ACCELERATING MSMEs GROWTH THROUGH INNOVATION & TECHNOLOGY PROGRAMME

<u>TERMS OF REFERENCE</u>

Assignment: Consultant Accelerating MSMEs Growth through Innovation and Technology Programme – Software Developer

Duration: <mark>August 2023 to March 2024</mark>

INTRODUCTION & BACKGROUND

The Jamaica Business Development Corporation (JBDC) located at 14 Camp Road, Kingston 4 is Jamaica's premier business development organisation and works collaboratively with government agencies, the private sector, and the academic and research communities. The organisation pursues development programmes and policies that foster development, sustainability, modernisation and growth in the MSME sector, an enabling business environment and cost-effective delivery of business development solutions to Micro, Small and Medium-size Enterprises (MSMEs) in Jamaica.

The JBDC through the Organization of American States (OAS)/ Development Corporation Fund (DCF) launched the Accelerating MSMEs Growth through Innovation & Technology. The project focuses on retooling MSMEs through innovation and technology. As the JBDC continues its mandate to provide services to the MSMEs sector, it acknowledges the need and use of technology to grow and innovate. JBDC plans to improve access and dissemination of technological and non-technological tools and resources for MSMEs to support the reactivation of the economy.

The Government of Jamaica (GOJ) has identified the digitalization of the public service and the economy as two critical means by which to rebuild the economy. This as digital means of providing government services to MSMEs offer the opportunity for improved access and scalability of programmes. To support the digital transformation objectives outlined by the GOJ, mechanisms must be created to improve MSMEs access to comprehensive and targeted business development training and information and ensure that they meet the requirements to access the funding and technical resources available. Effective strengthening of business continuity and resilience in the context of the COVID-19 crisis and beyond must be reliant on the application of technological and non-technological tools complemented by sound business skills, knowledge and reliance on credible data.

The development and pilot of a Knowledge Bank/ Virtual campus is one step in creating a credible and secure system which will be used as a repository for MSME information, data, knowledge and support.

The JBDC wishes to engage the services of a suitably qualified firm or consultant to develop a Software System that consists of a knowledge bank/virtual campus (i.e. learning management system).

PURPOSE OF THE ASSIGNMENT

The JBDC aims to design an in-house software system that can deliver modular content to staff, MSME's, and other stakeholders. This will comprise of
- A knowledge bank/virtual campus (i.e. learning management system)

The knowledge bank/virtual campus is expected to be an interactive user-friendly platform that will be highly visual and will serve the dual purpose of placing business assessment, needs identification and training within the hands of Micro, Small and Medium (MSME) entrepreneurs while paving the way for JBDC's full digitization as part of the Government of Jamaica's long-term objective to digitize the Jamaican economy and society.

The consultant will engage in the following to achieve the projects overall output.

1. To effectively design and develop a digital platform which will serve as a knowledge repository for all things MSME.
2. Developer should support project operations team with by creating a user-friendly platform that will act at the data centre for all things MSME. It therefore must be considered that the interface must cater to everyone in the MSME community.
3. The development of any automation should be utilized systems and programmes currently used by JBDC.
4. Provide essential information and documentation for any development (e.g. Forums, agenda, calendar, maps, other useful information).
5. Content of the development has to be in line with GOJ and JBDC standards. This must include full compliance of the Data Protection Act, 2020.
6. The developer will work closely with the Technical Services, Information technology, Business advisory, Marketing, Communications and Project Management and Research departments.

SCOPE OF WORK

Consultant's main duties and responsibilities

Within this framework a software developer, will be recruited to perform the following tasks:

a) Designing user friendly and easily accessible platform that incorporate a virtual campus and provide business assessment and needs identification to MSME's. Some additional features of the Knowledge Bank/Virtual Campus are listed below:

   i. ***Course Management*** - The system must have a module to upload new courses that are articulated through an asynchronous learning process. The module must allow JBDC to delete old or existing courses with rights for the administrator only. The format of the course must be multi-dimensional offering the administrator the possibility to upload videos, quizzes, assignments, reading material, video transcripts etc, for the users to enhance their skills and learning.

   ii. ***User Management*** - The Knowledge Bank/Virtual Campus must also have a user management module which allows the assignment of rights to the administrator. The user profiles database is mandatory and must include education, gender, experience, and basic contact details of the participants. The Knowledge Bank/Virtual Campus must be designed to allow users to register in the Knowledge Bank/Virtual Campus as this is an open source for MSMEs to enhance their skills; the users should register with their email and login to the system for taking the courses.

   iii. ***Analytics & Reporting -*** The system should report all the analytics related to who took the course, login and course taking duration of the participants.

iv. ***Issuance of Certificate -*** After successful completion of the training course, a certificate must be automatically issued to participants who fulfil certain criteria. The criteria for issuing the certificates are: the course completion, with a certain threshold (if necessary).

b) Apply workflow solutions for all the manual services used by JBDC staff.
c) Application programming interface, or API, to be a part of the knowledge bank code that is exposed to the internal and the public.
d) JBDC Help desk- a module where JBDC personnel, SDBC and MSMEs can request for specific data or research material.
e) User Requirements analysis and finalization of System Requirements Specification
f) To train JBDC Staff how to operate the interface, how to upload curriculum and make necessary changes to allow for usability
g) Prepare Technical Software Documentation, User Guides and User Manuals.
h) Suggesting regular upgrading possibilities to both the knowledge bank schema and the content in terms of topics, style of presentation, designs…etc.
i) Develop Business Continuity Plan for the system
j) Ensure compatibility with source documents/curriculum currently on the One on One platform
k) **The developer will provide the source code with the documentation after delivery of the project.**

Timeline and Deliverables

The Developer should complete all required tasks as stated above within the following timeline August – March 2024

Design, development and set up of platform

Deliverables	Schedule for Delivery
Deliverable 1 - Requirement's analysis document	Three (3) weeks after contract signing
Deliverable 2 - Detailed project work plan, with milestones	Three (3) weeks after acceptance of deliverable 1
Deliverable 3 - Prepare Technical Software Development Documentation	Eight (8) weeks after acceptance of deliverable 2
Deliverable 4 - System Design Document and Preliminary System demonstration and training	Fourteen (14) weeks after acceptance of deliverable 3

Qualifications:
- Bachelor of Science in Computer science, software development, Computer Engineering, Information system or other related academic fields
- Minimum of 5 years' experience in web-based applications development
- Proven experience in developing software using platforms and frameworks
- Experience in online deployment scenario and available controls and functions.
- Proven experience and knowledge in Programming Languages (e.g., C#, C++, Java script or PHP
- Proven previous experience in API programming (NodeJS/PHP…)
- Proven previous experience in developing compelling data Visualizations
- Database Management: Experience working with databases, including SQL query language, database design, and optimization. Knowledge of popular database management systems like MySQL, PostgreSQL, or MongoDB
- Algorithms and Data Structures: Knowledge of fundamental algorithms and data structures and their

application to solve real-world problems efficiently
- Include the following programming languages as well Phyton , C Sharp and Ruby

Other skills and requirements
- A certification in programming/software development will be an added advantage
- Good knowledge of system development and design principles such as Object-Oriented Design and Development
- Strong knowledge of emerging e-Learning theories, concepts, and standards
- Ability to analyse user requirements
- Ability to provide input to business processes reengineering, elaboration, and implementation of new systems

Reporting Requirement

The consultant will report directly to the Manager, Project Management and Research at JBDC.

The Consultant is solely responsible for the quality and timely completion of all tasks and deliverables defined by these Terms of Reference. The Consultant will report to the Manager, Project Management and Research (JBDC) who will have final sign off on deliverables and invoices. Should it be necessary to modify the scope of work, budget, or timeline, the Consultant must discuss the circumstances with the Manager and/or his designate, and obtain their prior written approval.

Deliverables and associated activities will not be considered completed until they have been reviewed and approved by the Manager. All deliverables should meet high quality standards and shall incorporate all feedback from the client and Manager. The Consultant will be required to demonstrate adherence to nationally and internationally recognized software development standards.

The following documents shall be required from the applicants:
1. Personal CV and at least three references
2. A cover letter (maximum length: 1 page) indicating why the candidate considers him-/herself to be suitable for the position.
3. Samples of relevant work (candidate can list URLs of existing work in the cover letter)
4. The costed workplan must include all direct and in-direct costs. The bidder must quote all the costs including all the chargeable taxes.

Eligibility Criteria
1. Copy of valid Tax Compliance Letter (TCL)
2. Proof of registration with the Public Procurement Commission in the category Information Technology Services