosts running the 6.5 version VMWare's hypervisor. There are 13 servers in UAT environment, 17 servers in production environment and 15 servers in disaster recovery environment.

These data centers feature:

- **Redundant systems** - N+1 redundant cooling, power, and telecommunications.
- **Backup power** - Uninterruptible Power Systems (UPS) prevent power spikes, brownouts and surges. Two diesel generators provide power in the event of a utility power outage. On site fuel is approximately 7,000 gallons, which can sustain the building for 10 to 12 days.
- **Automated monitoring** - Extensive monitoring process of network, servers and applications to detect problems, often before they affect availability and to support capacity-planning services to accurately distribute and accommodate load.

- **Fire suppression system** - Zoned dry pipe fire suppression system (pre-action), a zoned under floor fire suppression system, smoke and fire detection systems, independent heating, ventilation and air conditioning (HVAC). All systems operate independently

We maintain and continuously monitor the redundant HVAC systems

2.1.1.8 FUNCTIONAL REQUIRMENTS (SECTION 3.2.8)

CGI's solution for SIROMS is a full IT shared services platform, which has helped the State deliver disaster recovery services in a flexible, scalable, and efficient manner. The following sections describe in detail the functional components of the CGI solution.

FUNCTIONAL SCOPE OF WORK

SIROMS is a suite of custom software modules providing broad-spectrum functionality across the NJDCA's CDBG-DR funded Sandy Recovery programs. The custom software requires ongoing maintenance, updates, and supports efficient delivery of operations and services. To accomplish this, the CGI Team provides a diverse set of services described below.

APPLICATION SOFTWARE MAINTENANCE

The maintenance required for existing features and functionality will include, but is not limited to:

- Maintaining and updating documentation on changes to current functionality, including user guides
- Modifying applications deployed in production to correct faults, to improve performance or other attributes
- Modifying the system to cope with changes in the software environment
- Increasing software maintainability or reliability to prevent problems in the future
- Maintaining and updating database objects
- Maintaining and updating software using Metastorm BPM v9.4, including scripting and workflow design, with implementation and maintenance of workflow systems for SIROMS BPM Applications
- Maintaining and updating client side scripting using Javascript/JQuery/.NET for front end forms development
- Modifying SQL stored procedures and writing needed queries in MS SQL Server 2012 for updating SIROMS BPM and .NET modules and integration between them where required
- Managing, planning, and scheduling software builds for various applications through Test, Staging, and Production environments
- Tracking and controlling changes in applications, using Tortoise SVN Version Control System
- Maintaining and upgrading server, software, services, and database patching
- Managing OpenText Designer Studio builds for the purpose of deployment

The CGI Team recognizes that there may be a need to implement changes to respond to evolving program needs as a result of changes to internal DCA policies and procedures and potential legislation. Team CGI will provide no less than 50% of the total proposed FTEs for the design and development of system and/or reporting enhancements that are intended to alter existing functionality. Modifications to the allotment of total FTEs towards enhancements may be adjusted with the agreement of the SCM and CGI Project Manager and addressed through the Change Order process. Examples of such changes that have resulted in change orders and have recently been delivered to the State include: development to support the addition of a new RREM Construction Project Management contractor and the development of a new National Disaster Resiliency Program (NDR) module.

PRODUCTION SUPPORT

The list of custom modules that comprise the SIROMS suite of software applications require varying levels of production support in order to diagnose, triage, troubleshoot, and resolve issues reported by end users. For instance various recurring tasks are performed to verify that data from external, asynchronous systems is accurately and efficiently imported into the SIROMS on a day to day basis. SIROMS Production Support is essential to the support of over 30+ modules that comprise the SIROMS recovery system and maintain SIROMS as the system of record for the Sandy Recovery project.

The inventory list of ongoing maintenance tasks related to Production Support will include, but are not limited to:

- 1st Level/Tier support provided by the SIROMS Help Desk to triage incoming issues, determine severity, route ticket(s) accordingly, and follow-up as necessary.
- 2nd Level/Tier support to diagnose if the request is a defect, user training/configuration issue, or if there is a potential need for a system enhancement (Change Request).
- 3rd Level/Tier support to provide final diagnosis and resolution path with cross functional teams including business, database, application, reporting, network, and infrastructure.
- Examples of reoccurring tasks will include, but are not limited to:
 - Handling requests for moving grant applications to and from various points in their respective workflows via database updates and script execution
 - Data migrations from external data sources
 - Imports of financial transactions which do not originate in SIROMS
 - A1 File Generation and NJCFS Integration for automated transfer of grant payments to the NJ DCA's treasury system
 - Modifications to funding classifications via database updates in support of DRGR Reconciliation

- Mass upload and/or reclassification of attachments/supporting documentation to grant applications
- SharePoint scripts to support uploads of Business Object (BO) reports and large data extracts

The following modules will be supported by one or many of the tasks detailed above:

- SharePoint Applications
 - Admin Pages
 - Home Page
 - Password Manager
 - SIROMS Portal
 - GAP Solution Data
 - Help Desk Information
 - SIROMS Business Objects Reports
 - S2825 Transparency PDFs
 - Training
 - Contractor Fraud – Shared Library
 - DCA Compliance
 - ETL File Upload
 - FHE Document Library
 - FHRRR Document Library
 - File Review Download Library
 - LMI Document Library
 - LRRP Document Library
 - NJ Sandy Document Library
 - Reports Archive
 - RREM Document Library
 - SRD Operational Document Library
 - SRPAG Document Library
 - URS Document Library
- .NET Applications
 - Housing Counseling Services
 - Constituent Services
 - Resettlement Archive
 - Sweeney Applicant Status Form
 - RREM Forecast
 - RREM Construction Survey
 - Flood Hazard Risk Reduction Public Application Intake

- Lead Hazard Reduction Program Environmental Review Request Tool
- SIROMS Appointments
- LMI Public Application Intake
- RREM Waitlist
- Rental Assistance Program Application
- IFS Activation Management
- IFS Status Management
- IFS QPR Management
- ACH Escrow Overpayment Return
- ACH Transaction Processing
- Integration Transaction Viewer
- Database Performance Monitoring
- National Disaster Resiliency Program (NDR)
- BPM Modules/Forms
 - SGM
 - RREM
 - LRRP
 - LMI
 - USD
 - Flood Hazard Easements
 - Flood Hazard Risk Reduction and Resiliency
 - Accounts Receivable
 - Change Request
 - Contractor Invoice Module
 - ESGA- Phase I/Phase II/Phase III Applications
 - Federal Reports
 - Forecasting
 - Forecasting Data Integrity Tool
 - Funds Distribution
 - Including management of two distinct grants ((e.g., Sandy, National Disaster Resiliency (NDR))
 - Funds Request
 - Local Planning Services (LPS)
 - LPS Zoning
 - Multi-Applicant Invoice (MAI) Module
 - Payee/Vendor Management
 - Program Income
 - Quarterly Performance Report – Measure Reporting

- Return Funds
- Strategic Recovery Planning Report
- Technical Assistance and Monitoring
- User Access Request
- VCA-LEP Quarterly Reporting

BUSINESS SUPPORT

As the primary grantee of the Sandy Recovery project NJDCA, in coordination with its partners, is responsible for the oversight and execution of over 35 distinct programs operating across the state. Much of the day-to-day operations for these programs is documented, organized, and managed within the SIROMS suite of applications. Meeting the technology needs of a diverse user base of this size requires significant Business Support.

Figure 6 - SIROMS Business Support Overview



CGI's Business Support model will help ensure that the software continues to provide the flexibility required by the state's ever changing business needs and to handle exception

cases. The tasks that the CGI team may undertake in order to provide Business Support to NJDCA and its partners include, but are not limited to:

- Prepare for and conduct PMOs/status meetings
- Develop and distribute meeting minutes
- Client stakeholder communication management at all organizational levels
- Issue analysis, troubleshooting, escalation and remediation
- Delivery of ad-hoc training, one-on-one or to small groups. Involves travel to various locations in NJ at times.
- Analysis of new, or proposed new/modified, policies and procedures to determine system impacts or potential system impacts
- Document types/scanning convention maintenance and configuration
- Monitor automated notification mailboxes for bounce backs
- Map work function(s) to existing user roles, update for new employees or role changes, and other user access management updates.
- Develop and confirm of requirements for modifications to SharePoint document libraries
- Develop and confirm of ad-hoc reporting requirements and delivery of reports
- Develop and distribute of data migration templates, and associated collection, validation, and processing.

REQUIREMENTS MANAGEMENT

The state may require system and/or reporting development and/or enhancements that originate from various sources, including but not limited to:

- Action Plan and Action Plan Amendments
- State legislative actions
- Evolving requirements from the US Department of Housing and Urban Development
- Changes deemed necessary by users as a result of more sophisticated use and knowledge.

Due to the dynamic nature of disaster recovery and NJDCA's need to meet the requirements of various external stakeholders, the CGI Team recognizes the need for a time boxed, iterative approach to software delivery in line with an Agile methodology. An Agile methodology will allow for rapid software development; with software changes typically taking place within a four week iterative cycle.

The process begins with the submission and initial approval of a Change Request (CR) in the SIROMS system. A CGI business analyst will then lead the effort to analyze the change and facilitate Joint Application Design (JAD) sessions with appropriate NJ DCA staff to elicit change prerequisites and conditions. Subject matter experts identified by NJDCA are expected to attend these JAD sessions and provide the input necessary for CGI business

analyst to understand the business need and desired outcome. CR requirements are derived from the JAD sessions to form the basis of a Business/Functional Requirements Document (BFRD). Depending upon the nature of the change, the BFRD will address the following components:

- Business Objective
- Business Process Analysis
- Detailed Requirements
- Screen Mock-Ups
- Design Specifications
- Current and Proposed Process Flows
- User Role Definition
- Field Level Mapping
- System / User Testing Considerations
- Reporting Specifications
- Reference Documents

During BFRD development, the business analyst will socialize the change with the CGI cross-functional teams including development, reporting, database, interface, and quality control. Feedback from the subject matter experts on these teams will be incorporated into the requirements, where applicable.

Once a draft BFRD is complete, it will be reviewed with NJDCA and updated as needed until the content is finalized. Once completed, NJDCA will be required to approve the BFRD before development work begins. Finalized BFRDs will be posted to the appropriate SIROMS Change Request folder for final approval to proceed with development.

The detailed requirements in the approved BFRD will be used by the development and QC teams as the basis for system development and QC script development. Any necessary clarifications or modifications to requirements will be provided to the development and QC teams by the Business Analyst and may require additional NJDCA feedback. Any subsequent changes to the BFRD after NJDCA approval will be documented and a revised version of the BFRD will be posted to the SIROMS Change Request folder.

DOCUMENTATION

MEETING MINUTES

Documenting the outcome of meetings is essential for confirming mutual understanding and next steps. For meetings lead by the CGI team or related to SIROMS activities, CGI

will document detailed minutes with actionable items. These minutes will follow a standard agreed upon format and will be distributed to all meeting participants within 48 hours. Minutes will be considered approved as-is within 48 hours of distribution unless there is a written request within that timeframe to modify the content. Final meeting minutes will be posted to a central repository on www.siroms.com.

USER TESTING MATERIALS

User acceptance testing is a fundamental aspect to helping ensure that requirements agreed upon by the State and CGI are met prior to production implementation. Unless otherwise agreed to by CGI and the SCM, CGI will hold user testing sessions to present system changes. During these sessions, users will be provided with presentation materials that will be leveraged to train on the new or modified functionality associated with the change request. Copies of these materials will be provided to the users for future reference.

Additionally, users will be provided a checklist of all of the essential requirements associated with the change request. For each requirement, participating users will be required to indicate whether or not the requirement was met. Any requirement that has not been met will be prioritized and addressed. Completed checklists must be received within three (3) business days of the production release and will provide the basis for determining if the associated change is approved for release. Completed checklists from participating users as well as the presentation materials will be posted to the change request folder in BPM.

TRAINING GUIDES

Team CGI believes training is vital to enabling users and administrators to effectively and productively use SIROMS. As evidenced in section 3.3.8, Team CGI has developed a robust SIROMS training plan for the State of New Jersey. In support of these efforts, a comprehensive training guide for each SIROMS module will be made available to the state. These guides will document the process for accessing the module and the step-by-step actions required to progress through the applicable stages. Attention will be paid to indicating required fields and the action buttons necessary to facilitate the desired transaction. Training guides will be continuously maintained, being reviewed for necessary changes with each production release associated with the module. New training guides will be developed for any new SIROMS module. Current and former iterations of the user guides for all SIROMS modules are maintained on SharePoint at www.siroms.com.

Upon request, presentations will be developed or updated to provide new personnel with training on one or more specified modules. Unless otherwise requested, these materials will take the form of power point presentations. Requests for new or updated materials should be submitted five (5) business days prior to the expected training delivery date.

2.1.1.8.1 Quality Management

At CGI, we have a strong commitment to quality—a commitment that leads to business results for our clients. Our quality system represents a common language across CGI, and our passion for operational excellence plays a key role in ensuring consistent service delivery. Our ISO 9001-certified operations apply the [CGI Management Foundation](#), which outlines the key strategies and processes that define and guide the management of CGI and the management of our stakeholder relationships. Towards that end, a key component of the CGI's Client Partnership Management Framework (CPMF), includes a quality management approach which includes the quality planning, assurance, and control activities necessary to maintain defined quality standards. In practical terms, this means that the CGI Team has a set of quality standards that will govern deliverables for the support and maintenance of SIROMS.

Professional quality, technical accuracy, and timely completion of all requested products and services is understood to be of the utmost value to NJDCA. As stated earlier, due to the dynamic nature of NJDCA's program needs, the CGI Team employs an Agile software development approach which allows for rapid software development and minimized time between design to production which is typically limited to 4 weeks. Within that time frame each system change request is unit and system tested prior to production implementation against requirements documented and approved by the client in the BFRD.

CGI maintains test scripts, test results, and works collaboratively between functional and development teams to resolve defects as they are reported. Program managers and the SCM will actively discuss and evaluate all known critical or high priority defects prior to the date of deployment. CGI will mitigate and resolve known critical and high defects prior to the deployment of the CR to production. CGI will share the quality assurance log (e.g., defect list) with the SCM for review with each release. The SCM will approve of the quality assurance log as part of the user testing acceptance process.

Once deployed, application defects reported by application users are triaged and tracked by the SIROMS helpdesk with a unique ticket number. Any incident tickets reported to the SIROMS helpdesk impacting three or more users will be automatically upgraded to priority status. For priority incidents, the CGI Team will work to resolve the ticket in three days or

work closely with the SCM to determine a timeframe, agreed upon by the SCM and Vendor Project Manager.

2.1.1.8.2 Training

Training is a key component to enabling NJDCA program users and end users to effectively and productively continue the use of SIROMS. The CGI Team, as a result of having been directly involved with the development of the modules that comprise SIROMS, is well positioned and qualified to produce training materials, perform training sessions, maintain an environment for training and administer efforts related to training and training plans.

At the earliest opportunity, the CGI Team will engage the NJDCA SCM, to analyze the training needs and confirm the list of modules for which formal training will be required and conducted. Once training analysis is complete and the list of modules requiring training is determined, a training plan will be developed to facilitate the development, management and administration of training within 30 days. The training plan will include the following components:

- **List of Modules** - The CGI Team will engage the NJDCA SCM, at the earliest opportunity, to confirm the list of modules for which formal training will be required and conducted. The CGI team will provide detailed training and documentation of any aspect of the System's design, integrations, or environments at the request of the SCM within 10 business days, unless otherwise agreed upon by the SCM and the Vendor PM.
- **Training Sessions** - Training sessions will be tailored for each course and audience. Sessions will be provided as needed with the focus of the sessions to be tailored to the needs of the attendees. Each session will include a combination of instructor presentations, hands on sessions within the module, PowerPoint slide decks, checklists, group Q&A discussions, session surveys for evaluation and feedback and email follow up.
- **Training Materials** - Once the list of modules is determined, the CGI Team will draw upon prior documentation already developed and augment where necessary to complete the training documentation as required. Training documentation will be tailored for each course and will include user guides, PowerPoint presentations, training checklists, and training surveys.
- **Training Application Environment** – The CGI team will maintain a testing environment with production like code and data which will allow training to be administered and allow students to practice what they are taught.
- **Tracking and Continuous Improvement** – The CGI Team relies on feedback for continual improvement of the training effort. Trainees will be asked to anonymously fill out surveys to evaluate the quality of training content, knowledge level of the instructor, and overall satisfaction with the training course. Feedback from the students will allow for improvement of the training materials and subsequent training sessions.

- **Training Metrics** -Training status reports will be developed to capture the overall training program progress. Data – such as feedback from surveys, number of users trained, number of training classes conducted and training locations – will be provided in the training report.

The CGI Team understands that training is an ongoing effort and organizes training efforts for DCA staff onboarding on demand.

2.1.1.8.3 System Testing

The System Testing effort is a formal testing task administered and completed by the CGI QC Team in conjunction with CGI internal stakeholders to determine whether or not, new or updated system changes adhere to the business requirements as specified in the BFRD. Diligent testing and tracking of issues and concerns raised during System Testing helps minimize the life cycle of a system change request and produces a more efficient result in UAT. As discussed previously, the CGI Team, as a result of having been directly involved with the development of the modules that comprise the SIROMS, is well positioned and qualified to perform system testing in support of NJDCA's scope of work concerning the SIROMS suite of applications.

The system testing effort begins with the development of a testing script plan which is created after a careful review of the requirements. Once a testing script is created, it will be vetted with business analysts to help ensure that test plans account for sum of all valid scenarios. Issues and concerns found are documented and reviewed with developers and business analysts to validate issues and prioritize for resolution. Test plans and results are retained for CGI internal reviews and provide valuable feedback of the performance of the requirements gathering, development and testing efforts. In this manner, the CGI Team provides independent quality checkpoints prior to providing the deliverable. Any changes requiring additional development efforts are documented for approvals prior to resolution. Once a change request has passed CGI internal QC, the CR is promoted to UAT for client testing and evaluation. In the instance that a CR is promoted to UAT with minor defects, this will be made known to UAT testers prior to the start of UAT testing.

The CGI Team will engage the NJDCA SCM at the earliest opportunity, to confirm the need for the development and delivery of a system testing plan within 30 days of the blanket PO award. Any training, documentation, and support for User Acceptance Testing plan efforts will be presented for approval by the SCM during this time.

2.1.1.8.4 User Acceptance

User Acceptance Testing (UAT) is a shared responsibility of both the NJDCA and CGI teams. UAT is a formal testing effort administered by CGI Team and completed by DCA program users to determine whether or not new or updated system changes adhere to the business requirements as specified in the BFRD. Diligent testing and reporting of issues found during UAT is essential due to the fact that program users will possess detailed knowledge of the program needs that may not necessarily be replicated in unit or system testing efforts. UAT testers validate software releases and provide the necessary feedback for the SCM and the CGI Team to either approve/deny the production release. Team CGI will intake issues reported for the purpose of documenting, tracking, and resolution.

Team CGI will administer hands-on UAT sessions, augmented with a testing checklist of any new or updated hardware and software components developed as requested by NJDCA SCM or program users. A minimum of 5 days will be provided for UAT of any system, database, or report release assuming that there were no adjustments to the defined release schedule or delays in retaining BFRD approvals and design changes/updates were minimal after approval. The UAT sessions will be administered within a UAT environment that contains user accounts that mirror production level access including data that has been refreshed in the last 15 days. The CGI Team will work closely with the SCM to adhere to the scheduled outline as the normal course of action. In the instance that the scheduled outline deviates from normal, as a result of competing priorities, priority business needs, or production issues, the CGI Team will discuss with the SCM an appropriate course of action to these one-off cases.

Any defects, bugs, or design revisions found in UAT will be measured against the approved BFRD and prioritized for resolution. Once code revisions are available for testing, the new code will undergo system testing and regression testing efforts prior to promotion to UAT. Code promoted to production will be free of known critical errors or otherwise approved by the SCM for promotion to production. Non-critical issues which will not be resolved by the scheduled release date will be evaluated and queued for a future release date.

2.1.1.8.5 Implementation

Once user acceptance testing is successfully completed and approved by NJDCA, implementation is the final step in the process to integrate a newly approved and accepted change into the production environment. The implementation method itself will include a systematic structured series of steps which mimic the steps previously taken to integrate a new or enhanced change through testing and UAT environments. The new or enhanced change will be certified for use in production once all implementation steps have been completed.

As part of the implementation process, the CGI Team will be responsible for providing training, documentation, and support to NJDCA staff on new or enhanced software or hardware components. The CGI Team will develop and provide a documentation release package that may include updates to some or all of the following: release notes, user guides, workflow diagrams, and final design documentation updates, if any, to support NJDCA staff during the production rollout effort.

Components of the release package to be included are described below:

- Release notes provide a functional overview of all new or enhanced change requests included in a defined release. Release notes will be delivered via email communication to the SCM, program leads and key staff after implementation has been completed.
- User guides are module specific and living documents updated in each instance of a change request. It is intended to act as a reference document which provides end user assistance in the primary functions of the module. The user guide is updated after each implementation and stored in SharePoint for access by all end users.
- Workflow diagrams provide a graphical representation of a repeatable business activity from start to finish including sub-workflows. The workflow diagram is updated after each implementation and stored in SharePoint for access by all end users.
- Final design documentation details the requirements related to a specific change request which were not previously documented in the original discussions when the BFRD was completed and approved. Final design documentation will be documented and uploaded to the CR as necessary and will be reviewed upon implementation of the change in production.

2.1.1.9 IT PRACTICES, DATA SECURITY AND INTEGRITY

Please see sections 2 and 3 of the attached *NJ SIROMS Security Plan - 2018 document (Appendix G)*

2.2 Blanket P.O. {Contract} Management

To successfully manage this Blanket PO {Contract}, the CGI Team will utilize a core set of methodologies to effectively establish project governance and implement the project management processes and best practices that are necessary to successfully execute the NJ SIROMS project. The primary management methodologies that will be utilized for this Blanket PO {Contract} are:

- CGI's Client Partner Management Framework (CPMF); and
- CGI's Project Management Methodology (PMM).

CGI is confident that our methodologies will provide a strong management foundation for this Blanket PO {Contract} with NJDCA, as our methodologies have a proven track record of delivering results for state and local agencies throughout New Jersey. These methodologies have served as the underlying management foundations for the successful implementation of multiple projects and systems across the state, including our active projects at the New Jersey Department of Community Affairs (NJDCA), the New Jersey Department of Environmental Protection (NJDEP), and Ocean County. The following subsections provide an overview of CGI's proven approach and methodologies to managing this Blanket PO {Contract}.

2.2.1 CGI'S CLIENT PARTNER MANAGEMENT FRAMEWORK

CGI's Client Partnership Management Framework (CPMF) is a set of ISO 9001-certified frameworks, methodologies and processes that are tailored to each client environment and used to govern every aspect of our client relationships. The CPMF reflects the professional experience of CGI subject matter experts from the complete spectrum of our services. In addition, it also has been inspired by some of the industry's best practice concepts and standards (CCTA-ITIL, Project Management Institute's PMBOK, ISO-12207, ISO-9001, IEEE-1074 and SEI-CMM) and is structured to best support CGI's approaches to service offerings and delivery. The CPMF provides the tools, template and processes to yield consistent delivery of quality solutions and services and form a collaborative approach in every engagement.

The CPMF provides CGI's managers with a toolkit comprising process documentation, document templates, and reference material tailored to fully and efficiently support the decision and management processes. The methodology is deliverables-based and is designed to achieve objectives, manage tasks, control costs, and produce quality work products. The framework defines the organization structure, administrative procedures and

the forms related to each component of the application development arrangement that will be used throughout the project. It is both flexible and scalable, incorporating best practices and processes developed and refined over the course of thousands of CGI projects.

As a framework, CPMF derives its strength from the following fundamental concepts and objectives:

- Guide the project through an efficient delivery of services
- Facilitate synergy and effective communication among stakeholders by giving them a common frame of reference
- Provide a practical, efficient, and workable set of processes to support engagements, from proposal preparation to contractual completion
- Foster team member productivity by clearly identifying deliverables and activities
- Inject quality assurance processes from the outset, with a clear definition of quality standards and measurements
- Support integration of delivery, management, quality assurance and knowledge transfer activities across the full project lifecycle
- Foster sound decision-making by formulating the right questions at the right time, and providing pertinent information through an accurate framework of check points
- Establish a long term relationship with a primary focus on NJDCA satisfaction

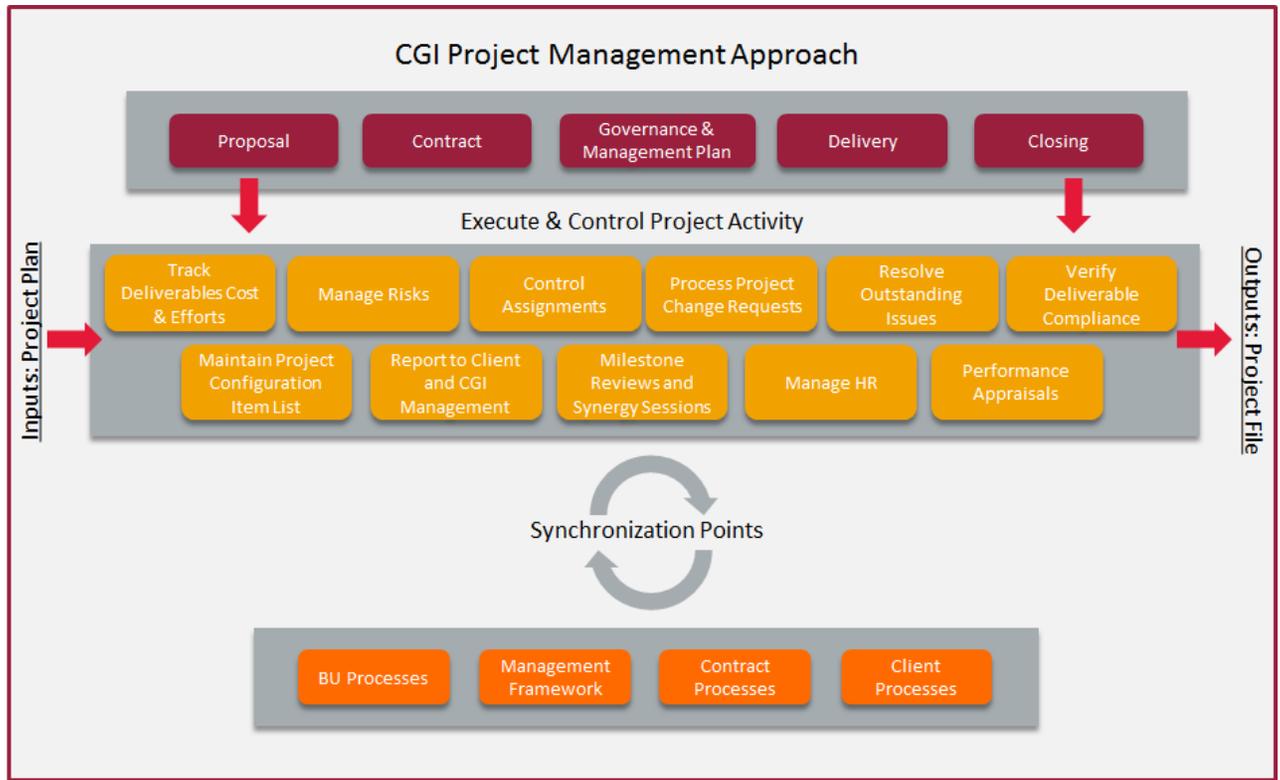


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Figure 8 - CGI Project Management Approach



2.2.1.1 CGI'S PROJECT MANAGEMENT METHODOLOGY

CGI's project management approach is grounded in two core practices: building and maintaining partnerships with clients through the project lifecycle, and applying appropriate, rigorous methods throughout solution refinement, project management and implementation. We believe there are several key aspects to reducing project risk and achieving mutual project success including:

- Senior management support and participation in our ISO 9001 certified quality approach—the CPMF, as described above
- Rigorous application of the CPMF and other development methodology practices and procedures across the Crash Records EDT project
- Ongoing measurement, tracking, and reporting of leading project indicators including schedule, status, staffing, deliverables, and other key project work products
- In our experience, adhering to these practices minimizes risk, maximizes positive results, and enables us to deliver on time and within budget

The CGI approach offers strengths that are well suited to the management needs and objectives of the NJ SIROMS project:

- Encompassing, practice-based methodology.** CGI's CPMF project methodology encompasses our project management standards. Drawing on its experience with hundreds of large scale projects in dozens of industries, CGI developed these standards as the foundation for achieving high-quality project results and promoting exceptional productivity within and across teams. Although encompassing, the CGI methodology is comprehensive and rigorous but not burdensome. We customize our approach specifically to our clients and without the need for unnecessary management overhead processes. This allows CGI to manage a project with a very aggressive schedule effectively and hit related milestone dates.
- Consistency with industry standards.** The CGI standards are consistent with the principles of industry standards such as the Project Management Institute's Body of Knowledge (PMBOK), the International Standards Organization (ISO), and the Software Engineering Institute's Capability Maturity Model Integration (CMMI), as shown in Figure 9 - Project Management Methodology Standards

Figure 9 - Project Management Methodology Standards

Topic	CGI PMF	PMBOK	CMMI
[Redacted]		✓	✓
		✓	✓
		✓	✓
		✓	
		✓	✓
		✓	✓
		✓	✓
		✓	✓
		✓	✓
			✓
			✓
			✓
		✓	✓
			✓

2.3 Blanket P.O. {Contract} Schedule and Plans

The following section details the schedule and the methodology that will be used for managing the Blanket P.O. {Contract}. The schedule provides key dates and the deliverables that will be part of these key dates, along with detailed timetables where necessary that will identify the completion dates for each task and sub-task required by the scope of work. The schedule, deliverables, and the plans will clearly describe how CGI understands the scope of work required for successful operations, maintenance and support of the SIROMS system.

2.3.1 BLANKET P.O. {CONTRACT} SCHEDULE

Team CGI maintains constant clear communication, both directly and indirectly, using scheduled meetings and progress reports to inform the State of activity progress, status of open items, any new or closed items and items requiring their participation and approval, as part of the support and maintenance of SIROMS.

In addition to the daily collaboration and weekly status meeting between the State and Team CGI, we provide a weekly status report to the State Contract Manager. The weekly status report will include:

- Project activities for the previous week,
- Accomplishments and tasks planned for the following week.
- Any necessary revisions and updates to any active Project plans.

Complete and accurate documentation is a key component of our program management, and we understand the critical need for substantiation of work in a program like SIROMS. Team CGI will work the State Contract Manager to identify the scope of changes for each release and will use the Change Request application to identify the schedule and scope of work.

2.3.2 MOBILIZATION PLAN

CGI's approach to mobilization draws on years of hands-on experience creating and implementing the NJ SIROMS system. In 2013, during the aftermath of Superstorm Sandy, NJDCA was under significant pressure to mobilize resources around their technical response to the disaster. As hurricane victims awaited much needed relief, NJDCA asked CGI to design and implement a GAP technical solution as part of our mobilization efforts, to serve as an interim solution that would allow the State to begin disbursing much anticipated

relief funds to a citizenry that was growing increasingly desperate. Within the first 45 days of the contract, CGI delivered on our promise. Additionally, throughout the contract period, CGI was able to provide sufficient depth of resources to support rapid implementation of New Jersey’s action plan and/or programs from other disaster recovery funding.

CGI understands the importance of rapid mobilization to maintaining the functionality of SIROMS system. Since CGI implemented the original SIROMS solution, our mobilization effort will be seamless and will leverage key personnel who have been involved in the original implementation and maintenance of SIROMS.

At CGI, it is in our DNA to approach every new engagement with an approach that is flexible, collaborative, and responsive to evolving client needs and priorities. This approach has helped us build lasting client relationships and earn the role of a true trusted advisor to NJDCA, NJDEP, and Ocean County. We will take this same collaborative approach with NJDCA to help ensure that the mobilization period lays the foundation for successful continued partnership next chapter in the SIROMS project.

The following table lists some of the key activities as part of our mobilization plan.

Mobilization Activity	Description
<p>Assemble Key Personnel</p>	<p>An important element of CGI’s Project Mobilization Plan is the co-location of most of our Project Team’s Key Personnel. Most of CGI’s key personnel assembled for this opportunity are already working with NJDCA out of CGI’s New Jersey Headquarters. Hence, they will be immediately available upon notice of intent to award the contract; CGI’s New Jersey Headquarters is home to nearly 100 CGI business and IT professionals.</p> <p>Our ability to co-locate Key Personnel from the Project Team will allow CGI to provide NJDCA with an unmatched level of service and accessibility on day one. This significantly reduces any business continuity risk for SIROMS. Additionally, while many other vendors would likely have to waste time trying to identify resources, procure resources with CDBG-DR experience, and make a new office space operational, CGI’s already established headquarters and experience with the system will enable us to hit the ground running,</p>

Mobilization Activity	Description
<p>Facilitate Project Initiation Meeting</p>	<p>An important milestone of the Project Mobilization Plan is the Project Initiation Meeting, which will occur no later than thirty (30) calendar days after receipt of notification to award contract. The meeting will take place at NJDCA headquarters, and will be attended by key personnel from CGI and NJDCA, including to State Contract Manager (SCM). Additionally, the meeting will provide an opportunity for NJDCA to ask for clarification of various aspect of CGI’s proposal, including (but not limited to) CGI’s approach to managing this Blanket PO contract and project management methodology.</p> <p>While CGI is excited to facilitate the Project Initiation Meeting as the official kickoff of project-related activities and collaboration between NJDCA and CGI, we would also like to emphasize that CGI will be available to facilitate various other meetings with NJDCA stakeholders throughout the mobilization period. As mentioned, CGI’s New Jersey headquarters in Hamilton, NJ allows our staff to be very accessible to NJDCA’s project team, and we look forward to taking advantage of our close proximity to NJDCA to collaborate in preparation for a successful project kickoff.</p>
<p>Establish Governance and Status Reporting Structure</p>	<p>Project governance is an essential component to any successful IT project, particularly an initiative that requires coordination between multiple state agencies, and collaboration with local government entities. CGI has successfully established a tiered approach to project governance at each of our active New Jersey projects, enabling project issues to flow upwards and downwards incrementally, so that the appropriate stakeholder group may address them. Typically, straightforward, tiered approach to governance allows approximately 85% of issues to be resolved by “on-the-ground” Project Teams, while 10% of issues are addressed by a Management-level Steering Committee, and the remaining 5% are addressed by an Executive-level Steering Committee.</p> <p>In addition to our tiered governance framework, CGI recommends deploying other cross-functional forums on an ad-hoc basis to facilitate decision-making and oversight in certain critical areas, depending on the phase and evolution of the project. CGI will prepare and facilitate a weekly status meeting with the Status Contract Manager. The purpose of this monthly meeting will be to discuss the detailed project status and provide additional updates on all outstanding high-priority items. Additionally CGI will provide a weekly status report to the State Contract Manager and other stakeholders as required that details the following</p> <ul style="list-style-type: none"> • Key Milestones in the coming weeks • Current project risks • Current project issues • Planned activities for next period • Release schedule • Significant accomplishments • Infrastructure updates • Look ahead scheduled out of office & working remote • Ongoing project risks
<p>Recruit and Onboard Project Team Members</p>	<p>CGI understands that project success ultimately depends on the quality of the functional, technical, and management professionals that are committed to the project. As mentioned earlier, CGI will leverage most of the personnel that have created and implemented SIROMS and have the unique ability to have the most resources with the best understanding of the system.</p>

Mobilization Activity	Description
Procure Hardware, Software, and Essential Equipment	CGI will follow its procurement model to buy the necessary hardware and software items as required for maintaining the NJSIROMS system specified in the RFP.

2.3.2.1 MOBILIZATION TIMETABLE

PLAN FOR DEPLOYING KEY PERSONNEL

CGI understands that a productive and successful mobilization period depends on the availability and commitment of Key Personnel to help get the project off the ground. During the mobilization period, all the Key Personnel referenced in Section 2.3.2.1 will be assembled to begin executing elements of Project Mobilization Plan immediately of notification of intent to award the contract. Most of key personnel will be co-located at CGI New Jersey’s Headquarters in Hamilton, NJ, to foster collaboration and maximize accessibility throughout mobilization to the State Contract Manager (SCM) and key stakeholders from NJDCA.

The table below provides a list of Key Personnel that will be available for the duration of the mobilization period, including their corresponding Project Role, and a high-level plan for how each member will be utilized to support activities throughout the mobilization

Name	Project Role	Functionality
[REDACTED]	Project Director	<ul style="list-style-type: none"> Co-facilitator of the Project Initiation Meeting Oversee execution of Project Mobilization Plan activities Approve revisions to Project Schedule, Project Management Plan, and new hires of any Key Personnel Approve procurement of any software, hardware, or other essential equipment
	Project Manager	<ul style="list-style-type: none"> Single-point-of-contact for SCM and NJDCA Manage CGI’s mobilization team Coordinate day-to-day mobilization activities Co-facilitator of the Project initiation Meeting Assess the need for new hires, and coordinate recruitment, interview, and hiring activities with H.R. Recruitment Team
	Disaster Recovery Application Design & Quality Director	<ul style="list-style-type: none"> Maintain consistency across Disaster Recovery products and facilitate sharing across teams

Name	Project Role	Functionality
[REDACTED]	Technical Manager	<ul style="list-style-type: none"> • Manage CGI's technical mobilization team • Serve as technical advisor for application systems during the Project Initiation Meeting • Support revisions to technical components of the Project Schedule and Project Management Plan • Perform final interview for new hires of technical resources as needed. • Provide support to SCM and NJDCA for any questions or clarification re: technical components of the proposal
[REDACTED]	Functional Manager	<ul style="list-style-type: none"> • Manage CGI's functional mobilization team • Serve as functional advisor during the Project Initiation Meeting • Support revisions to the functional components of the Project Schedule and Project Management Plan • Perform the final interview for new hires of functional resources as needed. • Provide support to SCM and NJDCA for any questions or clarification re: functional components of the proposal
[REDACTED]	Data Analysis and Reporting Manager	<ul style="list-style-type: none"> • Manage CGI's database and reporting mobilization team • Serve as technical advisor for reporting systems during the Project Initiation Meeting • Support revisions to the functional components of the Project Schedule and Project Management Plan • Perform the final interview for new hires of technical resources as needed. • Provide support to SCM and NJDCA for any questions or clarification re: technical components of the proposal
[REDACTED]	Help Desk Manager	<ul style="list-style-type: none"> • Serve as Helpdesk advisor during the Project Initiation Meeting, and support revisions to the Project Management Plan
[REDACTED]	Infrastructure Architect	<ul style="list-style-type: none"> • Serve as infrastructure advisor during the Project Initiation Meeting, and support revisions to the Project Management Plan
[REDACTED]	Database Manager	<ul style="list-style-type: none"> • Serve as database, data warehouse advisor during the Project Initiation Meeting, and support revisions to the Project Management Plan
[REDACTED]	Integration Lead	<ul style="list-style-type: none"> • Serve as Integration advisor during the Project Initiation Meeting, and support revisions to the Project Management Plan
[REDACTED]	PMO Director	<ul style="list-style-type: none"> • Serve as PMO advisor during the Project Initiation Meeting, and support revisions to the Project Management Plan

2.3.3 SECURITY PLAN (SECTION 3.4.6.1)

CGI appreciates the sensitivity of the data within SIROMS and the need to protect the personal identification information and financial transactions. CGI drafted and implemented a comprehensive security plan that ensures the SIROMS infrastructure, application, and data are protected at all times from internal and external threats. CGI implements best of breed solutions for assessing vulnerabilities and detecting threats while also ensuring SIROMS data is encrypted both at rest and in transit.

The current *NJ SIROMS Security Plan - 2018 (Appendix G)* document can be found as an attachment to this proposal response. Many of the following subsections of our response refer to a section within the attached security plan. CGI will provide an updated Security Plan within the first 15 days of contract award and annually if any changes are required.

2.3.3.1 REGULATIONS AND SECURITY REQUIREMENTS

Please refer to section 2.8 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.2 SYSTEM, ADMINISTRATIVE AND PERSONNEL SECURITY

Please refer to section 3.3 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.3 WORKFORCE SECURITY

Please refer to section 3.2 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.4 ROLE-BASED SECURITY ACCESS

Please refer to section 3.6.2 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.5 ACCOUNT MANAGEMENT

Please refer to section 3.6.1 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.6 PASSWORD MANAGEMENT

Please refer to section 3.6.1 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.7 AUTHENTICATION/AUTHORIZATION

Please refer to section 3.6 of the attached *NJ SIROMS Security Plan - 2018* document (*Appendix G*).

2.3.3.8 LOGGING/AUDITING CONTROLS

Key Application Data Tables with non-static data are tracked using SQL Server's Change Data Capture (CDC) module. CDC captures insert, update and delete activity that is applied to a SQL Server table. Both column information and metadata is stored in CDC tables which can be consumed for further analysis and auditing purposes.

All of the SIROMS Database changes captured with CDC are stored in dedicated Audit log tables. The Audit Log tables provide an audit trail of security-relevant chronological records that provide documentary evidence of the sequence of activities that have affected at any time a specific operation, procedure, or event.

Since the implementation of Change Data Capture in 2015, a total of more than 610,000 jobs have been executed to move the appropriate data to the Audit Log tables. These jobs have processed almost 15 million CDC rows capturing over 24 million data points for audit tracking.

To ensure the continuous processing throughout the day, and to avoid backlog of these jobs, several status reports are configured to be sent to the database team during the day to provide alerts on any potential issues.

The CDC stored procedures create dynamic SQL to move the data changes to the various audit logs for each table that is tracked by CDC. This enables the addition of newly created tables to the process in less than 10 minutes when new functionality is developed by defining the Metadata attributes in the Change Data Capture architecture, maintaining the high scalability and re-usability of the CDC process.

When Data Definition Language (DDL) changes occur to tables that are already tracked by CDC, a simple stop and start of the CDC tracking on that specific table will add the attributes that were added or removed.

2.3.3.9 INCIDENT MANAGEMENT

Please refer to section 3.4 of the attached *NJ SIROMS Security Plan - 2018* document (Appendix G).

2.3.3.10 VULNERABILITY/SECURITY ASSESSMENT

Please refer to section 3.5.2 of the attached *NJ SIROMS Security Plan - 2018* document (Appendix G).

2.3.3.11 APPLICATION SECURITY

Please refer to section 3.6 of the attached *NJ SIROMS Security Plan - 2018* document (Appendix G).

2.3.3.12 ANTI-VIRUS/MALWARE CONTROLS

Please refer to section 3.5.2 of the attached *NJ SIROMS Security Plan - 2018* document (Appendix G).

2.3.3.13 NETWORK SECURITY

Please refer to section 1.3 of the attached *SIROMS Infrastructure - 2018* document (Appendix G).

2.3.3.14 DATABASE

The SIROMS Database is designed as an OLTP Highly Scalable Transactional Database processing thousands of user queries a day efficiently, catering to the business user community of over 550 active users. The SIROMS Database servers are hosted within the CGI Cloud ®

CGI CLOUD ®

The CGI Cloud ® is a fully secure, fully managed cloud infrastructure environment that resides in CGI's Phoenix data center with a disaster recovery site in Philadelphia. This FedRAMP moderate certified environment enables CGI to provide the State of NJ and NJDCA with seamless integration across multiple systems.

DATABASE AND VERSION

With the initial implementation of SIROMS in 2013, SQL Server 2008 R2 was chosen as the database which best suited for the proposed solution. In keeping with best practices, the CGI team has recently completed the process of upgrading the database environment to SQL Server 2012 R2 in UAT, Production and Disaster Recovery.

APPLICATION SERVERS

The SIROMS Database Server Architecture is on two different domains. The Development Environment is hosted on a CGI internal domain and the UAT, Staging, Production, and DR Environments are hosted on the FedCloud Domain. As the Development Environment is not located within a FedRAMP moderate level hosting facility, production data cannot be copied to it. We use three dedicated production servers – Application Database server, Reporting server, and Staging server. All three have corresponding UAT and Staging environments. The UAT and QA/Staging database environments are refreshed with Production data at least once a month, and on-demand as necessary to support development activities.

DISASTER RECOVERY SERVER

As a Disaster Recovery Solution, all of the SIROMS Databases are mirrored on the DR Server. For the safety of sensitive data, Database Mirroring is configured with Live Transactional High Safety Synchronous Mode, which commits each of the transactions to DR Server (Mirrored Server) before committing on actual Production Server (Principle Server). For Mirroring status monitoring, automated SQL alerts have been configured.

SIROMS DATABASE SECURITY POLICY

The Transparent Data Encryption (TDE) is enabled for the SIROMS Application Database in order to comply with the State of New Jersey's Security Policies and Requirements. The TDE is at the Database File level, so Application Database Data, Log, and Backup Files are encrypted using TDE, which require Encryption Certificates/Keys in order to Migrate/Restore Database on another Database Server. SIROMS Application Database cannot be restored/attached to another Server without an Encryption Key/Certificate.

BACKUP POLICY

All of the SIROMS databases are configured for a full daily backup and a transactional hourly backup. A database can be restored up to the last full hour by restoring the full daily

backup and the incremental hourly backup files. Apart from the backup configuration, the SIROMS databases are configured for Real Time Transactional Database Mirroring on the DR server, which commits and saves data on the DR server databases before committing on the Production server databases which assures that the SIROMS databases have an almost no data loss in case of an emergency or disaster.

DATABASE MAINTENANCE

All of the Databases are configured for an Integrity Check every morning before business hours, which provides information about any errors and overall health of the database. All of the Indexes/Statistics on all of the database tables are configured to Rebuild/Reorganize/Update weekly in order to consider weekly changes on data for Performance improvement. Additionally the Database Admin and Support team tune the databases periodically and tune resource intensive SQL Queries as necessary.

DATABASE/SERVER MONITORING

Automated SQL Alerts are configured for Database Server Performance, Deadlock/Blocking Events, etc. The SQL Alert Logs and Error Logs are configured to save SQL Queries on particular events for later analysis and troubleshooting purposes. The Database Team actively monitors CPU/Memory Usage and Database Fragmentation for performance on daily basis, and performs Databases File Shrink, releases unused space to OS in order to maintain Drive Space on Database Servers, etc. In addition all SIROMS Database Servers are actively being monitored for System/User Errors and Performance Threshold as part of the IPCenter Tool, one of the many CGI IP.

SIROMS TRANSACTIONAL (OLTP) AND DATA WAREHOUSE REPORTING SERVERS

The SIROMS Online Transactional Processing (OLTP) database has been designed to process iterative workloads from concurrent BPM applications with the fastest response time and improving day by day as we add new programs into the system. Periodical stress tests are carried out to measure the scalability for desired volume of data in longer period of time. In order to support the real time reporting solutions from SIROMS Databases, Transactional replication configuration for the required tables to the SIROMS Data Warehouse Reporting Database schema has been put in place. Optimized, high performance SQL Server SSIS ETL jobs are scheduled with required SQL alerts monitoring the load status of required tables to the Data Warehouse Database schemas. ETL jobs are also scheduled to load the external daily data sets like DRGR that are sent to the SIROMS Database server through Secured File Transfer protocol (SFTP).

2.3.3.15 DATA INTEGRITY

Data Integrity refers to the completeness, consistency, and accuracy of data while created, transmitted, and stored. This means that the data should be intact and unchanged between updates of a data record. Data integrity can be maintained by the use of various validation procedures and error checking. The data integrity on the SIROMS project is verified through checksum algorithms which are derived from the digital data for the purpose of detecting errors which may have been introduced during transmission or storage. Before and after business hours, checksum reports are sent to the database team for verification. For additional details, please refer to sections 2.5 through 3.1 of the attached NJ SIROMS Security Plan - 2018 document and sections 6.8 through 9 of the SIROMS Infrastructure document.

2.3.3.16 SERVER AND INFRASTRUCTURE

Please refer to section 3.5.2 of the attached *NJ SIROMS Security Plan - 2018 document (Appendix G)*.

2.3.3.17 WIRELESS, REMOTE AND MOBILE ACCESS

Please refer to section 3.7 of the attached *NJ SIROMS Security Plan - 2018 document (Appendix G)*.

2.3.3.18 TRANSMISSION

Please refer to section 3.10 of the attached *NJ SIROMS Security Plan - 2018 document (Appendix G)*.

2.3.3.19 CONTINUOUS MONITORING

Please refer to section 3.5.2 of the attached *NJ SIROMS Security Plan - 2018 document (Appendix G)*.

2.3.3.20 CHANGE/CONFIGURATION MANAGEMENT AND SECURITY AUTHORIZATION

Role-Based Security Access is described in section 3.9 of the attached SIROMS Security Plan (*Appendix G*).

2.3.3.21 RISK MANAGEMENT

CGI will continue to implement the risk management plan that helped them work with NJDCA to implement SIROMS successfully. CGI's approach to risk management leverages risk management models from leading authorities such as the Project Management Institute and the Carnegie Mellon Software Engineering Institute, and combines these methodologies with years of hands-on experience delivering IT projects for public sector clients. The result is a Risk Management Process that is practical, lean, and aligned with CGI's overall project management approach.

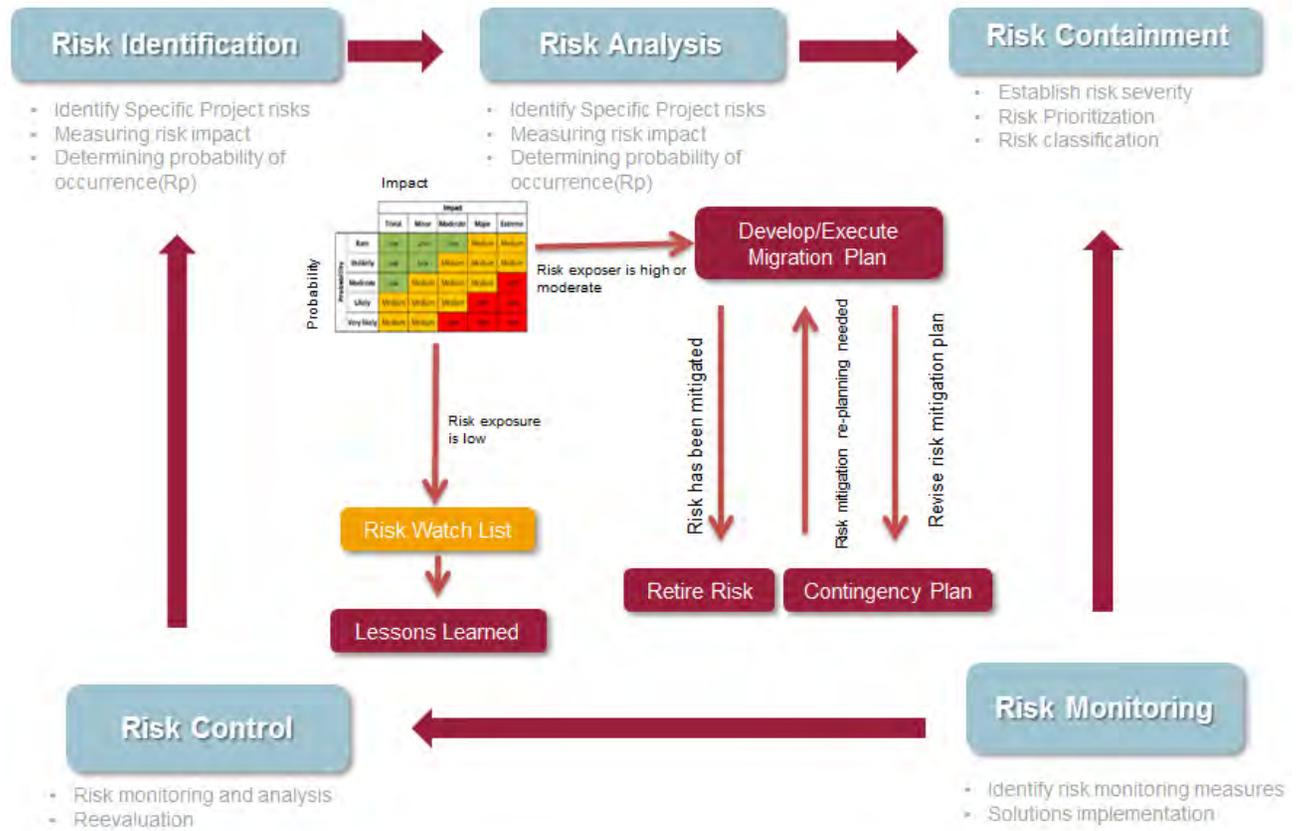
Figure 10 - Carnegie Mellon Software Engineering Institute's Risk Management Paradigm



Figure 11 below depicts CGI's Risk Management Process, and provides context for subsections below that describe the major components of how CGI manages risk, including:

- Risk Identification
- Risk Assessment
- Management of Actions to Avoid
- Mitigating and Managing Risk; and
- Monitoring and Reporting Risk Status

Figure 11: CGI's Risk Management Process



RISK IDENTIFICATION

CGI’s Risk Management methodology centers on an approach that will effectively manage risk, by proactively identifying the inherent project risks and the appropriate actions to mitigate or eliminate those risks. A risk is defined as a potential event or situation that, if it occurs, can affect the Project Team’s ability to achieve stated goals, objectives, or expectations. Risk management is defined as the process of identifying risks and developing strategies to avoid or minimize them. Integrated risk management is geared to creating opportunities for discovering and dealing with risks at various levels of the agency, including overall program, project related, or operation related risks.

CGI’s approach to risk management explicitly focuses on building risk discovery and mitigation into day-to-day management activities. This process enables the identification of risks early, building mitigation steps into the Program Management Plan, and monitoring progress toward risk mitigation as a routine component of the management process.

CGI's Risk Management Approach provides a systematic process for monitoring and controlling identified risk events and, on an ongoing basis, for identifying and for analyzing risk not identified during the program's mobilization period. The probability of program success increases through advanced planning and early risk identification, assessment, mitigation, documentation, and reporting.

Stakeholders are responsible for identifying risk in the earliest phases of planning, including mobilization and throughout the project life cycle. Members of a project team will be given training in our risk management process. This risk identification process focuses on producing a list of program-specific risks as early as possible to effectively reduce problems that could jeopardize the success of the program.

RISK ASSESSMENT

Risks are adequately examined in a structured and systematic way. CGI utilizes our qualitative risk analysis process to provide a better understanding of the risk by qualifying the expected impact, probability, and timeframe of a risk. The steps for qualitative analysis are probability assessment and impact assessment. The risk analysis produces an impact assessment of a risk as it occurs including potential loss and risk scoring. In addition, risk prioritization is included in this process to identify risks from greatest to the lowest level of risk exposure to the program. At the conclusion of the risk assessment the risk will be assigned to a Risk Assignee in the impacted areas.

MANAGEMENT OF ACTIONS TO AVOID, MITIGATE AND MANAGE RISKS

CGI's risk control methodology is focused on developing and choosing alternative strategies, applying or implementing contingency plans, and developing and implementing corrective action or re-planning of the program. The Project Manager will work in conjunction with the SCM, and other program stakeholders to develop the risk mitigation, management and avoidance strategies for the project. This collaborative process will support the mitigation of risk by involving various levels of the program team.

MONITORING AND REPORTING OF RISK STATUS

The Project Manager conducts ongoing risk monitoring to keep track of the already identified risks, to identify new risks, and to make certain of the execution of risk responses and containment strategies. The Project Manager identifies the success of containment strategies based on the criteria and measures identified during risk identification.

The weekly status report will be utilized to document and track the risks identified during the course of the program. The list is continuously developed and maintained throughout the program life cycle. The risks updated in the weekly status report will be maintained and monitored by the Project Manager and will contain the following information:

- Risk Number
- Type of Risk
- Severity
- Risk Title and Description
- Mitigation plan and actions
- Status (open, pending, closed)

The Team works the list by deploying one or more of the risk mitigation strategies to the risks in red (showstoppers); working the yellow (caution) risks, time permitting; and continue to monitor the green (everything okay) risks. If a risk is determined to be of a critical nature and may have a severe impact on the program, it will then be escalated to the SCM for immediate review. This is a proven process CGI utilizes on our large efforts similar in size and scope to that of this project.

2.3.3.22 SECURITY AUDIT

Please refer to section 3.11 of the attached *NJ SIROMS Security Plan - 2018 document*.

2.3.3.23 CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENTS

CGI members and partners demonstrate the highest level of integrity and professionalism in our work for clients. This is an integral part of our core value system. Our members believe that it is our collective responsibility to ensure that our clients experience the best of CGI and that includes maintaining the privacy and confidentiality of our client's data. Annually, as part of our quality processes, members complete security awareness and confidentiality training. As new regulations and best practices arise, for example, the General Data Protection Regulation (GDPR) in the European Union, these security practices become required training for all our members globally.

Due to the confidential nature of the information contained in background check materials, our clients typically allow us to control the background check process with the understanding that we will only assign staff to the engagement who have received a pass rating on our standard criminal searches. We can certify the results to the State, including a summary of the items verified, which includes 7-year criminal searches at the local and

federal levels, national criminal record locator search, and a global watch alert search (a search of numerous government watch lists, etc.).

CGI and any subcontracting project staff will complete and sign confidentiality and non-disclosure agreements as required by the State. In addition, project staff will also view any mandatory security awareness training provided by the State.

2.3.4 DISASTER RECOVERY PLAN (SECTION 3.4.5.2)

Please see the attached *BCP SIROMS Functional Plan 2018* documents (Appendix F).

2.3.5 CONTINGENCY PLAN (SECTION 3.4.5.3)

Please see the attached *BCP SIROMS Functional Plan 2018* document (Appendix F).

2.3.6 PERFORMANCE MANAGEMENT PLAN (SECTION 3.4.5.4)

CGI will provide final updates to its existing SIROMS Performance Management Plan and deliver it to DCA for its review within 10 business days after award of the contract. An initial draft version of the updated Performance Management Plan is included as Appendix E. The Performance Management Plan will be updated annually to reflect any changes mutually agreed upon between CGI and DCA and it will follow established review and approval processes before being made final.

The Performance Management Plan proposes the jMeter tool for automated stress testing and includes recommended benchmarking methods, benchmarking metrics, and measurable goals. The plan also proposes a variety of resolution methods depending on issues that may arise. Finally, the plan does describe how CGI can meet the specific service metrics and expected service levels set forth in section 3.4.6.4 of the proposal.

CGI acknowledges and accepts that the State may choose to participate in an audit of the stress test and or audit the performance testing process and results. Should the State solicit a 3rd party to audit the stress testing results, the State must bear the cost of any additional support hours CGI may incur to support the third party auditor.

2.3.7 POTENTIAL PROBLEMS

As the State and NJDCA are aware, Team CGI proposed a series of questions in regards to the requirements and terms included in the initial release of this RFP during the Q&A period prior to the award opening date. While many of our questions sought to elicit further clarity from the State and NJDCA on certain requirements, many were also posed with the

intent of potentially enabling Team CGI to provide the State and NJDCA a means to obtain more competitive pricing from qualified firms experienced in delivering IT projects for Natural Disaster Recovery. Given the answers provided, Team CGI is very appreciative of the State's willingness to engage in negotiations in regards to the terms of this agreement. Through our experience working closely with the State and NJDCA in support of their mission to assist New Jerseyans and their communities recover from the devastating impacts of Superstorm Sandy, we fully understand that it is the duty of the State to simultaneously utilize the recovery funding as efficiently as possible in an effort to maximize the impact of the recovery programs it administers while also acting as a steward of the American tax dollars which are funding the recovery efforts. Our experience as the only Vendor experienced in the design, development, implementation, maintenance, and support of the SIROMS system also provides us with unique insight into the system and its various applications. Should we be fortunate enough to be selected to continue to serve the State and NJDCA in the management of the SIROMS solution, Team CGI proposes to conduct a meeting with the SCM and/or his designees, within the first 30 business days after contract award, to discuss the requirements and terms within the amended RFP which we believe can be addressed via other means that still fulfill the State's business needs and may provide the State with potential cost saving opportunities should the State be willing to continue the negotiation of the requirements and terms.

The requirements and terms listed below are representative of the types of clauses in the amended RFP which Team CGI would appreciate the opportunity to engage the State in negotiations in regards to:

- **Requirements**
 - **Service Metrics**
 - **Hosted System Responsiveness**
 - **Problem:** In order to meet the requirement around "user actions" and "screen load" times, many other variables are involved. For example, many SQL queries require longer than 2 seconds to run given the relational nature of SQL.
 - **Solution:** As proposed in the Performance Management Plan, establish revised Expected Service Levels based on work throughput or another business based metric. The State has a business need to provide their staff and partners with a system that allows them to complete their job functions accurately, efficiently, and in a timely fashion. If CGI and NJDCA can reach an agreement as to how many transactions a User should be able to reasonably process in a period of time, rather than potentially holding CGI in breach of contract for a particular screen load time the State may be able to realize cost savings as risk to CGI will be reduced while business processes remain supported.
 - **Infrastructure/Application Uptime**

- **Problem:** The requested 99.7% Uptime requirement is an increased compared to the current 99.5% Uptime while the State simultaneously desires to reduce hosting costs. Additionally, NJDCA has yet to incur any adverse business effects related to their prior 99.5% Uptime requirement in place during the initial five years of this project.
 - **Solution:** Collaborate with CGI to determine actual estimated risk to the State's business due to this requested change in Uptime. This requirement has required that CGI add cost into our hosting price in order to enhance the hosting infrastructure to meet NJDCA's new requirement.
- **Contract Terms**
 - **Unlimited Liability**
 - **Data Confidentiality**
 - **Problem:** Current language is so broad that it could be read to mean that the Contractor is liable for a breach, whether by the State or third parties not working for the Contractor, and regardless of whether the data is under the Contractor's control at the time of the breach. This shifts risk to the Contractor without any commensurate control, and forces Vendors such as CGI to add cost into their proposals to mitigate against such risks.
 - **Solution:** Alter language similarly to prior alterations deemed acceptable by State in other RFPs in order to specify responsibility for breach laying with the Contractor and/or introduce a "Super Cap" for liability at double contract value, for example.
 - **Liquidated Damages**
 - **Performance Test**
 - **Problem:** Given reasons discussed above in regards to Hosted System Responsiveness, there is potential that subsequent to the first stress test after contract award there may be system functions which are unable to meet the performance requirements without being broken apart to require additional manual system clicks to meet the required load times.
 - **Solution:** Collaborate with CGI to determine business driven metrics, as discussed in the Performance Plan, which would allow NJDCA to maintain their desired efficiency in business processing and minimizing exposure of undue risk to CGI. A lesser risk profile would allow CGI to potentially reduce our rates provided to the state due to a decreased need for risk mitigation.
 - **Software Updates**
 - **Problem:** Upon contract award, the State could potentially choose to begin assessment of the liquid damages related to the "core" software upgrade provision based on current infrastructure, and continue to do so for potentially the first three months given the time to successfully complete a required upgrade and properly test it.
 - **Solution:** Develop a three and six year roadmap for "core" software upgrades that is agreeable to both NJDCA and CGI which would allow for staggered upgrades of "core" software in such a timeframe that minimizing impacts to NJDCA's business processes and removes the financial risk which CGI must mitigate against without more clear direction from the State and/or NJDCA.

As previously stated, the potential problems detailed above are representative, but not a holistic enumeration, of the types of project requirements and contract terms which CGI assumes we will have an opportunity to discuss directly with the State post contract award in an effort to best serve the State and the citizens of New Jersey.

3 Organizational Support and Experience (Section 4.4.4)

CGI is the leading technology integrator for natural disaster recovery efforts. CGI has lead the technology development and maintenance activities for the State of New Jersey (Superstorm Sandy) and Louisiana (Hurricane Katrina) disaster recovery efforts. Our unparalleled expertise in developing comprehensive financial and grant management systems, uniquely qualifies CGI to respond to the SIROMS Maintenance and Hosting RFP. CGI is the only vendor in the world that has successfully built, implemented, and operated a HUD CDBG-DR system that comprehensively incorporates both Financial management and Grant management. Our current experience, along with our recent contract award in Puerto Rico, ensures CGI will continue to work within the regulatory and statutory frameworks related to grant programs funded by HUD. As a vendor who continues to collaborate with multiple states to provide and support the technology behind the largest recovery efforts in history, CGI is ready to continue to support the State of New Jersey's disaster recovery efforts. CGI's full breadth of experience enables us to provided leadership and implementation capabilities with the technology aspects of the SIROMS Financial management systems and Grant management systems' current and future needs.

3.1 Location

CGI'S CLIENT PROXIMITY MODEL

CGI's business model is built on a client proximity model where we emphasize staffing and delivering projects with a local geographic Business Unit (BU) close to our client's center of operations. This model allows us to function as true business partners and offers the highest degree of responsiveness, accessibility, and efficiency. It is our expectation, unless otherwise agreed upon with NJDCA, that all work related to the SIROMS ongoing maintenance effort will be performed on-site at CGI's New Jersey Headquarters in Hamilton Township, New Jersey and from other locations in the United States to take advantage of specialized experience and reduce project costs.

CGI's deep presence in the State of New Jersey is apparent through its partnership with various agencies across the State, and the New Jersey, Pennsylvania, and New York-based professionals who live and work near the communities they serve. We are committed to using our on-shore delivery capabilities, leveraging our economies of scale,

and streamlining our workflows to create processing efficiencies that will reduce NJDCA's ongoing maintenance costs.

For the project, NJDCA will be primarily supported from the following locations:

CGI NEW JERSEY HEADQUARTERS – LOCAL AND CONTINGENT STAFF

Contact Information: William Richey, 609-789-2016

3525 Quakerbridge Road, Suite 2300

Hamilton Township, NJ 08619

CGI UNITED STATES HEADQUARTERS

11325 Random Hills Road

Fairfax, VA 22030

CGI'S ONSHORE DELIVERY

CGI's Onshore Delivery Model is a low-cost, low risk, U.S.-based solution that is an appropriate IT diversification option for many clients. Agreed-upon managed service levels at a lower-fixed price not only can reduce costs, but also can provide greater cost predictability.

CGI's U.S. Centers of Excellence are staffed by a highly educated and skilled talent pool that has a lower-than-average attrition rate. Employees are hired through a feeder system of high-caliber colleges and universities, as well as strong technical programs and recruiting networks including veteran and military family outreach. All employees must meet CGI's rigorous standards and follow specific procedures for knowledge retention and transfer.

Leveraging our skilled IT professionals and repeatable governance framework, CGI's Onshore Delivery Model improves system quality, reliability, and stability through standardization and consistency, all while ensuring IT alignment to business goals and delivering quality services at a lower cost. Our Centers also maintain certifications such as CMMI and ISO9001 to ensure quality programs.

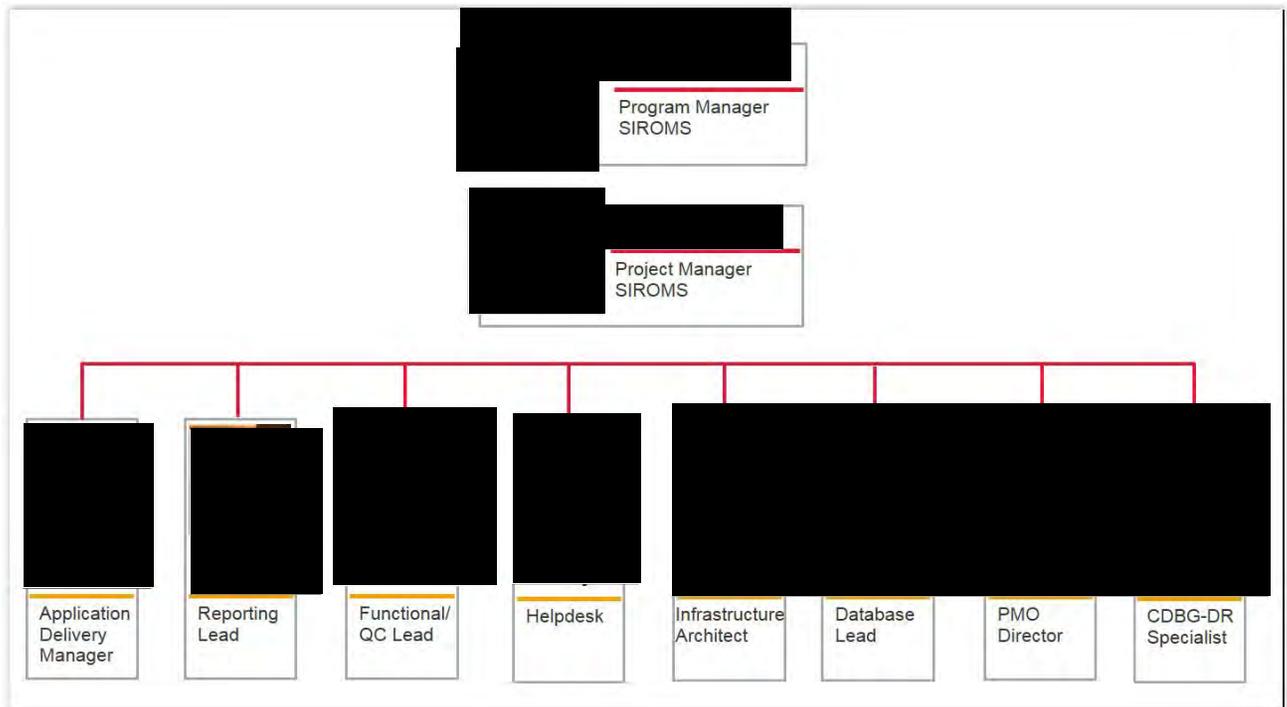
At this time, we do not anticipate that staff from U.S. Centers of Excellence will support this project. The information of these U.S. Centers is provided so that the State of New Jersey is aware of the breadth and depth of CGI's offerings and capabilities to support the State.

3.2 Organization Charts

The key personnel assigned by CGI for the maintenance of the NJSIROMS solution have in-depth CDBG-DR knowledge and supported NJDCA to implement complex programs for NJSIROMS, and remain in compliance with federal reporting requirements in an ever-changing environment. The CGI Team is composed of members from CGI, Blue Streak Technologies, LLC and HORNE, LLP.

The organization for our SIROMS project team is shown in Figure 12.

Figure 12 – SIROMS Project Team



3.2.1 CORPORATE ORGANIZATION AND STRUCTURE

CGI's overall organization structure is shown in Figure 13.

Figure 13 – CGI Leadership Team



The US Commercial and State Government (USCSG) Strategic Business Unit (SBU), which resides under Dave Henderson as part of CGI Technologies and Solutions Inc. will be responsible for the SIROMS project. The key element of our management structure is the Business Unit (BU) within the USCSG structure. BUs are designed to respond effectively and efficiently to clients' demands. Based on our client proximity guiding principle, a BU has a geographic focus. The US East Business Unit, which would be delivering the SIROMS project, is empowered to manage its resources and to make decisions based on our global strategy, governance rules, policies, and management frameworks. The relationship between the individual assigned to lead the SIROMS project with the overall organization structure is shown in Figure 14.

Figure 14 – US Leadership Team



3.3 Resumes

The CGI Team has a well-known track record of successful projects around the globe, drawing on a group of 72,000-strong CGI members worldwide, providing professionals with the technical skills and functional knowledge that is required for successful implementations. The CGI Team recognizes that the continued success of this effort requires experienced professionals who are familiar with the NJDCA environment and its data, seasoned in technology project management, and have expertise having delivered at NJDCA and the specifically for the CDBG-DR program.

As stated previously, the CGI Team will draw on proven resources, to fulfill the management, supervisory, and key personnel roles that have demonstrated the knowledge and skillset to meet the requirements of the role he/she are designated to perform. Resumes submitted will list job experiences that present qualifications and experience with completing contracts of a similar size and scope. A description which demonstrates each the individual's competency and proficiency and how it relates to the success of each

relevant job experience can be provided. Each relevant job experience will include beginning and end dates.

Proposed primary staff resumes are included in Appendix A.

3.4 Backup Staff

As stated previously, the CGI Team will draw on proven resources, including a group of 72,000-strong CGI members worldwide to fulfill primary management, supervisory and key personnel roles. This group of CGI members also form the basis of the backup staff resources should the need to assist or replace initially assigned primary staff be needed.

In the unlikely event that the CGI Team should need to hire staff to fulfill primary management, supervisory and key personnel roles, the CGI Team will provide a plan to secure backup staff in the interim as part of the recruitment plan to help ensure the continued success of the NJDCA CDBG-DR Program.

In all instances where primary staff requires assistance or replacement, CGI will provide multiple resumes of backup staff that are equally proficient both functionally and technically as primary staff.

Proposed backup staff resumes are included in **Appendix B**.

3.5 Experience with Contracts of Similar Size and Scope

3.5.1 STATE OF LOUISIANA OFFICE OF COMMUNITY DEVELOPMENT/DISASTER RECOVERY UNIT (OCD/DRU)

Since March 2009, CGI has provided a full range of consulting services to the State of Louisiana's Office of Community Development – Disaster Recovery Unity (OCD/DRU) to support their recovery efforts after the historical destruction caused by Hurricanes Katrina and Rita. OCD/DRU was designated as Louisiana's lead agency in response to Hurricanes Katrina and Rita, receiving an initial \$10.4B in funding through the HUD Community Development Block Grants – Disaster Recovery Program (CDBG-DR). Additionally, OCD/DRU received \$1B in CDBG-DR funds to support recovery efforts from Hurricanes Gustav and Ike and administered the FEMA funded Hazard Mitigation Grant Program (HMGP).

3.5.1.1 ENGAGEMENT DESCRIPTION AND OBJECTIVES

The Louisiana Commissioner of Administration established the OCD/DRU in response to Hurricane Katrina, authorizing the Unit to orchestrate the State's relief efforts across multiple disaster recovery areas. The Road Home Housing Assistance Program (HAP) serves as the primary DR program. HAP is designed to compensate individual homeowners for residences moderately or severely damaged during Hurricanes Katrina and Rita. Additional program areas target the displacement of low-to-moderate income victims (Small Rental Property Program, and Low-Income Housing Tax Credits Program), and FEMA disaster mitigation funds for reconstruction (Hazard Mitigation Grant Program). CGI was engaged by OCD/DRU in March 2009 to provide a range of consulting services to support the State's disaster recovery programs, including the provision of project management and oversight of core operations support services across all OCD/DRU's IT services.

The following are the overall objectives for the CGI engagement with the State of Louisiana OCD/DRU:

- Serve as OCD/DRU's primary IT expert to operate, improve, and otherwise manage all outsourced DR-related IT functions according to industry best practices and State and federal guidelines;
- Implement a program for continuous process improvement and provide active leadership to ensure the quality and efficiency of IT services;
- Coordinate with non-IT stakeholders, including the State and program implementation contractors, to confirm that IT services are performing the right functions, and that priorities are correctly aligned across programs;
- Oversee subcontractor activities, including planning, issuing task orders, oversight and contract enforcement, deliverable review and approval, quality assurance and testing of software enhancements or fixes, and invoice review and pre-approval.

Overall, CGI is responsible for providing OCD/DRU with IT expertise, planning and implementation oversight across all aspects of the States disaster recovery initiatives, including its CDBG-DR initiatives, and to assist the State in achieving its ultimate goal of providing superior service to hurricane victims and other citizens of Louisiana in a manner that is efficient and produces cost savings over time.

3.5.1.1.1 CGI RECOMMENDATIONS

In March 2009, as part of OCD/DRU's transition to CGI as its primary IT consultant, CGI began performing an enterprise assessment of OCD/DRU's business needs and current state IT systems and infrastructure. CGI met with Subject Matter Experts (SME) from the Road Home Assistance Program (RHAP) to review the full range of organization,

documentation and operating practices that were in use across the IT support functions prior to March 1, 2009. The assessment included performing an enterprise-level assessment of the quality and efficiency of IT services and processes, identifying continuous improvement opportunities and targeting specific areas that could be improved in the steady state support. CGI's understanding was that the Road Home IT organization had made limited use of established IT structures and best practices. A major focus of CGI's initial assessment determined what actions CGI would need to take to address critical management process gaps during the transition, and build a best practice environment for supporting OCD/DRU's IT systems and infrastructure.

The assessment of OCD/DRU's Road Home Assistance Program included the facilitation of discovery sessions with SMEs from the State, OCD/DRU programs, program implementation contractors, IT subcontractors, and other project stakeholders related OCD/DRU's IT operations.

A summary of CGI's recommendations provided to OCD/DRU upon completion of CGI's initial assessment and analysis are as follows:

- **Initial assessment and analysis:** CGI's recommendation to conduct an initial enterprise assessment and analysis initiated a service-level dialogue with the implementation programs, provided a first step in documenting business requirements on application criticality, and provided needed alignment of IT support and program priorities. It also provided a basis for development-level process improvements, such as availability planning, systems engineering, backup requirements, and establishing priorities for ticket processing and setting recovery time objectives.
- **Change Management:** As part of the initial assessment and analysis phase the OCD/DRU engagement, CGI recognized the lack of a standard process for collecting, assessing and reviewing changes to IT systems, infrastructure, and related processes. This represented a significant risk to delivering effective service during OCD/DRU's transition to CGI as its primary IT consultant. As a first step to addressing the current state situation, CGI deployed an interim change management process supported by a change request form and a change calendar. As a permanent solution, CGI recommended the establishment of a Change Control Board (CCB) at the Project Management Office (PMO) to review change requests for application enhancements, database modifications, and the development of new reports. CGI subsequently implemented a separate CCB to review modification requests to production operating environments, including hardware, application, database, reports, software releases and deployments.
- **Capacity Management:** With the limited focus that had been placed historically on this area, CGI recommended the development of a capacity management process that began with a comprehensive review of the current utilization levels of the Road Home servers and storage environments. This information provided an initial baseline and a documented capacity plan that was continuously updated based on system and data storage utilization trends and new business demand. Capacity and performance impact assessments were also established as a requirement in the Change and Release Management processes.
- **IT Service Measurement and Reporting:** The CGI Client Partnership Management Framework (CPMF) and detailed service management processes that are implemented across all our engagements, including

OCD/DRU, rely on CGI's ability to collect high quality service data to identify service and support issues and drive continuous improvement. CGI's initial assessment identified that there were limited systems management tools in place in many areas within the current state IT environment for managing service quality. CGI recommended that a detailed tools assessment be completed within each workgroup to identify minimum service measurement and reporting requirements, and then worked with the State to identify gaps and provide costs on specific deficiencies in current state tools. CGI also recommended establishing a standard set of KPIs for measuring service effectiveness and productivity.

- **Incident Management:** The weaknesses of OCD/DRU Incident Management process became evident during the early stages of CGI's initial assessment of current state IT systems and infrastructure. CGI needed to ensure that all incidents would be identified and tracked, and recommended the use of the help desk system for all IT support groups. The help desk team would work to separate incident ticket processing from the Service Request types, and re-work incident reporting data to provide better root cause definitions for downstream analysis and incident prevention. These actions would improve incident handling in the interim and provide a basis for moving forward in establishing improved root cause classification, a problem management process, ticket processing time objectives, and improved management and reporting capabilities. CGI also recommended that a well-documented Major Incident management process be adopted that outlines operational procedures to be followed when a major event occurs, such as the extended loss of a system. This process would include information such as criteria for defining a Major Incident and for engaging support Subject Matter Experts (SME) and key stakeholders from CGI, the Road Home Assistance Program, other program areas, and the State and its major vendors.
- **Request Fulfillment:** CGI recommended the implementation of a help desk tool to manage service request for DR-related IT systems and infrastructure. The tool required that all user requests flow through the help desk with the exception of those requests handled by the Project Management Office (PMO) for software changes, enhancements and project work. CGI ensured that OCD/DRU reporting and issue tracking requirements were considered prior to implementation, so that data collected through the process could be leveraged to support goals established in the Continuous Improvement Plan.
- **Problem Management:** Establishing best practices for problem management would require robust incident management processes as a foundation for success. As a follow-on activity under the Continuous Improvement Plan, CGI recommended separating incident management from problem management and documenting a set of new process for problem management, alongside well-defined roles, responsibilities, and specific procedures reporting and managing problems.

3.5.1.1.2 RESULTS

CGI's leadership, expertise, and the implementation of our recommendations to improve IT management and oversight practices, contributed to OCD/DRU ability to achieve the following milestones:

- Disbursement of more than \$8.9B to rebuild homes through the Road Home Assistance Program (RHAP);
- Disbursement of more than \$400M for the restoration of nearly 8,500 rental units through its Small Rental Property Program (SRPP);
- Disbursement over \$620M to mitigate natural disaster risks to nearly 9,600 homes through the Hazard Mitigation Grant Program (HMGP);

Additional successes include:

- Approximately 99.99% of homeowners have closed their RHAP grant; reaching over 130,000 homeowners;
- Approximately 92% of homeowners that received a grant through the RHAP have decided to stay and rebuild in Louisiana;
- Approximately 54% of disbursed RHAP funds (~\$4,864,845,083) have been provided to over 56,000 low to moderate income households, with an average award of nearly \$87,000;
- Over 30,029 elderly applicants have closed their RHAP grant, with an average award of over \$80,000;

Over 17,500 disabled applicants have closed their RHAP grant, with an average award of over \$74,000;

3.5.1.1.3 ENGAGEMENT REFERENCE

3.5.2 STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

For over fifteen years, CGI has served as the primary IT consultant to the New Jersey Department of Environmental Protection (NJDEP). This ongoing partnership has produced significant advancements to NJDEP’s IT systems, capabilities and infrastructure. This section highlights the successes achieved by NJDEP as a direct result of CGI’s consultation and support.

3.5.2.1 ENGAGEMENT DESCRIPTION AND OBJECTIVES

Prior to CGI's initial engagement with NJDEP, the Department's regulatory operations were fragmented. NJDEP's seven major program areas had each made disparate investments in IT systems and infrastructure, resulting in inefficient business practices, data silos, significant reporting challenges for management, and inconsistent communications with citizens, businesses, and regulated entities.

In 1998, NJDEP listed the following objectives as part of its initial engagement with CGI:

- Assess its existing IT systems and infrastructure
- Propose a plan to retire its existing system and infrastructure, centralize its operations, consolidate and streamline its regulatory processes, and enhance its reporting capabilities

3.5.2.2 CGI RECOMMENDATIONS

In response to NJDEP's initial objectives to assess its existing IT systems and infrastructure, centralize operations, streamline business processes, and enhance its reporting capabilities, CGI recommended the implementation of an enterprise-wide regulatory management system – the New Jersey Environmental Management System (NJEMS) - which was conceptualized, architected, designed, and implemented by CGI. The implementation of NJEMS enabled the Department to retire approximately 90% of all legacy systems, providing a universal view of its regulatory activities under the umbrella of a centrally managed, maintained and quality controlled system. CGI has worked directly with business owners across NJDEP's seven major program areas to streamline and integrate its business processes into NJEMS.

After the successful implementation of NJEMS, the Department was well-positioned to further advance its long-term IT objectives. As NJDEP's primary IT consultant, CGI has collaborated directly with the Department's Chief Information Officer to recommend a series of strategic IT initiatives to help NJDEP achieve its regulatory mission. These recommendations include, but are not limited to, the following IT initiatives:

- Reduce processing costs, generate operating efficiencies, and improve relations with key stakeholders by implementing a public-facing web application to enable the electronic intake of permit applications, mandated reports, registrations, licenses, and fee payments;
- Reduce processing costs and improve financial tracking and reporting by implementing a financial module within NJEMS to automatically generate and distribute assessments, bills, and reconcile funds between NJDEP and the New Jersey Treasury Department;
- Implement an environmental incident help desk and NJEMS incident module to improve the tracking and reporting of state-wide environmental incidents;

- Automate the flow of data between NJDEP and external entities (federal, state, and local) to improve reporting and reduce processing costs associated with federal reporting requirements;
- Implement a help desk to service maintenance and enhancement requests to existing mission critical systems;
- Implement a public records request tracking system (OPRATS) to manage the application intake and processing of public records requests under the New Jersey Open Public Records Act (OPRA), and create a public-facing public access portal to enable online querying of publicly available environmental data and reports;
- Integrate NJEMS with the Department's Content Management System to improve access to digital records and reduce costs associated with record retention and paper storage

3.5.2.3 RESULTS

CGI's recommendations to NJDEP have been transformative for the Department. Implementation of NJEMS has eliminated data silos, generated efficiencies, and improved quality controls throughout every aspect of the regulatory process. NJEMS has also provided management with a universal view of the Department's mission critical regulatory operations.

Key successes of the NJEMS implementation include:

- **2,416** registered NJDEP staff users;
- **1,201** managed regulatory processes across all seven major program areas;
- Nearly **12 million** managed regulatory activities, such as permits, violations, and enforcement actions;
- Over **\$1.4 billion** funds processed from regulatory activities

Additionally, CGI's recommendations and subsequent development and implementation of advanced IT initiatives at NJDEP have resulted in the following key successes:

- Over **350,000** applications processed online through the public-facing Regulatory Services Portal (RSP)
- The automated distribution of ten data sets to the USEPA to meet key federal reporting requirements;
- Over **3,800** services requests processed successfully via CGI's maintenance and enhancement help desk;
- Over **48,000** state-wide environmental incidents reported, processed, and closed via CGI's incident management module;
- Over **156,000** online requests for public records processed in compliance with New Jersey's Open Public Records Act, and over 650 publically available reports made accessible online;
- Over **390,000** paper records digitized and made available for internal reporting in a machine readable, searchable format.

CGI's partnership with NJDEP demonstrates our ability to accurately assess client challenges and deliver results that achieve significant efficiencies, cost savings, and in many instances deliver solutions above and beyond the original project scope. The

experience that CGI has accumulated as a result of our NJDEP engagement prepares us to deliver similar results for the Department of Transportation, including:

- Our ability to implement a web application (RSP) to control the intake of over **350,000** applications from New Jersey residents, business, and government entities prepares us to implement solutions that enable online submission of Crash Record Reports.
- Our ability to implement an enterprise-wide regulatory management system (NJEMS) to manage backend regulatory processes prepares us to implement solutions that track and streamline the processing of Crash Record Reports.

3.5.2.3.1 ENGAGEMENT REFERENCE

[REDACTED]	
[REDACTED]	[REDACTED]

3.5.3 STATE OF LOUISIANA DIVISION OF ADMINISTRATION

The Louisiana Division of Administration’s Office of Information Technology (OIT) is tasked with the review and approval of all IT Budget Requests (IT-10s) made within all Louisiana state agencies. When OIT decided to move away from an Oracle-based workflow solution, they chose the Metastorm BPM platform as their workflow standard, and selected Blue Streak Technologies as their BPM development partner.

3.5.3.1 ENGAGEMENT DESCRIPTION AND OBJECTIVES

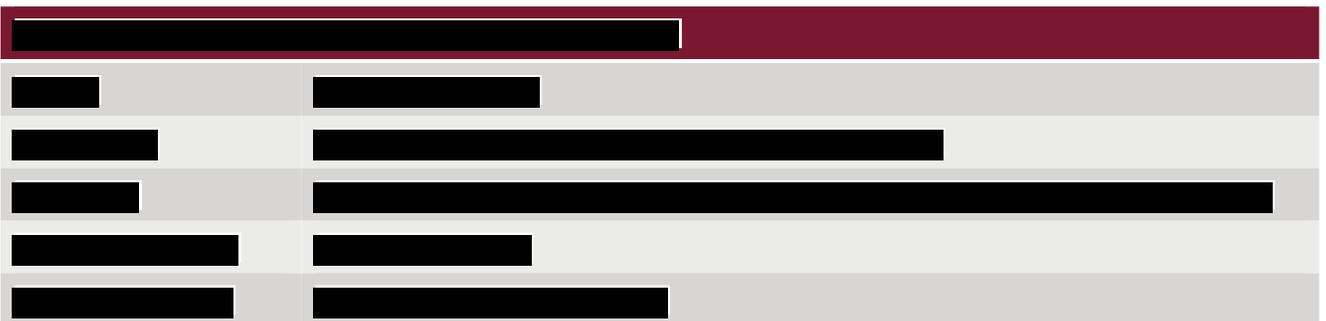
This statewide, internet-based system offers a user registration and approval process, a ten-step wizard-style process for initial request entry, and a workflow for review and approval of IT-10s at both the Agency and State levels. Users log in to the system via a custom login screen, and are directed into a custom dashboard. On the dashboard, users

are presented with their working list of active requests (requests awaiting action by the logged in user), and their organization request list (all requests, historical and current, for their organization). From this dashboard, higher-level admin users can also manage user registration requests and role assignments. When a user submits a request, it is routed to their organization's internal IT Director, Budget Analyst, and Undersecretary for approval. If approved at those levels, the request moves into a workflow of division-level approval steps, including OIT Analysts, OPB Analysts, and the State CIO. The request is dynamically routed based on type of request (budget/mid-year) and whether approved or disapproved at any level. There are some additional features of this system: email notifications, printable PDF-formatted display of IT-10 form, graphical audit trail, ability to add comments, and private correspondence between users.

3.5.3.2 RECOMMENDATIONS

The IT10 budget request workflow system is designed to provide all Louisiana state agencies with an on-line flexible solution to submit and/or manage IT requests 24/7. The system allows one access point for state IT budget requests, visibility to track the progress of submitted requests and review the history of current and past requests. This system was originally deployed in version 7.6 and has been upgraded to use version 9.2 of the OpenText MBPM platform.

3.5.3.2.1 ENGAGEMENT REFERENCE

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3.5.4 STATE OF NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

Although not applicable as a reference for this procurement, since June 2013, CGI has served as the primary IT consultant to the New Jersey Department of Community Affairs (NJDCA) in support of their ongoing disaster recovery efforts following the devastating impact of Superstorm Sandy. NJDCA has been designated the lead agency for

implementing New Jersey's Action Plan to assist state residents, businesses, and communities in their recovery efforts in the aftermath of the storm. NJDCA has received approximately \$3.2B in funding to date through the US Housing and Urban Development Agency (HUD) Community Development Block Grants – Disaster Recovery (CDBG-DR) Program. This section highlights the successes achieved by NJDCA as a direct result of CGI's consultation.

3.5.4.1 ENGAGEMENT DESCRIPTION AND OBJECTIVES

NJDCA established the Sandy Recovery Division (SRD) focused on the administration of the Superstorm Sandy recovery programs. CGI was engaged to provide a suite of services through the Sandy Integrated Recovery Operations and Management Systems (SIROMS) project.

The following are the overall objectives for the CGI engagement:

- Provide sufficient depth of resources to support rapid implementation of New Jersey's Action plan and/or programs from other disaster recovery funding
- Provide back office technologies and a mechanism by which the State of New Jersey could facilitate the distribution of recovery funds
- Create a gap solution within weeks of the engagement to begin immediately processing funds, while working on developing and implementing the longer term solution
- Collaborate with partner agencies working with SRD to manage, track and report on the progress and delivery of recovery programs implemented by these agencies

Overall, CGI is responsible for providing NJDCA and its partners with a shared technology infrastructure, software, IT, financial and CDBG-DR services expertise to support the State in its disaster recovery operations. CGI supports systems that provide management and oversight capability, while supporting the State's compliance with State and Federal Regulations. The ultimate objective is to assist the State in delivering disaster relief services in a flexible, scalable and efficient manner.

3.5.4.2 RECOMMENDATIONS

During the process of supporting DCA's disaster recovery objectives, CGI was asked to assess New Jersey's existing information and record keeping systems and provide recommendations that were targeted to help the State quickly deploy its CDBG-DR Programs to assist state residents impacted by Superstorm Sandy. CGI evaluated the existing solutions that supported the State's disaster recovery programs and provided an analysis on those data management systems and the reporting tools. CGI identified

opportunities in many of the recovery programs and proposed improvements and targeted solutions identifying key timelines, resources and information system upgrades.

Specific recommendations were provided under the following categories:

- The State needed a Grants Management program that would bridge the gaps identified on existing programs and provide workflow solutions for variety of programs.
- Enhanced reporting capabilities were required that would allow the State and Senior Management to answer multiple requests including auditors, OPRA and public facing information updates, and tracking overall progress.
- There was no integrated program to centralize the overall program direction including establishing the necessary data management systems
- Additional systems integrations with State, Banks, and other vendors' systems would result in reduced costs and increased efficiencies for the State.

3.5.4.3 RESULTS

CGI's expertise and the ability to implement CDBG-DR based programs have helped the State in delivering disaster relief services in a flexible, scalable and efficient manner. CGI has implemented a comprehensive suite of tools through SIROMS that have facilitated the successful management of the New Jersey Sandy Recovery programs.

SIROMS functionality and initiatives include:

- **Funds Management.** CGI has developed a detailed accounting tool that allows NJDCA/SRD to centrally manage requests for Funds Distribution while accurately capturing both the required approvals and the supporting documentation. This set of financial management tools is still growing as NJDCA/SRD develops new needs for managing and tracking Sandy Recovery funds. Seamless integration with state's financial systems and with systems of other contractors working on recovery efforts have created cost efficiencies by reducing manual processes.
- **IT Program/Project Management.** CGI established Program Management and Oversight functions. Plans and processes were put in place to manage the engagement including the Program Management Plan, Change Management Plan, Program Tracking and Communication Plan, Issues and Risk Management Plan, Quality Assurance Plan, and the Software Development Lifecycle. Regular PMO meetings with all stakeholder groups that receive CDBG-DR funding for Hurricane Sandy has ensured that the status of all the initiatives were tracked and communicated across helping NJDCA savings in both cost and time by identifying cross program synergies.
- **Sandy Recovery Grant/Program Management.** SIROMS provides full life cycle program management for recovery grants, loans, and other programs that are managed by the State of New Jersey. SIROMS is customized to fit the needs of each program while taking advantage of the overlapping functions that most programs include. CGI has developed for SIROMS: public facing application intake systems, application randomization, eligibility determination and scoring, at a glance workflow status, document repository, complex grant award calculations, print screens that are used as part of legal grant signing agreements, status and history tracking to provide clear audit trail for all actions taken within the system, and direct

integration with the Funds Management that allows the program staff to easily process and distribute funds.

- **Systems Development.** Acting on behalf of NJDCA, CGI has created and executed multiple full system development lifecycle project initiatives. These include various modules of SIROMS across multiple programs within DCA and the partner agencies.
- **Change Control Management.** The Change Control Management Plan, developed in partnership with DCA, identifies workflow processes required to implement changes across the SIROMS environment. In addition, it identifies managed and controlled work products and defines Change Control Management responsibilities for managing and controlling them.
- **Policy Management System.** Incorporating a centralized policy storage and notification workflow and implementing a policy document change management tool has greatly reduced the current manual process for DCA, in addition to increasing communication across various stakeholders for policy information.
- **Service Desk and Incident Management.** CGI has staffed and managed a Service Desk for reporting, tracking and resolving incidents. To date we have processed over 9000 tickets helping end users with various questions regarding the policies, systems, applications and reporting.
- **Quality Assurance, System and Integration Testing.** CGI has staffed and managed Quality Assurance, Systems and Integration Testing. System and Integration testing is an integral step for every project work stream. Test Plans, Test Tracking and Results Report as well as User Acceptance frameworks have been established and utilized for each system development initiative.
- **SQL Database Management.** All SIROMS systems are built on a SQL database platform which creates consistency for reporting needs.
- **Data Warehouse Management/Reporting.** CGI has staffed and managed a Data Warehouse Team and a Reporting Team to provide ad hoc and scheduled reports to NJDCA/SRD and Program Management and staff. An integrated data warehouse with all the agencies working on the recovery efforts provide consolidated information to multiple transparency portals including the Governor's Office of Recovery and Rebuilding (GORR), and the Office of the Comptroller.
- **Business Intelligence Reporting.** CGI has staffed and managed a Business Intelligence Reporting team. Providing statistical analysis and forecasting methodologies has helped the State identify bottlenecks in operations, provide estimates on program completion, plan for resource allocations and project for financial disbursements through the life of the programs.
- **Enterprise Content Management Server (ECM)** integration has helped NJDCA by providing a single source of record for any documentation that is associated with the recovery efforts
- **Managed Services/Hosting.** CGI hosts all of the SIROMS components in our secured cloud environment which provide end to end grant management solution to NJDCA/SRD.
- **IT Disaster Recovery Planning and Testing.** The Infrastructure Team is responsible for Disaster Recovery Planning and Testing.
- **Geospatial Information Services.** CGI has built an ESRI ARC-GIS enabled web portal for NJDCA/SRD.
- **Quarterly Performance Report (QPR).** CGI's SIROMS solution facilitates the centralized collection and aggregation of this data to ensure smooth report generation and entry into the federal DRGR system.

Some of the key successes of CGI's partnership with the State of New Jersey for CDBG-DR efforts include:

- Nearly **\$2 billion** in recovery funds disbursed through SIROMS implementation (to date)
- NJ Government has successfully submitted 6 QPRs to date on time and with no comments
- CGI has assisted DCA successfully pass multiple audits from 6 distinct organizations including HUD and HUD-OIG
- **26,748** Homeowners currently served through the program.
- **5,470** renters being served through SIROMS Systems
- More than **\$750 million** in funds obligated for Housing Programs
- More than **130** canned reports delivered on automated schedules
- Supporting an average of **50+** ad hoc report/data requests **each week**

CGI's recommendations and technology/governance implementations have had a significant impact for the State of New Jersey as they help thousands of people recover from a historic tragedy. SRD's recovery programs and initiatives have been able to move forward quickly helping businesses create new jobs, communities remove dangerous structures and replace them with park and green spaces, people moving out of their temporary shelters and move back into secure homes.

3.6 Financial Capability of the Vendor {Bidder}

CGI has been a publicly traded company since December 17, 1986. CGI company shares are traded on the Toronto Stock Exchange (Symbol: GIB.A) and New York Stock Exchange (Symbol: GIB). CGI's Fiscal 2016 and 2017 Results are available for review at: <https://www.cgi.com/en/investors/annual-reports>. Printed copies of our latest annual report may also be requested at: <https://www.cgi.com/en/investors/contact-us>.

Please refer to Appendix D – Financial Capabilities of the Firm for the following documentation regarding the financial capability of CGI:

- Balance Sheet
- Income Statement
- Statement of Cash Flow
- Notes from the most recent fiscal year

4 (3A) Any other miscellaneous documents to be included by the Vendor {Bidder}

No additional documents are included in this section.



Appendix Contents

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Appendix A

Team CGI Resumes are included in Appendix A.

Appendix B

Additional Team CGI Backup Resumes are included in Appendix B.

Appendix C

A User Tutorial and Training Material Example is included in Appendix C.

Appendix D

The Financial Capabilities of CGI are included in Appendix D.

Appendix E

The Performance Management Plan is included in Appendix E.

Appendix F

The Business Continuity Plan is included in Appendix F.

Appendix G

The Security Plan is included in Appendix G.

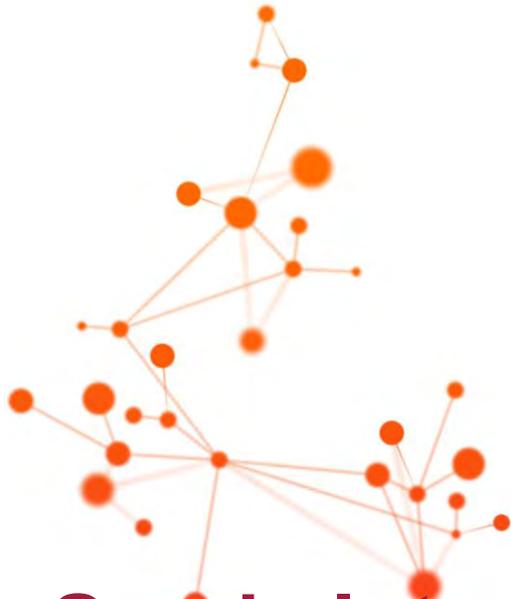
Appendix H

The Infrastructure Overview is included in Appendix H.



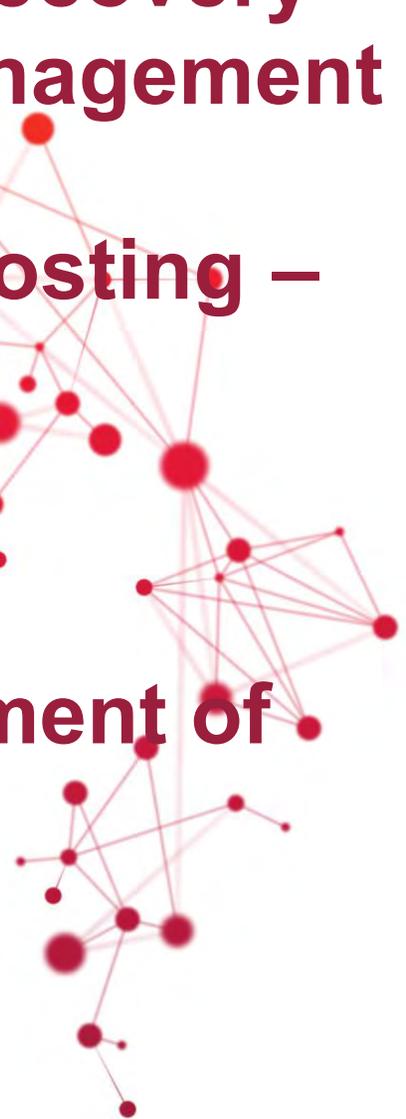
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Sandy Integrated Recovery Operations and Management System (SIROMS) Maintenance and Hosting – Pricing

New Jersey Department of Community Affairs Bid# 18DPP00226



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Founded in 1976, CGI is one of the world's largest IT and business consulting services firms. We help clients achieve their goals, including becoming customer-centric digital organizations, through high-end IT and business consulting, systems integration and outsourcing services combined with a unique client proximity model and global center of excellence network.

PROPRIETARY AND CONFIDENTIAL

The information contained in this document is legally privileged and confidential to CGI and to the receiving party. This document cannot be reproduced in any form or by any mechanical or electronic means, including electronic archival systems, without the written approval of CGI. The receiving party is exempt from this restriction for evaluation purposes only.

If you have received this document by mistake, note that the reading, the reproduction or the distribution of this document is strictly forbidden. You are hereby requested to inform us by telephone at (609) 789-2016 and to return this document by certified mail.

The information in this proposal is submitted on March 24, 2018 on behalf of CGI by the following authorized representative:

Paul Doty
Vice President, Consulting Services
CGI Technologies and Solutions
3525 Quakerbridge Road, Hamilton Twp, NJ 08619
(609) 789-2016

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1 Introduction

For 25 consecutive years, state and local government agencies across New Jersey have trusted CGI to transform their information systems and business processes to increase efficiency and deliver modern technology experiences to citizens and public servants. For the past 5 years, CGI has been a trusted partner with the NJ Department of Community Affairs (NJDCA) helping to make the SIROMS project a success and allowing thousands of NJ citizens to recover from the devastation of Super Storm Sandy. CGI is pleased to submit this price proposal to NJDCA in hopes to continue our partnership and complete the overall mission of managing and distributing funds to remaining NJ citizens in need.

CGI is pleased to submit a bid for maintenance and hosting costs of \$49,000,521.12 that covers the three (3) base years and three (3) option years of the Blanket P.O. contract.

For the NJDCA request for nine (9) years of software licensing costs, CGI is pleased to submit a bid of \$3,157,640.00.

2 Pricing Summary

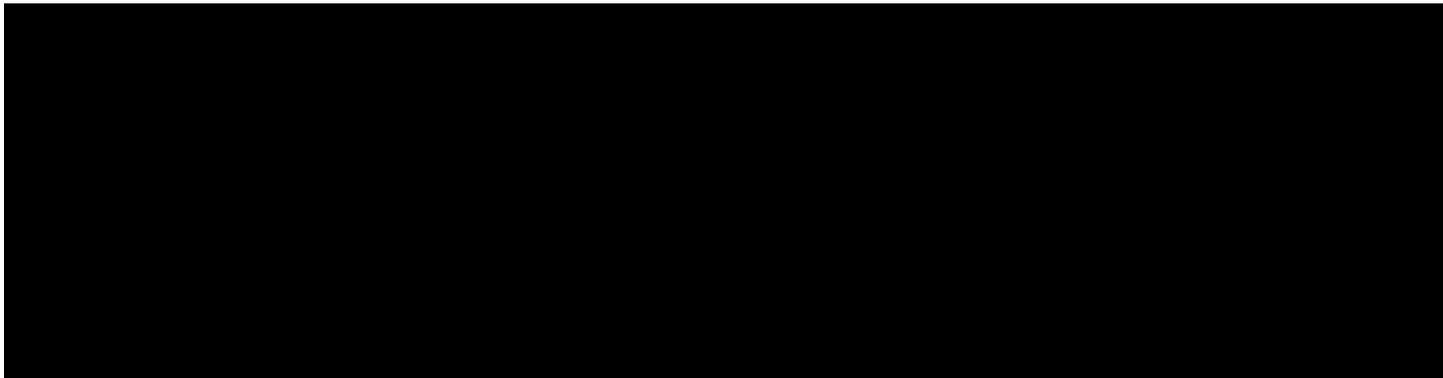
As requested, the price sheet/schedule Excel file provided by the State has been attached as part of our price proposal. A breakdown of the pricing summary is provided in the subsequent sections of this section.

2.1 SIROMS Maintenance Labor Services Pricing

The pricing summary presented in Exhibit 1 below provides a breakdown of how our pricing is distributed across six years of software maintenance.

Exhibit 1: Pricing Summary by Phase and Contract Year

Year	Rate	Billable Hours	Price
Year 1	\$ [REDACTED]	[REDACTED]	[REDACTED]
Year 2	\$ [REDACTED]	[REDACTED]	[REDACTED]
Year 3	\$ [REDACTED]	[REDACTED]	[REDACTED]
Year 4	\$ [REDACTED]	[REDACTED]	[REDACTED]
Year 5	\$ [REDACTED]	[REDACTED]	[REDACTED]
Year 6	\$ [REDACTED]	[REDACTED]	[REDACTED]
TOTAL		[REDACTED]	[REDACTED]



	2019	2020	2021	2022	2023	2024
1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

ITEM NO	LABOR CATEGORY	HRS 2018- 2019	HRS 2019- 2020	HRS 2020- 2021	HRS 2021- 2022	HRS 2022- 2023	HRS 2023- 2024
7							
8							
9							
10							
11							
12							
TOTAL							

2.2 Hosting and Infrastructure Pricing

2.2.1 LICENSING

Software Licensing	Unit	Unit Price	Quantity	Extended Price
Blanket P.O. {Contract} Year 1				
Blanket P.O. {Contract} Year 2				
Blanket P.O. {Contract} Year 3				
Optional Extension Year 1				
Optional Extension Year 2				
Optional Extension Year 3				
Post Blanket P.O. {Contract} Years 1-3				

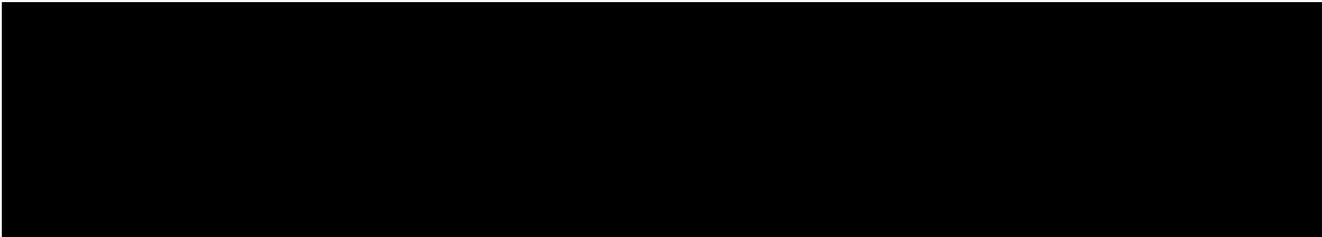
The following sections provide the detailed license fees for each 3-year block within this contract.

2.2.1.1 SIROMS LICENSING FOR YEARS 1-3

Software	Vendor	Expires	Base Years		
			Year 1	Year 2	Year 3
[Redacted content]					

The following table provides details around the licensing structure.

Software	License Terms	Comments
[Redacted content]		



2.2.1.2 SIROMS LICENSING FOR OPTION YEARS 4-6

The following exhibit provides a license cost breakdown of the commercial products used by the SIROMS application and infrastructure for the next three option years of the contract.

Software	Vendor	Expires	Option Years

All licensing terms carry forward for option years 1-3. The only thing to note from the table above is that SSL certificates will be purchased in Year 5 (i.e., option year #2).

2.2.1.3 SIROMS LICENSING FOR POST CONTRACT YEARS 7-9

The exhibit below provides a license cost breakdown of the commercial products used by the SIROMS application and infrastructure for three years after the end of the contract. It must be mentioned that no vendor would provide accurate quotes beyond the first 6 years of the contract. Consequently, any licensing costs are based on 2018 prices and it is likely that in 2024 the prices could be higher. The licensing costs provided in the table below and

the price schedule sheet are for budgetary/informational purposes only and will need to be refreshed if the State chooses to actually purchase them at that point.

Software	Vendor	Expires	Post Contract Years
[Redacted content]			

The following table provides details around the licensing structure.

Software	Unit	Unit Price
[Redacted content]		

Software	Unit	Unit Price
[Redacted Content]		

2.2.2 HOSTING

The table below represents Year 1 from the pricing sheet and only represents costs associated with hosting the SIROMS infrastructure. In our proposed pricing sheet, we have maintained a constant hosting price throughout the 6 years of the contract. CGI does believe that there can be an opportunity for reduced hosting charges each year. However, there are competing requirements, such as performance targets, that make it difficult to acknowledge that infrastructure will decrease when the SIROMS user population decreases and to predict by how much. CGI does include a proposed method to realize yearly cost savings that can be found in the section 2.2.3.

Hosting: Year 1	Unit	Unit Price	Quantity	Extended Price
[Redacted Content]				

The following table provides more detail around what each line item includes.

Line Item	Description

2.2.3 COST SAVINGS

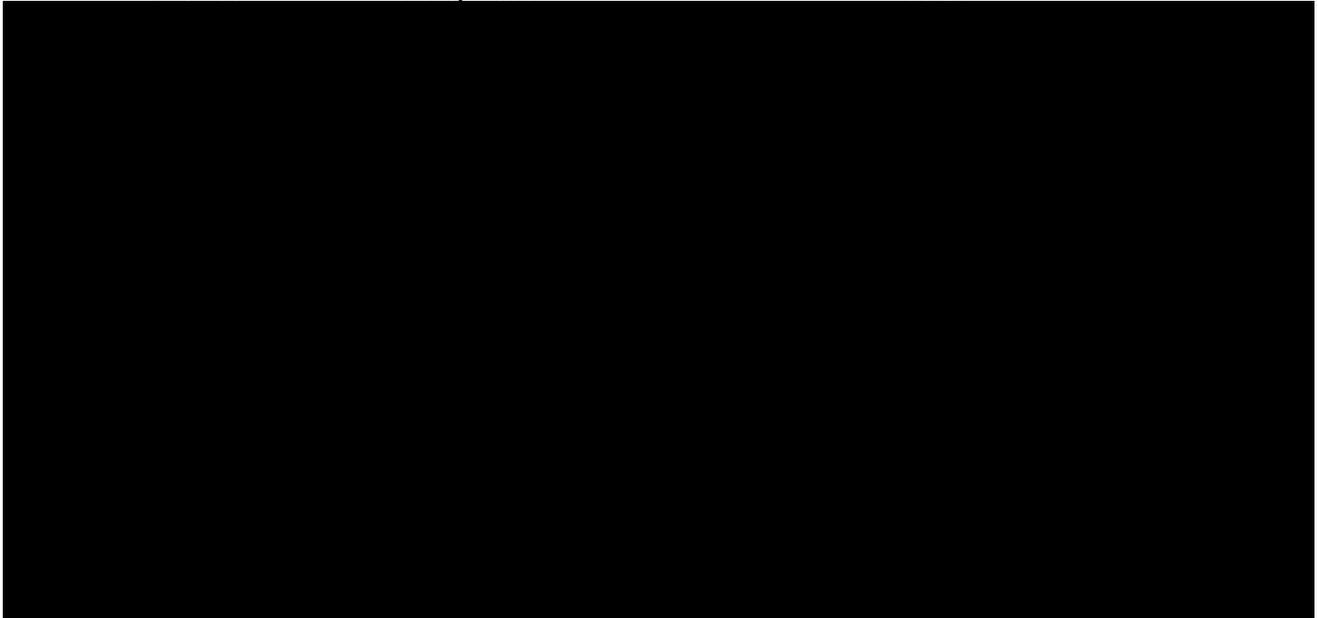
There are a number of ways for NJDCA to realize cost savings. The following sections describe these potential savings in more detail.

2.2.3.1 LICENSING

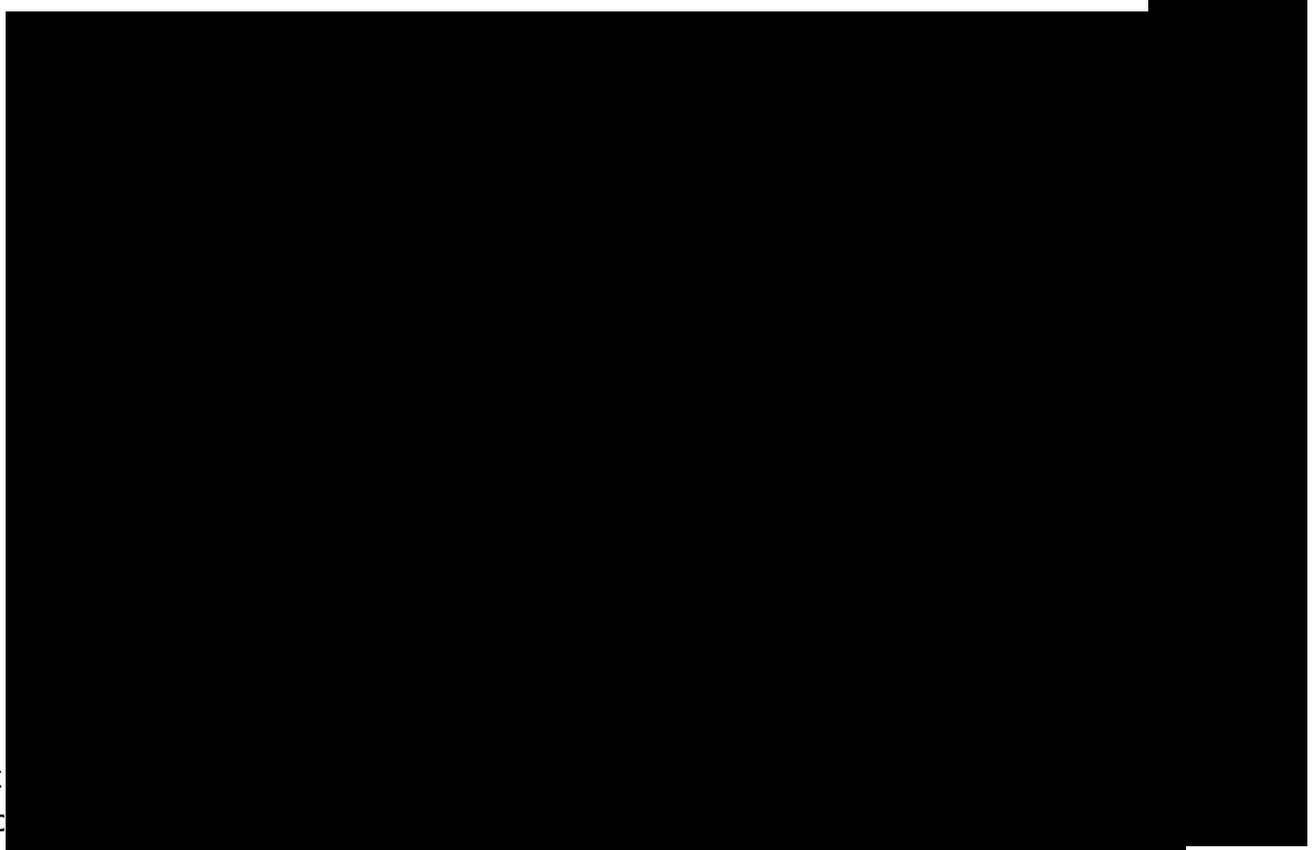
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2.2.3.2 INFRASTRUCTURE RATE CARD

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Line Item	Price/Month	Notes
		

2.2.3.3 DEMONSTRATING COST SAVINGS



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Year	Example Changes in SIROMS Infrastructure

The following table provides a summary of the total yearly savings realized by this hypothetical example. Please note that the starting value for **Contract Year 1** only includes licensing costs for SQL Server and SharePoint because these are the only licenses affected by the number of SIROMS users. This is meant only as an example to demonstrate the potential for cost savings.

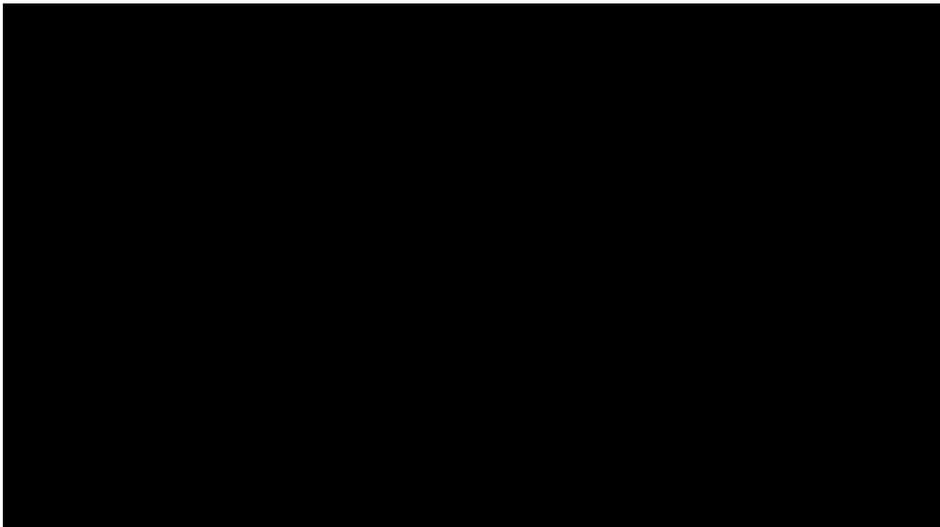
Contract Year	Hosting Charge (including only SQL/SharePoint license)
Year 1	
Year 2	
Year 3	
Year 4	
Year 5	
Year 6	

2.2.4 POTENTIAL FOR COST INCREASES

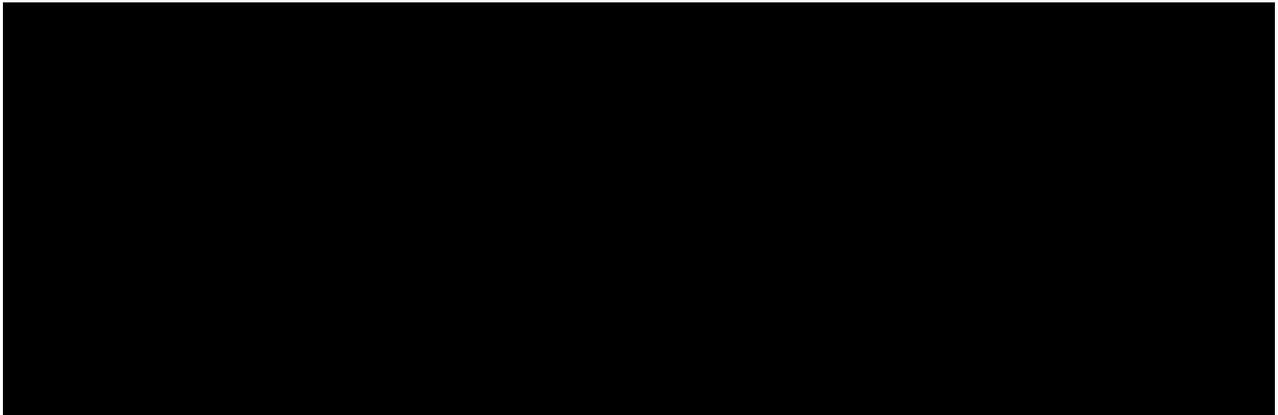
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2.2.5 HOSTING - ASSUMPTIONS AND CLARIFICATIONS

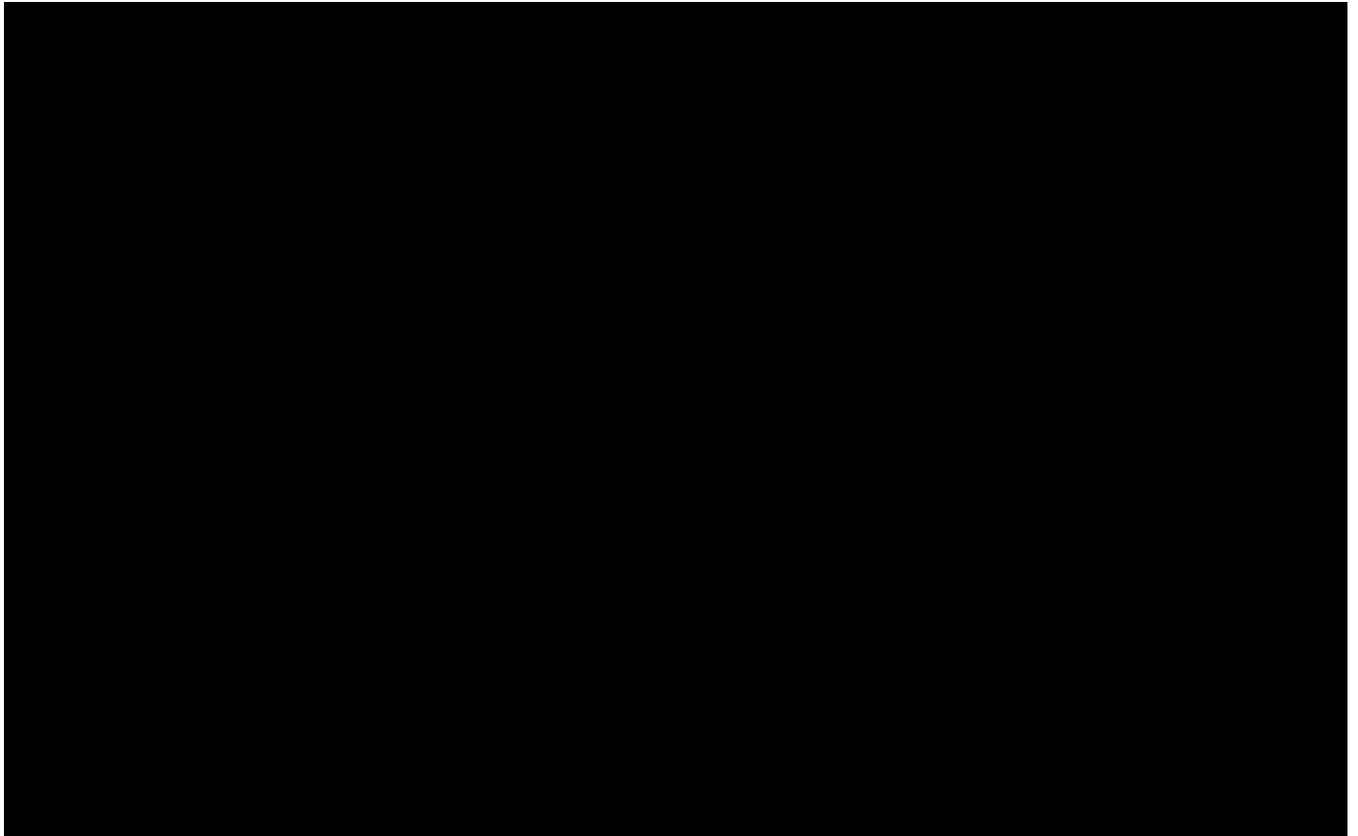
3 Corporate Information

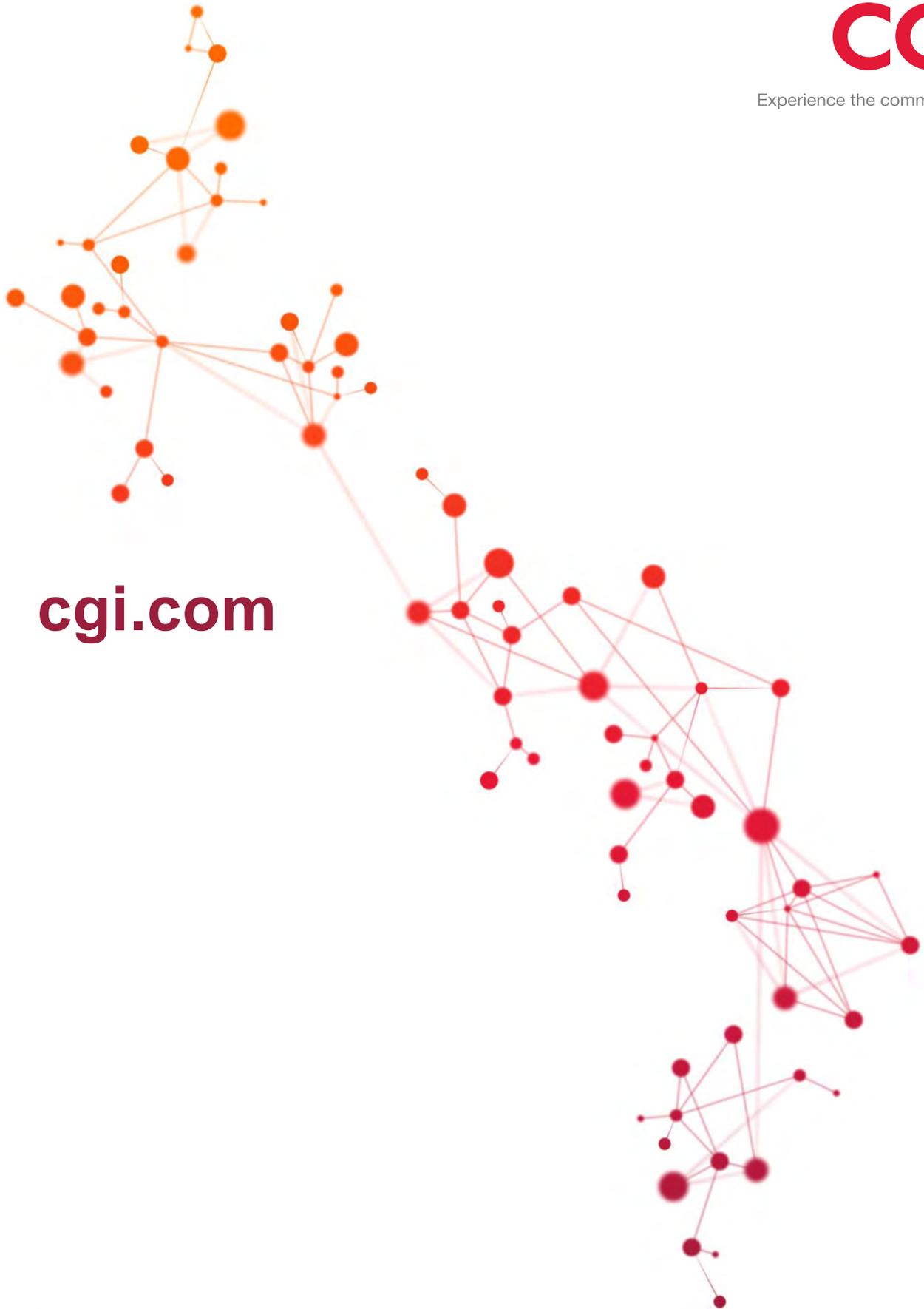


3.1 Payment/Invoicing



4 Assumptions and Clarifications





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Bid Solicitation {RFP} #18DPP00226 Section - Price Sheet/Schedule					
Sandy Integrated Recovery Operations and Management System (SIROMS) Maintenance and Hosting					
er to Bid Solicitation {RFP} Section 3.0 (Scope of Work) and Attachment 1 for task requirements and deliverables					
Description					
Line #	Maintenance and Hosting: Year 1	Unit	Unit Price	Quantity	Extended Price
00001	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 160.12	63240	\$ 10,125,988.80
00002	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00003	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00004	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00005	Bandwidth Usage in Megabits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Maintenance and Hosting: Year 2					
		Unit	Unit Price	Quantity	Extended Price
00006	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 160.78	51000	\$ 8,199,780.00
00007	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00008	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00009	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00010	Bandwidth Usage in Megabits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Maintenance and Hosting: Year 3					
		Unit	Unit Price	Quantity	Extended Price
00011	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 161.32	44880	\$ 7,240,041.60
00012	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00013	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00014	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00015	Bandwidth Usage in MegaBits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Total Cost: Years					\$ 28,784,073.18
Maintenance and Hosting: Optional Extension Year 1					
		Unit	Unit Price	Quantity	Extended Price
00016	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 167.24	34680	\$ 5,799,883.20
00017	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00018	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00019	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00020	Bandwidth Usage in Megabits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Maintenance and Hosting: Optional Extension Year 2					
		Unit	Unit Price	Quantity	Extended Price
00021	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 169.29	28560	\$ 4,834,922.40
00022	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00023	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00024	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00025	Bandwidth Usage in MegaBits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Maintenance and Hosting: Optional Extension Year 3					
		Unit	Unit Price	Quantity	Extended Price
00026	Full Time Equivalent (FTE) Maintenance Staff - Blended Annual Labor Rate	Each FTE	\$ 178.23	24480	\$ 4,363,070.40
00027	Virtual Machines (VM)	Each VM	\$ 10,298.37	52	\$ 535,515.24
00028	Storage Capacity in Terabytes (TB)	Each TB	\$ 8,739.31	26	\$ 227,222.06
00029	Processor Cores	Each Core	\$ 1,267.40	120	\$ 152,088.00
00030	Bandwidth Usage in MegaBits (Mbs) per Month	Each Mbit/s	\$ 9,870.56	16	\$ 157,928.96
Total Cost: Years 1-6					\$ 47,000,211.96
Software Licensing					
		Unit	Unit Price	Quantity	Extended Price
00031	Blanket P.O. {Contract} Year 1	All Software	\$ 755,486.00	1	\$ 755,486.00
00032	Blanket P.O. {Contract} Year 2	All Software	\$ 357,789.00	1	\$ 357,789.00
00033	Blanket P.O. {Contract} Year 3	All Software	\$ 358,489.00	1	\$ 358,489.00
00034	Optional Extension Year 1	All Software	\$ 357,789.00	1	\$ 357,789.00
00035	Optional Extension Year 2	All Software	\$ 358,489.00	1	\$ 358,489.00
00036	Optional Extension Year 3	All Software	\$ 357,789.00	1	\$ 357,789.00
00037	Post Blanket P.O. {Contract} Years 1-3	All Software	\$ 611,809.00	1	\$ 611,809.00

REVISED

Bid Solicitation {RFP} #18DPP00226 Section - Price Sheet/Schedule					
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