



MINISTRY OF FINANCE AND THE PUBLIC SERVICE

TERMS OF REFERENCE

**CONSULTANCY SERVICE
FOR: TRAINING IN SOFTWARE DEVELOPMENT**

Dec 2019



Institutional Strengthening Programme

STRATEGIC PUBLIC-SECTOR TRANSFORMATION PROJECT

IBRD LOAN NO.: 8406-JM



DEFINITION OF ACRONYMS

| ACRONYM | DEFINITION |
|----------------|---|
| BizDevOps | Business, Development and Operations. (A shift to highly collaborative cultures with strong focus on teams and collaboration) |
| eGovJa | eGov Jamaica Limited |
| GOJ | Government of Jamaica |
| G2B | Government-to-Business |
| G2C | Government-to-Citizens |
| G2G | Government-to-Government |
| IBRD | International Bank for Reconstruction and Development |
| ICT | Information Communications Technology |
| MDA | Ministries, Departments and Agencies |
| MSET | Ministry of Science, Energy and Technology (formerly MSTEM) |
| PDO | Project Development Objective |
| PFMS | Public Financial Management Systems |
| SPSTP | Strategic Public Sector Transformation Project |

1.0. BACKGROUND

eGovJa is a full-service provider of ICT services such as ICT Consultancy, GOJ Validation Web Services, Data Centre (Hosting and Data Storage), Infrastructure Design and Development Services, and Software Development/Acquisition.

With a mandate to provide ICT services to the entire public sector of the GOJ, eGovJa was restructured to support critical business processes of government entities and to enhance the revenue collection capabilities of the Government of Jamaica. The mandate is further expanded in the Vision 2030 ICT Sector Plan that has the following action items assigned to eGovJa:

- Implement a Brand Jamaica portal organized in product streams. This should be done in collaboration with the Jamaica Trade and Invest.
- Assess, re-engineer and automate key government business processes to improve facilitation and service delivery. This should be done in collaboration with the Cabinet Office and the relevant MDAs.
- Develop more efficient electronic systems for engagement in G2G, G2B and G2C transactions. This should be done in collaboration with our parent ministry, MSET.

The range and scope of the services provided by eGovJa have changed dramatically and the organisation is now required to service a larger client base, however there has not been a commensurate increase in human and physical resources. The company is also expected to adopt the agile methodology and be effective in its delivery of services. Hence, changes in its software development processes will be required to facilitate same.

2.0. INTRODUCTION

eGovJa traditionally utilizes the waterfall software development methodology, and currently records an efficiency level below best practice standard. An internal study of the organisation was done which revealed the following challenges, among others:

- Lengthy delays in delivering solutions
- Difficulty incorporating changes to business requirements
- Software defects are identified too late in the process
- Excessive application support and maintenance

Some of the challenges outlined above can be resolved by strengthening the software design and architecture skills of the development team as well as, knowledge of the software development platforms.

It is envisaged that training, in software design and architecture as well as, the development platforms used by the organization, will bolster the team's ability to develop higher quality software that are more reliable, scalable, extensible, usable and maintainable. Also, the application development team will have the required competencies to reduce the technical debt in existing applications. This improvement in software quality will allow the

organization to be more responsive to changing customer needs, increase operational efficiencies and ultimately achieve greater customer satisfaction.

Project Funding Overview: The GOJ is the beneficiary of an investment loan from the World Bank. The Strategic Public Sector Transformation Project (IBRD Loan No.-8406-JM) will, inter alia, assist in repositioning of eGov Jamaica Limited to be able to support the Public Financial Management Systems (PFMS).

The Project Development Objective (PDO) of the SPSTP is to strengthen public resource management and support selected public sector institutions in facilitating a more enabling environment for private sector growth. The project has six components. The components of the SPSTP are:

- Component I: Strengthening the Public Investment Management System
- Component II: Strengthening the Budget Preparation Process & Results-Based Budgeting
- Component III: Adaptive Public Sector Approaches to Promote Fiscal Sustainability
- Component IV: Modernizing of the Accountant's General's Department.
- Component V: Fostering Industrial Growth and Trade Facilitation
- Component VI: Project Management

This training falls under Component III: Adaptive Public Sector Approaches to Promote Fiscal Sustainability.

3.0. OBJECTIVES

Software Development Training: Through this consultancy, it is expected that the eGovJa participants' skills should be upgraded in JEE 8 and .Net Web Development, Software Design and Architecture and User Experience Design.

4.0. SCOPE OF WORK (SOW)

Specifically, the scope of work shall include:

- Developing a programme to provide the requisite software development training to participants whose roles involve designing and coding application software.
- Sourcing, scheduling and delivering specialized software development training courses as outlined below:

The scope of work is not considered exhaustive and modifications may be considered during the course of the engagement. All changes to the scope of work shall be formally agreed by both parties on presentation of a formal change request by the Consulting Firm with the justification and related time and cost for consideration.

For each training course provided, workshops, case studies, realistic or practical assignments should be included to enhance the learning experience and the delivery of the course.

1. Deliver work and training plans to cover the course content outlined below.

| Software Development | | | |
|--|---|---|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| Application Security Testing and Mobile Application Testing | <ul style="list-style-type: none"> ▪ At the conclusion of this consultancy, the teams would have acquired the necessary knowledge and skills to effectively conduct security and mobile application testing. The teams would also be equipped with required skills/competencies as well as exposure to international best practices necessary to better able to test newly developed as well as legacy applications. The training will also prepare the team to sit the related International Software Testing Qualifications Board (ISTQB) certification exams. | Programmers and Quality Assurance Analysts | 32 |
| Architecture Design Training | <p>This training is expected to cover the following knowledge areas:</p> <ul style="list-style-type: none"> ▪ Architectural Analysis ▪ System Decomposition ▪ Component Specification ▪ Communication Mechanism ▪ Architectural Patterns ▪ Architectural Modelling ▪ Documenting Architecture ▪ GoF Design Patterns ▪ Microservices Architecture and Design ▪ | Programmers and Quality Assurance Analysts | 50 |
| User Experience Training | <p>The training should cover the following knowledge areas:</p> <ul style="list-style-type: none"> ▪ Introduction to UX principles and theories ▪ Design Thinking ▪ User Centred Design ▪ User Needs Research ▪ Usability Evaluation | Programmers and Quality Assurance Analysts | 50 |

| Software Development | | | |
|-----------------------------|---|---|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ▪ Information Architecture ▪ Interaction Design ▪ Visual Design ▪ User Interface Prototyping ▪ UX writing ▪ | | |
| GitLab Training | <p>Anticipated learning objectives of the training include:</p> <ul style="list-style-type: none"> ▪ How to install GitLab ▪ How to manage users & groups ▪ Issue management ▪ Code review ▪ CI / CD ▪ Issue management like how to create merge requests, milestones etc. ▪ How to import repositories ▪ Continuous Integration in GitLab ▪ Triggering pipelines ▪ The basics of version control ▪ The training should cover the following knowledge areas: <ul style="list-style-type: none"> ▪ Overview ▪ Basic Setup & Installation ▪ Git - A Simple Introduction ▪ Issue Management ▪ Milestones ▪ GitLab Flow / Branching Strategies <ul style="list-style-type: none"> ○ Feature Branches ○ Environment Branches ○ Release Branches ▪ Merging <ul style="list-style-type: none"> ○ Basics ○ Merge Requests ○ Issue Closing with Merge Requests ○ Forking ○ GitLab Container Registry ▪ GitLab CI (Continuous Integration) <ul style="list-style-type: none"> ○ Introduction ○ Setup ○ Runners ○ Strategies ○ Secrets / Variables ○ Stages ○ Merging and CI | Programmers and Quality Assurance Analysts | 50 |

| Software Development | | | |
|------------------------------------|---|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ▪ GitLab Server Administration <ul style="list-style-type: none"> ○ Users & Groups ○ External Authentication (OAuth / LDAP / Active Directory) ○ Monitoring ○ Service Integrations ○ Backup & Recovery Strategies ○ Updating GitLab | | |
| Secure JAVA Web Development | <ul style="list-style-type: none"> ▪ Training will allow students to: ▪ Develop secure Java web applications and services, or to secure existing applications and services by refactoring as necessary. ▪ Define security constraints and login configurations that instruct the web container to enforce authentication and authorization policies. ▪ Guard against common web attacks including XSS, CSRF, and SQL injection. ▪ Validate user input aggressively, for general application health and specifically to foil injection and XSS attacks. ▪ Configure a server and/or application to use one-way or two-way HTTPS. ▪ Apply application-level cryptography where necessary. ▪ Store sensitive information securely, hash user passwords, and understand the importance of salting and of using slow hashing algorithms and processes, to maximize the safety of stored credentials. ▪ Use HMAC security as appropriate in RESTful web services. ▪ Participate in SAML SSO systems, and be aware of the security concerns involved in single sign-on. ▪ Implement server and client sides of the OAuth-2.0 initial flow in order to provide third-party authorization to resources in a secure manner | Programmers | 40 |

| Software Development | | | |
|---|---|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| Continuous Integration (CI) Course | <ul style="list-style-type: none"> ▪ Continuous Integration (CI) Overview ▪ Continuous Integration Workflow ▪ Implement a CI Environment <ul style="list-style-type: none"> ○ Create and Manage GIT Source Code Repository ○ Configuring Automated Deployment scripts ○ Create Automated Tests (Unit, Integration, UI Testing, API Testing, Load and Security Testing) ▪ Database Versioning <ul style="list-style-type: none"> ○ Best Practices for Database Versioning ○ Database versioning tools ○ Benefits of Database Versioning ○ Database Versioning Processing ○ Database Versioning Approaches ▪ Maintain CI Environment <ul style="list-style-type: none"> ○ Implementing the Build, Deploy, Test and Release Process ○ Product Maintainability and Monitoring ▪ Agile Tools for Continuous Integration <ul style="list-style-type: none"> ○ Configuring a CI Server ○ CI environment, standard workflows and core architecture ○ Configure GitLab CI Server ○ Configure SonarQube for Static Code Analysis ○ Configure Nexus OSS for Build Artifacts ○ Build Tools for CI (Java & | Programmers | 40 |

| Software Development | | | |
|---|---|---------------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <p>.Net)</p> <ul style="list-style-type: none"> ▪ Relevant Case Studies and Lab Exercises | | |
| <p>Java Enterprise Edition (JEE 8) Web Development USING JBOSS/WEBSPP HERE</p> | <ul style="list-style-type: none"> ▪ Enterprise Development <ul style="list-style-type: none"> ○ Enterprise application software ○ Requirements of enterprise applications ○ Scalability, load balancing, failover ○ Resource pooling ▪ Java EE Core Components <ul style="list-style-type: none"> ○ Overview of Java EE core components ○ Web Tier components ○ Application tier ○ Deployable units ○ Deployment descriptors ○ The Java Naming and Directory Interface (JNDI) ▪ Introduction to Servlets <ul style="list-style-type: none"> ○ The servlet interface ○ The web container ○ Creating HTML output using servlets ○ The @webservlet annotation ○ Interaction between web.xml and annotations ○ The @webinitparam annotation <p>Form Processing Using Servlets</p> <ul style="list-style-type: none"> ○ Using HTML5 forms with servlets ○ Processing request parameters ○ HttpServletRequest methods ○ HttpServletResponse methods <ul style="list-style-type: none"> ▪ Java Server Pages | <p>Programmers</p> | <p>40</p> |

| Software Development | | | |
|-----------------------------|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ JAVA server pages (JSPs) ○ THE relationship between JSPs and Servlets ○ THE JSP lifecycle ○ THE role of JSPs in JAVA EE 7 ▪ Implementing MVC in JEE <ul style="list-style-type: none"> ○ Model view control ○ Using the RequestDispatcher ○ Handling requests ○ The request scope ○ Handling request attributes ○ The expression language (JSR 341) ○ EL in template ▪ Session Management <ul style="list-style-type: none"> ○ Sessions in web applications ○ The HttpSession object ○ Session management in Java EE ○ Handling cookies ○ URL-rewriting ▪ Servlet Filters <ul style="list-style-type: none"> ○ Introduce servlet filters ○ Modify the request data ○ Modify the response data ○ The @WebFilter mappings ○ Move functionality out into a decorator pattern ▪ Overview of EL <ul style="list-style-type: none"> ○ The EXPRESSION LANGUAGE (JSR 341) ○ Value and method expressions ○ Immediate and deferred evaluation syntax ○ Read and read/write expressions ▪ The EL Language <ul style="list-style-type: none"> ○ EL operators ○ EL reserved words | | |

| Software Development | | | |
|-----------------------------|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ EL implicit objects ○ Referencing objects using EL ▪ Introduction to Customs Tags <ul style="list-style-type: none"> ○ Custom tags ○ Using the taglibPage directive ○ The TLD file ○ The TAG implementation class ▪ The Java Standard Tag Library <ul style="list-style-type: none"> ○ JSTL overview ○ Use JSTL to iterate over collections of data ○ JSTL functions ▪ Introduction to CDI <ul style="list-style-type: none"> ○ Context dependency injection (CDI) ○ The @inject annotation ○ The @default annotation ○ The @alternative annotation ○ The @named annotation ▪ Using CDI <ul style="list-style-type: none"> ○ Qualifiers ○ @POSTCONSTRUCT and @predestroy ○ The @produces annotation ▪ CDI and Java EE <ul style="list-style-type: none"> ○ CDI's relationship to Java EE ○ The @model annotation ○ Built-in CDI scopes ▪ JEE Data sources <ul style="list-style-type: none"> ○ Data sources in JEE ○ Setup a data source ○ Using CDI to inject a data source ▪ Overview of JPA | | |

| Software Development | | | |
|-----------------------------|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ Introduce the java persistence of API (JPA) ○ Benefits of using an ORM framework ○ Hibernate and JPA ▪ Introduction to WebSocket <ul style="list-style-type: none"> ○ JAVA API for WebSocket overview ○ Using WebSocket in Java EE ○ Endpoint instances ▪ Implementing WebSocket Endpoint <ul style="list-style-type: none"> ○ Annotated endpoints ○ Receiving messages ○ Send response to client(s) ○ JavaScript to setup a WebSocket connection ▪ WebSocket's in JEE <ul style="list-style-type: none"> ○ Manage client state ○ Encoding and decoding messages ○ Handling errors ▪ Introduction to Bean Validation <ul style="list-style-type: none"> ○ Bean validation ○ Define constraints on object models ○ Core validation annotations ○ Validate objects and object graphs ▪ Web Fragments <ul style="list-style-type: none"> ○ Need for web fragments ○ The web-fragment element ○ Fragment ordering ▪ Error Handling <ul style="list-style-type: none"> ○ Handling HTTP errors codes | | |

| Software Development | | | |
|-----------------------------|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ Handling exceptions ▪ Asynchronous Servlets <ul style="list-style-type: none"> ○ Invoking a ‘long running’ process ○ The asyncsupported attribute ○ Using the AsyncContext class ○ Heading AsyncEvent objects ○ Non-blocking, I/O in servlets ▪ Web Security <ul style="list-style-type: none"> ○ Specify the servlet security model ○ Roles in the web application ○ Access control and authentication requirements ○ Security-Related annotations ○ Servlet 3.1 predefined roles ○ The deny-uncovered-http-methods XML element ▪ Introduction to JSF <ul style="list-style-type: none"> ○ JSF overview ○ The JSF ‘components’ ○ Configuring a JSF application ○ MVC using JSF ▪ JSF Components <ul style="list-style-type: none"> ○ Understand the component architecture of JSF ○ Explain the use of the RenderKit ○ User interface component model ○ Introduce the JSF custom tags ○ Explain the functionality of the various tags ○ Panels and tables in JSF ▪ Facelets <ul style="list-style-type: none"> ○ Facelets as view handlers ○ Custom tags used in facelets ○ The @named annotation ○ The @requestscoped and @sessionscoped annotations | | |

| Software Development | | | |
|---|---|---|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ Using the data table custom tag ▪ Facelets Templating and Resourcing ○ Creating a consistent look and feel ○ Templating and placeholders ○ JSF resource management | | |
| User Experience Design | <ul style="list-style-type: none"> ▪ Define UX Design ▪ Recognizing the User ▪ Writing Scenarios ▪ Establishing Context ▪ Architecting UI Structure ▪ Testing Your Architecture ▪ Leveraging the Modelling Process ▪ Dealing with Complex Task ▪ Integrating UX Design Patterns ▪ Addressing the Mobile Context ▪ Developing a Mobile Design ▪ Prototyping Your UI ▪ Developing a High-Fidelity Design ▪ Preparing for Testing ▪ Performing Usability Testing | UX Designers, QA Analysts, Business Analysts, Functional Managers | 40 |
| Software Design and Architecture | <p>DESIGN PATTERNS</p> <ul style="list-style-type: none"> ▪ Introduction to Design Patterns ▪ Detailed Coverage of the following: <ul style="list-style-type: none"> ○ Observer Pattern ○ Decorator Pattern ○ Factory Pattern ○ Command Pattern ○ Adapter Pattern ○ Template Method Pattern ○ Iterator and Composite Patterns ○ Strategy and State Patterns ○ Model-View-Controller (MVC) ▪ Case Study using Design Patterns in OOAD <p>SOFTWARE ARCHITECTURE</p> <ul style="list-style-type: none"> ▪ Architecture Definitions and Distinctions <ul style="list-style-type: none"> ○ Enterprise, Information, System etc | Application Designers and Architects, Business Analysts, Functional Managers | 40 |

| Software Development | | | |
|-----------------------------|---|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ▪ Benefits of a Successful Architecture <ul style="list-style-type: none"> ○ Relationship between Business Strategy and Architecture Strategy ▪ Architecture Key Concerns <ul style="list-style-type: none"> ○ System Decomposition ○ Component Specification ○ Communication mechanism ○ System Properties <ul style="list-style-type: none"> - Performance, Consistency, Data Integrity, Scalability etc ▪ Primary Architecting Techniques <ul style="list-style-type: none"> ○ Architecture Patterns <ul style="list-style-type: none"> - Layer - Client/Server - Brokers and Bridges etc ○ Architectural Modelling using UML ○ Architectural Views ▪ Architecture, Design and Implementation <ul style="list-style-type: none"> ○ Techniques to transition from Architecture to Design and from Design to Implementation The Architecting Process ▪ Initiate Process <ul style="list-style-type: none"> ○ Describe how to initiate the architecting process, gain management support and create a cohesive and creative architecture team ▪ Architectural Requirements <ul style="list-style-type: none"> ○ How to elicit and document functional and non-functional requirements ▪ System Structuring <ul style="list-style-type: none"> ○ Architectural Model to Decompose System ○ Evaluate Architectural Trade-offs | | |

| Software Development | | | |
|---|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ○ Document System using different views ▪ Evaluation <ul style="list-style-type: none"> ○ Assess system using system requirements ▪ Deployment <ul style="list-style-type: none"> ○ Guide project team to ensure successful adoption and appropriate use of system. | | |
| Test Driven Development (TDD) and Refactoring Using Java | <p>Roles and Responsibility of the Architect</p> <ul style="list-style-type: none"> ▪ Introduction to TDD ▪ Emergent Design ▪ Basic Unit Testing ▪ Comprehensive Unit Testing Concepts ▪ Mocks, Fakes, Stubs and Drivers ▪ Database Unit Testing ▪ Refactoring Basics ▪ Refactoring Legacy Code ▪ Patterns and Anti-Patterns in TDD ▪ Code Coverage ▪ System, Regression and Acceptance Testing ▪ Continuous Integration Servers/ Automated Testing ▪ Risks Changing Legacy/Production Systems | Programmers | 40 |
| ASP.NET MVC Programming Using C# | <ul style="list-style-type: none"> ▪ Introduction to .NET ▪ Introduction to Visual Studio ▪ C# Language Fundamentals ▪ Conditionals and Looping ▪ Methods and Parameters ▪ Exception Handling ▪ Collections ▪ Object Oriented Programming ▪ Overview of ASP.NET MVC ▪ Developing Controllers ▪ Developing Views ▪ Developing Models ▪ Routing Controls ▪ Integrating ASP.NET MVC and Web Forms ▪ MVC Unit Testing ▪ Securing MVC Applications | Programmers | 40 |

| Software Development | | | |
|-----------------------------|--|---------------------|-------------------------------|
| Course | Course Content | Target Group | Number of Participants |
| | <ul style="list-style-type: none"> ▪ Deploying ASP.NET Applications | | |

2. Recommend best-practice solutions for issues identified by the participants.

- It is expected that modules may be enhanced based on the dynamics and interaction with participants so as to ensure where knowledge gaps are identified these will be addressed through course enhancement.
- Issues identified by participants and for which a best practice exists should be included in the training programme, tailored to any identified special characteristics and or policy in the Jamaican environment

5.0 METHODOLOGY

The Consulting Firm is expected to use accepted and proven methodologies for carrying out the assignment. The Consulting Firm should prepare a detailed methodology and work plan indicating how the objectives of the assignment will be achieved. The Consulting Firm will conduct the course on the agreed dates for the identified target audience, and will provide each participant with a printed copy of the training material along with a copy for the eGovJa Information Resource Centre.

The trainers should bring real-world experience to every training session. Participants should be led through a combination of presentations and practical hands-on exercises.

The proposal must include a work plan and training plan. The work plan submitted should be aided by a Work Breakdown Schedule showing the allocation of time to each of the key components of the project. Detailed scheduling should be provided to support the methodology outlined.

The Consulting Firm should bring real-world experience to every workshop. Participants should be led through a combination of presentations and practical hands-on exercises. It is expected that the training will be delivered on-site at eGov Jamaica Limited in a classroom setting.

6.0. COORDINATION/REPORTING RELATIONSHIP

The Consulting Firm will report to and operate under the supervision of the Senior Director, Programme & Client Relationship Management Division. The Senior Director, Programme & Client Relationship Management Division will work with the Consulting Firm to schedule the course(s).

The Director will be supported by the PMO and a Steering Committee, who will co-ordinate the review and approval of the documents prepared by the Consulting Firm. A Steering Committee will be established and will have responsibility for the review and sign off on key deliverables as listed in section 7.

7.0. DELIVERABLES

The deliverables under this project are as specified in the tables below. All deliverables should conform to the following minimum standards:

1. Use language appropriate for the respective target audience;
2. Be comprehensive, properly formatted and well presented;
3. Provide justifications for all assumptions;
4. Be presented and written in clear English;
5. Be comprehensive, properly formatted and well presented

The key deliverables for the Software Development training are as specified in the table below.

| Key Deliverables | Performance Standard |
|----------------------------|---|
| Work plan | The Work plan is the operational document for the training engagement and is used to determine the required inputs for the development and delivery of the output of the training. The Work plan is to include broad implementation strategy, activities, projected beginning and end times for major activities. |
| Training Plan | <p>Must include:</p> <ul style="list-style-type: none"> - Detailed course outlines addressing the objectives stated in the Scope of Work, and certification curriculum - The time-frame for achieving/covering the competencies - The number of teaching hours (not including breaks) and session options - Optimal class size - The entrance and exit competencies - Prerequisite for participation and learning outcome - The training approach and methodology which will be used - Who is responsible for the delivery of training to deliver each exit competency - The student evaluation/assessment methodology - Description of training material which will be provided, including the medium and rights and restrictions for the use of the training material. <p><i>Samples must also be included</i></p> <ul style="list-style-type: none"> - Any other specific requirements to be met in accordance with the particular training contract in question |
| Training Implementation | <p>Must include:</p> <ul style="list-style-type: none"> - Learning objectives for each course - Duration of each course - Manual/documentation - printed (and electronic where applicable) copies of the training material – one for each participant and one for the eGovJa Information Resource Centre - Teaching aids - Delivery of courses on the agreed dates for the identified target audience - Provision of course participation certificates |
| Training Evaluation Report | <p>This report should contain but not be limited to:</p> <ul style="list-style-type: none"> - A brief overview of the training with an emphasis on the most important points - Background information on the training program, the objectives and the questions it seeks to answer - Overview of evaluation results and key issues identified - Discussion on the key findings with references to the collected data |

At the end of each module, participants will be asked to complete eGovJa’s training evaluation forms.

7.1. “Sign-off” Procedure

The Steering Committee will work with the Consulting Firm to ensure the deliverables align with the objective of this assignment. It is also expected that the Consulting Firm will present the deliverables to the Steering Committee.

7.2. Variations

All proposed changes to the work plan and deliverables must be discussed with the Project Sponsor, and where necessary a change request proposal as referenced at 4.0 SOW may be submitted for approval to the Steering Committee.

7.3. Schedule of Payment

Payments for the services will be specified in the Contract.

8.0. QUALIFICATION AND TECHNICAL EXPERTISE REQUIRED

8.1. The Consulting Firm

The Consulting Firm should have the following minimum qualifications and demonstrate the following competencies:

- a) At least 8 years’ experience in working with large organizations to deliver on similar scope.
- b) Should be able to provide evidence of the validity of experience and qualification, including work done for an IT organization.
- c) Must be accredited to deliver training at the requisite level.
- d) The Consulting Firm(s) will meet the minimum score of 70% in relation to the criteria listed in the Appendix.
- e) The firm must demonstrate that they have key personnel with skills and/or qualification in the specific training areas.

8.2. Key Skills/ Qualifications

Of key interest to the GOJ are the key instructor(s) assigned by the Consulting firm to the Project. Specific attention will be paid to the depth of expertise of these individuals and their presence and communication capabilities. The key instructors should have the following minimum qualifications and demonstrate the following competencies:

- a. Certified instructor in delivery of training to adults, from a recognized institution.

- b. Individual trainers must be certified to teach the respective courses.
- c. Practitioner in the respective knowledge area with at least 5 years relevant experience and demonstrated competence.
- d. Bachelor's degree in Computer Science/IT related field or equivalent working experience.
- e. Ability to translate theory, and to tailor, implement and embed best practices.

A primary and secondary resource for each module should be identified to ensure project continuity if required. The training must be delivered in fluent English

9.0. CHARACTERISTICS OF THE CONSULTANCY

| | |
|--|---------------------------------|
| Type of Consultancy: | Consulting Firm |
| Duration of Contract | 7 months (non-consecutive days) |
| Place of Work: | Jamaica |
| Type of Contract: | Fixed Price Contract |
| Payment Responsibility | MOFPS Project Office |
| NB: The contract amount includes all costs related to undertaking the consultancy. | |

APPENDIX 1: Evaluation Criteria for Scoring TECHNICAL PROPOSALS

| | Evaluation Criteria | Maximum Points |
|--|---|----------------|
| | 1. The Training Firm has a minimum of five (8) years' experience in delivering training of similar scope as defined by the terms of reference. | 10 |
| | 2. Adequacy and quality of the proposed training plan in responding to the Terms of Reference (TOR): Training Plan reflects a clear understanding of the assignment and suitably responds to each element of the scope of work and deliverables | 25 |
| | 3. Adequacy of Qualification and Experience of the Instructors | 40 |
| | 2.1 Instructors are certified to teach respective module | 10 |
| | 3.2. Experience in successfully delivering respective training in the past five years: <ul style="list-style-type: none"> • Four or more courses, four in the last 5 years (10); or • Four or more courses, three in the last 5 years (7); or • Three courses, at least two in last 5 years (4). | 10 |
| | 3.3. Practical experience in the relevant domain <ul style="list-style-type: none"> • Five years or more (10 pts); or • Three to Four years (7 pts); • Two years (5 pts) | 10 |
| | 3.4. Fluency in English | 10 |
| | 4. Company Stability | 25 |
| | Company profile | 10 |
| | Quality of the references of previous clients. | 15 |
| | Total | 100 |

The Training Firm is required to meet the minimum score of 70% in relation to the criteria listed in the table above.

The Degree of Responsiveness to the Requirements

1. The procuring entity will assess the Consulting Firm's response to each requirement as follows:

| <i>Degree of Responsiveness</i> | <i>Score</i> |
|---------------------------------|------------------|
| <i>Excellent</i> | <i>95 - 100%</i> |
| <i>Very Good</i> | <i>80 - 94%</i> |
| <i>Good</i> | <i>70 - 79%</i> |
| <i>Satisfactory</i> | <i>60 - 69%</i> |
| <i>Poor</i> | <i>50 - 59%</i> |
| <i>Unsatisfactory</i> | <i>0 - 49%</i> |

2. The degree of responsiveness will be used to determine what percentage of the maximum scores allocated for each requirement is attained by each bidder.