TERMS OF REFERENCE

CONSULTANCY SERVICE
FOR: AGILE SOFTWARE DEVELOPMENT TRAINING

INSTITUTIONAL STRENGTHENING PROGRAMME

November 2016

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. **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 business processes will be required to facilitate same.

eGovJa traditionally utilizes the waterfall software development methodology, and currently records an efficiency level below best practice standards. 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
- Customers are not involved in the process, often resulting in their dissatisfaction with the end product
- Inadequate collaboration among team members and with customer
- Silos across functional units/Unnecessary bureaucracy

Through research, it was determined that some of the challenges outlined above can be resolved by building the 'BizDevOps' culture which adopts the Agile principles. eGovJa has begun to pilot the scrum agile methodology for selected projects, which resulted in a tremendous increase in operational efficiency and customer satisfaction.

With the required training in agile we intend to implement this methodology throughout the organisation, since companies that have adopted these principles operate at an optimal level and have reported increased 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. This consultancy falls under Component III: Adaptive Public Sector Approaches to Promote Fiscal Sustainability. 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: Strengthening Property Tax Compliance and Administration.
- Component V: Fostering Industrial Growth and Trade Facilitation
- Component VI: Project Management

Training in Agile will assist eGovJa in reorganizing its business, application development and operational processes to improve software quality and remove the operational silos that

currently generate inefficiencies, waste and extended delivery time for new software features. By extension, this will also enhance the delivery of ICT services to GOJ and provide medium to long term support of the Public Financial Management systems under Component 3 of the Strategic Public Sector Transformation Project. This component will support activities that will contribute to the sustainability of GOJ's reform process in public administration, fiscal sustainability and growth.

2. OBJECTIVES

2.1. Agile Training

Through this consultancy, the participants' skills should have been upgraded in real world agile and scrum methodology, agile testing, agile project management, agile planning and estimating, agile costing and agile business analysis.

At the end of the training programme, participants will also be equipped to sit the various agile certification exams (Certified Scrum Master (CSM), Certified Scrum Product Owner (CSPO), etc). The possibility of earning PDUs would be an asset to the participants.

3. SCOPE

The agile training consultancy is required to enhance the capacity of at least 75 participants. In achieving the objectives outlined above, the Consulting firm is expected to engage in the actions outlined below. The scope of work is not considered exhaustive and modifications will be considered during the course of the engagement. All changes to the scope of work shall be formally agreed by both parties.

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.

Agile and Scrum Training Course

Target Audience: Participants from across the organization – participants will be selected based on areas to be covered	
Course	**Course Content**
Introduction and Agile Overview	- Traditional SDLC - Issues with traditional process - Why chose Agile - Basics of Agile, understanding Agile, its Core values and Principles - Introduction to Agile Methodologies - The methodologies should include scrum, kanban, scrum ban, extreme programming
Agile Teams	- Scrum Process - Roles and responsibilities - Scrum Ceremonies and Artefacts - Characteristics of Agile teams - Creating the agile team environment - Setting ground rules - Management Role - Role of the functional managers in agile teams
Initiating a Project using Agile	- Iteration or Sprint Zero: Project initiation activities - Agile roles and responsibilities - Self managed team characteristics - Creating a self-managed team - Creating the agile team environment - Setting ground rules - Envisioning the product - Project initiating guidelines and steps - Sprint Zero activities - Scrum team roles and responsibilities - BA activities on a Scrum project - User roles and personas - Creating the Product Backlog - Useful templates for writing user stories - Components of a user story - Guidelines for good user stories - How to write non-functional requirements user stories - Breaking down epics or large stories - How to conduct a story writing workshop - Other types of Product Backlog Items - Determining the best agile methodology to use for a project and Setting up a team with that methodology. The methodologies should include scrum, kanban, scrum ban, extreme

Agile and Scrum Training Course	
Target Audience: Participants from across the organization – participants will be selected based on areas to be covered	
Course	**Course Content**
	programming At the end of the session, the participants should be able to determine user roles, write user stories, breakdown an epic story, design team environment and set ground rules and create a vision statement
Agile Estimating	• Creating the Product Backlog • User story writing guidelines • Defining acceptance criteria for user stories • Using progressive estimation to refine estimate accuracy • Estimating size with story points • Using Planning Poker to estimate user stories • Using triangulation to estimate user stories • Story points versus ideal days for estimating • Estimating proposed agile projects for the business case • Agile contracting approaches At the end of the session, the participants should be able to write users stories, write acceptance tests and estimate stories.
Agile Planning	• Agile Planning • Levels of Planning (Major focus Product, Release and Sprint levels of planning) • Agile Release lifecycle • Building a product roadmap • Envisaging the Product • Agile Project Management Essentials • Adopting an Agile Approach to Project Management • An Overview of Agile Methodologies • Agile Planning: Project Initiating and Requirements Gathering • Agile Planning: Doing Estimates and Completing the Release Plan • Planning and Monitoring Iterations on an Agile Project • Leading an Agile Team • Managing Stakeholder Engagement on an Agile Project • Ensuring Delivery of Value and Quality in Agile Projects
Release Planning	• Define Release Planning • Selecting themes for a release • Identifying the minimum Viable Product(MVP) • Define velocity • Forecasting velocity • Utilizing velocity

Agile and Scrum Training Course	
Target Audience: Participants from across the organization – participants will be selected based on areas to be covered	
Course	**Course Content**
	• Pre-Release Sprint • Communication • Determining Team Capacity • Creating Release Plans • Managing common software risks. At the end of the session, the participants should be able to calculate Team Capacity and create a Release Plan
Sprint Planning and Execution	• Sprint Planning Preparation • The Sprint Planning meeting • Getting stories ready for sprint planning • Task Breakdown • Populating and managing the Task Board • Creating a sprint plan on the Team board • Defining "DONE" • Daily Scrum meetings • Scaling Agile • Agile Metrics • Sprint Reviews • Sprint Retrospectives • Agile Tools At the end of the session, the participants should be able to plan a sprint, break down stories into tasks, build a task board, and facilitate a productive stand-up meeting.
Running a Sprint	• Events during a Sprint • Daily planning during the Sprint • Rules for the Daily Stand Up meeting • Using burn down charts to track progress • Tracking impediments • Dealing with changes in estimates • Techniques for splitting or thinning user stories • Releasing into production • The Sprint Review meeting • Sprint and release metrics and reporting • Using agile retrospectives to inspect and adapt • Agile technical practices At the end of the session, the participants should be able to facilitate a stand up meeting and retrospective session
Developing,	• User stories

Agile and Scrum Training Course	
Target Audience: Participants from across the organization – participants will be selected based on areas to be covered	
Course	**Course Content**
Grooming, Prioritizing the Product Backlog	- Non functional stories - Story writing Techniques - Epics - Compound and Complex stories - How to break down large stories - Various methods used to prioritize backlogs - Ordering vs. Prioritizing - Themes and Minimally Marketable Features - The MoSCoW rules and other classification methods - Value mapping techniques - User story mapping - Discovering and defining project backlogs items - Prioritising the project backlogs - Writing user stories and acceptance tests - Sizing project backlogs items – story points and ideal days - Estimating with planning poker At the end of the session, the participants should be able to identify stories, breakdown epics, prioritize stories and size stories.
Refining the Product Backlog	- Sprint planning process - Getting stories ready for sprint planning - Defining "ready" and "done" - Defining acceptance criteria - Other types of requirements - Using models to refine stories - Data, process, and interaction models - Splitting or thinning stories At the end of the session, the participants should be able to define acceptance criteria for user stories, define business rules, select and chose the appropriate model to create user stories
Agile Testing and Test Estimation	- Collaborate in a cross-functional Agile team and being familiar with principles and basic practices of Agile software development - Adapt existing testing experience and knowledge to Agile values and principles. - Support the Agile team in planning test-related activities. - Apply relevant methods and techniques for testing in an Agile project - Test in Agile Projects - Understand the roles and skills of a tester in Agile Projects

_____

Agile and Scrum Training Course	
Target Audience: Participants from across the organization – participants will be selected based on areas to be covered	
Course	**Course Content**
	• Use Agile testing techniques and methods • Understand how to use test tools in Agile Projects • Assist the Agile team in test automation activities • Assist business stakeholders in defining understandable and testable user stories, scenarios, requirements and acceptance criteria as appropriate • Assess product quality risks within an Agile project • Estimate testing effort based on iteration content and quality risks
Agile Engineering	• XP Practices overview • Pair Programming • Test Driven Development • User Centered Design • Agile Architecture – high level architecture design • Agile Database Design - high level data design

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

4. METHODOLOGY

The Consultant is expected to use accepted and proven methodologies for carrying out the assignment. The Consultant should prepare a detailed methodology and work plan indicating how the objectives of the assignment will be achieved.

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.

5. COORDINATION/REPORTING RELATIONSHIP

The Consultant will report to and operate under the supervision of the Senior Director, Programme Management Division or her designate.

The Director or her designate will be supported by the PMO and a Steering Committee, who will co-ordinate the review and approval of the documents prepared by the Consultant.

The Steering Committee will have responsibility for the review and sign off of key deliverables as listed in section 6.

6. DELIVERABLES

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

1. Use language appropriate for a non-technical audience;
2. Be comprehensive, properly formatted and well presented;
3. Provide justifications for all assumptions;

6.1. AGILE TRAINING

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

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

The proposal must include a work plan and training plan as outlined in the table below.

Key Deliverables	Performance Standard
Work plan	The Work plan is the operational document for the consultancy and is used to determine the required inputs for the development and delivery of the output of the consultancy. The Work plan is to include broad implementation strategy, activities, projected beginning and end times for major activities.
Training Plan	Must include: - 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. **Samples must also be included** - Any other specific requirements to be met in accordance with the particular training contract in question
Training Implementation	Must include: - 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	This report should contain but not be limited to: - A brief overview of the training with an emphasis on the most important points - Background information on the training program, the

Key Deliverables	Performance Standard
	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 course, participants will be asked to complete eGovJa's training evaluation forms.

6.2. "Sign-off" Procedure

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

6.3. Variations
All proposed changes to the work plan and deliverables must be discussed with the Project Sponsor, and where necessary will be submitted for approval to the Steering Committee.

6.4. Schedule of Payment

Payments for the services will be specified in the Contract.

7. QUALIFICATION AND TECHNICAL EXPERTISE REQUIRED

7.1. The Consulting Firm
The Consultant 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 Consultant will meet the minimum score of 70% in relation to the criteria listed in the Appendix.

7.2. Key Skills/ Qualifications
A primary and secondary resource for each component should be identified to ensure project continuity if required.

The firm must demonstrate that they have key personnel with skills and/or qualification in the areas outlined below.

7.2.1. Agile Training

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) Certified in one (or more) of the following areas Certified Scrum Master, Certified Scrum Product Owner, Certified Scrum Developer, Certified Scrum Trainer, Certified Scrum Coach Professional, ICAgile/ACI.

d) Practitioner in Agile and Scrum with at least 5 years relevant experience and demonstrated competence.

e) Bachelor's degree in Computer Science/IT related field or equivalent working experience.

f) Ability to translate theory, and to tailor, implement and embed best practices.

8. CHARACTERISTICS OF THE CONSULTANCY

Type of Consultancy:	Consulting Firm
Duration of Contract	60 days
Place of Work:	Jamaica, at eGovJa Offices
Type of Contract:	Fixed Price Contract
Payment Responsibility	MOFPS Project Office
NB: The contract amount includes all costs related to undertaking the consultancy.	