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TOR for Designing, developing and installation of Joyeeta's Multi-Business management software

Package 8.20

1. Background:

The Government of Bangladesh has established the Joyeeta Foundation (JF) under the Ministry of Women and Children Affairs for promoting and supporting women in their business initiatives. It is assigned to develop, and nurture dedicated market-places countrywide, exclusively for women to showcase their products and services and market them. JF has also the responsibility to create a unique brand value and congenial environment, where the women can run their business hassle-free. It is to render all possible facilitation support, so that women can be established as successful business entrepreneurs. JF is to develop and manage supply chains of products and services from production to marketing and employing women in different phases of the chain by enhancing the capabilities and competencies of women. Above all, JF serves as a strong proponent of attaching preferential treatment towards women in the business front, so that backwardness of women in business can be reduced for the ends of equity. JF have also to develop online platform for JF self and Outlets to establish virtual market for Joyeeta products countrywide and globally.

To achieve the above objectives, Joyeeta Foundation intends to help entrepreneurs through develop and installation of Joyeeta's multi-business management software for JF and JF Outlets. The on-line business software will be a virtual hub where Joyeeta Foundation, Individual Women Entrepreneurs (IWEs), Women Entrepreneurs Associations (WEAs), Consumers and other stakeholders can access and share business-related information and services.

In view of that, JF hereby initiate the procurement process to hire a consultant to carry out the assignment for developing and installation of a software for JF and JF outlet with the features for maintain robust management for Multi-business of Joyeeta products.

2. Objectives of the Project:

The core objectives of this project are "Capacity Building of Joyeeta Foundation (JF)" and having coordination mechanism of JF which is a set of certain methodologies that is applied to manage various dependencies among the activities to improve long run performance of business for achieving maximum benefit and to maximize customer satisfaction with the following specific objectives:

- a) To make Joyeeta Foundation a capable and self-sustainable in terms of Institutional, technical and financial aspect so that the individual woman /Women associations can operate multipurpose business initiatives successfully and effectively;
- b) Building capacity of more than 28,000 in Women Entrepreneur Associations (WEAs)/individual Entrepreneur (IWEs) periodically to make various business initiatives.
- c) Development and operations of an On-line Business Software (or a business application) or set of computer programs used by the Joyeeta Foundation and Women entrepreneurs/Women entrepreneurs association to perform various business functions. These business applications are used to increase productivity, measure productivity, and perform other business functions accurately.

Hence initiative is taken for an appointment of a consulting firm to developing and installation of a business management, software for JF and JF outlet and its operations, maintenance, and necessary training for the concerned personnel.

3. Objectives of the Assignment

Joyeeta foundation will take care of the business of WEAs/IWEs would always be a number of activities going on every time. It could be a challenge to handle too many things at once and not let work become chaotic. This is why it makes sense for businesses to start using business management software to stay on top of things. These days more and more organizations or companies are investing in business management software to get things done, predict risks, and improve overall efficiency. In line with the above the objectives of the assignment are spelled out as follows:

- a) Assessment of business management needs (BMN) of Joyeeta Foundation, it's outlets , and concerned WEAs/IWEs, system designing, developing verification and installation of the proposed software, trial run and final run of the system. It also includes 3 years operation and maintenance of the system and installation.
- b) Designing, developing and installation of Joyeeta` Multi-business management software with the following features:
 - I. Easy to operate multi-business and online facilities.
 - II. There will be no geographical boundaries.
 - III. Much cheaper than traditional business.
 - IV. Flexible business hours.
 - V. Less marketing cost.
 - VI. Maintaining security and integrity issues.
- c) Software application training for Joyeeta Foundation, its outlet management personnel and IWEs/WEAs.
- d) Software management, operation, and maintenance training for concerned personnel.
- e) Required accessories for installation, management, operation, and maintenance.
- f) Should not be only mobile responsive but necessary native mobile App environs should be included.

4. Scope of Work:

- a) Integration of business processes.
- b) Manage almost every aspect of Joyeeta business in one system.
- c) Fosters collaboration with online document storage and sharing.
- d) Automate personalized business workflows.
- e) Management and company control.
- f) Operations traceability.
- g) Responsive appearance and excellent user experience.
- h) Data always at hand.
- i) Data protection.
- j) Covers Customer relationship management (CRM), supply chain management, e-commerce, accounting, inventory, sales, and project management.

- k) Generally, the six functional areas of business management such as strategy, marketing, finance, human resources, technology and equipment, and operations will be involved in the software.
- l) Attain SQTC (Software Quality & Testing Certificate) acceptance certificate before delivery.
- m) Access control system of the concerned building to be incorporated.

5. Security and Privacy Requirements

5.1 Security and Privacy Plan

The firm should submit an extensive “Security and Privacy Plan” including comprehensive security architectures in their technical proposal for this proposed application considering the following issues:

- a) Project technical scopes
- b) Functional and non-functional requirements and ultimate objectives
- c) Concerned service provider organization’s operational environments and capacity.
- d) User roles- Accessibility, Authentication, Authorization and Accountability
- e) Data management & data privacy
- f) Strength of technologies to be used for development, operate & maintenance.
- g) Deployment & hosting
- h) Service recipients and providers’ security, confidentiality, and privacy
- i) A checklist of security measures to be taken for this solution
- j) Overall, security standards should apply to a system.
- k) Provide premium dedicated SSL protection for 3 (three) years.

Apart from these, the firm should keep in account the following considerations. The firm should provide a checklist based on the system and hosting security plan (i.e., fraud, hacking, money laundering, etc.) & the test report of that checklist.

5.2 System Security Requirements:

- a) The Firm should follow any industry-standard secure development methodology such as Comprehensive Lightweight Application Security Process (CLASP) by OWASP.
- b) The firm should consider common vulnerabilities such as SQL Injection, Cross-Site Scripting (XSS) etc.
- c) The firm will undertake responsibility for Input Validation Controls, Authorization/Authentication Control, and other security controls in place in both testing and production environments of application.
- d) The following vulnerabilities must be checked and ensured security from the beginning:
 - a. Cross-Site Request Forgery (CRSF)
 - b. Cross-Site Scripting (XSS)
 - c. Session hi-jacking
 - d. Session fixation
 - e. SQL Injection and Code Injection
 - f. Input Validation/Filtering

- g. Output Escaping
- h. Secure File Access
- e) The firm shall minimally provide Access control, Authentication, and accountability security mechanisms for backend operations of the system.
- f) The proposed security solution shall be scalable and should not affect the performance by creating a bottleneck or single point of failure to the overall system.
- g) The system should provide tamper-proof audit trails and logs for the administrator or auditor to check for the actions committed by users. The audit trails shall consist of the following details:
 - a. Login and logout
 - b. Attempts to access unauthorized resources.
 - c. User profile changes
 - d. Past audit events.
 - e. Track all actions performed on documents attached/uploaded.
 - f. The system should have a provision to assign the access rights of other resources on a need basis to authorized users.
 - g. Information in the System that is deemed sensitive shall be encrypted and protected from accidental and unauthorized modification.
 - h. The system shall provide automatic session disconnection for inactive users after session time [Proposed best practice session time] is over.
 - i. The system shall protect the audit trails from being modified by unauthorized personnel or privileged users.
- h) Security requirement for electronic payments & transactions:
 - a. The solution should comply with all standardized security features, message protocols and encryption.
 - b. Payment Gateway should be established with EKPAY-IDTP have access to DC and DR as per national standard guidelines.
 - c. Payment Gateway should comply with Bangladesh Bank's monetary security standards and be certified by the concerned security authorities and financial payment-related auditors.

6. Language Support

The system's default language will be in both English & Bangla. The system should support multilingual options for both the Web version and native mobile application. All the user interfaces will be displayed, and input controls can take input both in English & Bangla. System/App users can choose and set their preferred language in the profile setting for the system interfaces.

7. Requirements Technology

Item	Specification
Server-side language	JAVA/ NODEJS
Framework	Laravel/ Others

Front end	HTML5, CSS3, JavaScript, jQuery, Ajax
Javascript component & libraries	Livewire & necessary libraries
Web Server	Open Litespeed, Apache
CDN network	Cloudflare
Server-Side caching	Memecache, File cache
Database	MariaDB, PostgreSQL, MongoDB
Hosting environment	Linux Cloud VPS/ Cloud Elastic VPS
Failsafe backup	Mandatory
Server performance monitoring tool	Required
Automatic DB & code backup	Yes
Automatic backup frequency	Daily
Autoscale/ Elasticity	Suggested

8. Hosting Architecture & Requirements

The hosting services shall be given by the selected firm where as, the physical hosting infrastructure should remain within the geographic boundary of Bangladesh. BDIX connectivity will be preferable. Firms are requested to submit a “Hosting Architecture & Requirements” in their technical proposal for this Software application.

9. Maintenance and Support

- The developed and deployed software application should run smoothly and bug-free.
- In case of any technical problem or support requirement, the firm's response to the solution must be very prompt.
- Technical complexity and support requirement, the response and problem solution plan must be predefined and precise.
- Firms must consider contingency plans to manage and solve sudden complexity, technical problems that arise and support requests.
- The maintenance support plan should consider improving user engagement, user training, and receiving user review & feedback.
- Communication, software performance evaluation, continuous improvement for user satisfaction and right time reporting to the concerned authority should be planned well ahead and executed simultaneously as standard service.
- Maintenance and support should be provided for 3 years after successful deployment.
- The firm will propose detail maintenance and support plan.

10. Project Management Plan

The Firm will submit a comprehensive and detailed project management plan for the client's approval with a PowerPoint presentation and a hardcopy of documents.

11. Development Methodology

The Firm will propose development methodology.

12. Training Plan

The Firm will propose training plan.

13. Risk Management

The firm should submit a "Risk Management Plan" addressing all types of risks, including the steps mentioned above following standard risk management principles and their mitigation plan.

14. System Requirement Specification (SRS)

The selected firm must analyze the complex functions, processes, documents, actors, service delivery sites and infrastructure of the relevant services precisely of the concerned organization. At this phase, the firm's ultimate objective will be to finalize the e-Service requirements in detail under the scope of TOR and receive approval from the concerned organizational authority.

15. System Design Document

The Firm will have to submit a report on system design, including HLD and LLD based system design on which development will be started. High-level design (HLD) will ensure the architecture used for developing this solution. The architecture diagram will provide an overview of an entire system, identifying the main components formed for the system and their interfaces. Low-level design (LLD) is a component-level design process in which the software components, modules and functional requirements are designed. This process can be used for designing data structures, required software architecture, source code and ultimately performance algorithms.

16. Test Plan

The Firm will prepare an extensive testing plan so that any functional failure can be detected and corrected timely and adequately. This testing plan should cover all the standard testing approaches applicable for this solution, including phase-wise testing activities like test scripting, test cases, testing tools, testing process, test log, result, and report. Based on testing report of SQTC will also be submitted for necessary verification.

17. Qualification and Experiences of the Firm/Institution

The Consultant will have demonstrated experience of at least seven (7) years in similar assignments of designing and developing on-line business management software, train the management as well as operations and maintenance personnel. Firm's team composition with key with a mixed set of skills, educational background, and experience in the relevant fields.

The Firm must meet the below eligibility criteria for selection to the next steps and the following documents are mandatory for submission:

Minimum Eligibility Criteria:

- a) Minimum 7 years' experience in software development business as a registered company/entity. (Initial Trade license or the certificate of incorporation if applicable).
- b) Minimum 3 years of experience of design, development, implementation and maintenance of web portal and mobile apps in Government of Bangladesh/any development partner/ International organization/private sector. Please provide copy of contract, URL, and other relevant documents.
- c) Experience in developing Web and Mobile-Based Ecommerce Platform with entrepreneurs' module for UN Organizations/ Government Organizations, (Minimum 01 Project Experience with Minimum 50 Lacs Work Order Value). Please provide copy of contract, URL, and other relevant documents.
- d) Experience in developing & maintenance Web Based POS system with entrepreneurs' module for Government Organizations, (Minimum 01 Project Experience with Minimum 10 Lacs Work Order Value). Please provide copy of contract, URL, and other relevant documents.
- e) Minimum 03 project experience in developing Google Map API integration with Android platforms. Please provide copy of contract, URL, and other relevant documents.
- f) The vendor must have at least 03 software support and maintenance contract completed/running in the last 5 years with a total of 1 year of duration. Please provide copy of contract, URL, and other relevant documents.
- g) Minimum 02 project experiences in designing, developing, installation, and maintenance of a business management software, and other relevant documents.
- h) Must have valid and up to date Trade license, register of joint stock & companies (RJSC) registration (if applicable), TIN certificate, VAT Identification Number, Updated Income Tax Payment (2021-2022), BASIS membership certificate.

18. Key Personnel Requirement and qualification

The minimum required qualification and experience of the Key professional staff are as follows:

Sl.	Position	Man month	No. of Personnel	Minimum Qualification	Responsibility
1.	Project Manager	4	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines. Experience of works for minimum 3 years.	<ul style="list-style-type: none">• Responsible for planning and overseeing projects to ensure they are completed in a timely fashion and within budget.• Plan and designate project resources, prepare budgets, monitor progress, and keep stakeholders informed the entire way.• Responsible for understanding and assessing the changing needs of the business.• Analyze the impacts of change.• Maintain the documents for a company, change and update records• Keep a database of the documents to track the different versions of reports created.• Oversee a library of materials specific to the project.
2.	System Analyst	2	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines. Experience of works for minimum 3 years.	<ul style="list-style-type: none">• Implement, maintain, and support IT and information systems to meet the business needs of organizations and scale as organizations grow.• Analyze and create tests and develop specifications and requirements for developers and programmers to follow.• Responsible for the maintenance, configuration, and reliable operation of computer systems and servers.

					<ul style="list-style-type: none"> Actively resolve problems and issues with computer and server systems to limit work disruptions.
3.	Software Architect	2	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines. Experience of works for minimum 3 years.	<ul style="list-style-type: none"> Team leader for the innovation and creation of new software and program features. Manage and facilitate the proper design of large websites or programs within products. Build database systems of high availability and quality depending on each end user's specialized role for minimum 3 years. Design and implement database in accordance to end users' information needs and views. Perform tests and evaluations regularly to ensure data security, privacy and integrity.
4.	Senior Developer/ Senior Programmer	2	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines. Experience of works for minimum 3 years.	<ul style="list-style-type: none"> Define, develop, test, analyze, and maintain new software applications to support the achievement of business requirements. This includes writing, coding, testing, and analyzing software programs and applications.
5.	Developer/ Programmer	3	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines.	<ul style="list-style-type: none"> Collaborating with business analysts and developers to produce software designs. Formulating program specifications and basic prototypes Transforming software designs and specifications into high functioning code in the appropriate language
6.	Android Application Developer	3	1	Minimum graduate in Computer Science/CSE/Software Engineering or	<ul style="list-style-type: none"> Design and build advanced applications for the Android platform Collaborate with cross-

				any other relevant Science Disciplines.	<ul style="list-style-type: none"> functional teams to define, design, and ship new features. Work with outside data sources and APIs Unit-test code for robustness, including edge cases, usability, and general reliability. Work on bug fixing and improving application performance. Continuously discover, evaluate, and implement new technologies to maximize development efficiency
7.	QA Expert	1	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines.	<ul style="list-style-type: none"> Interpret, build upon, and comply with company quality assurance standards. Identify training needs and take action to ensure company-wide compliance. Pursue continuing education on new solutions, technology, and skills.
8.	UI/UX Designer	1	1	Minimum graduate in Computer Science/CSE/Software Engineering or any other relevant Science Disciplines.	<ul style="list-style-type: none"> Creating user-centred designs by understanding business requirements and user feedback. Creating user flows, wireframes, prototypes, and mock-ups. Translating requirements into style guides, design systems, design patterns and attractive user interfaces.
9.	Trainer		1	Minimum graduate in relevant field with knowledge of the developed software, business and training.	<ul style="list-style-type: none"> Provide training on the software and its implementation, troubleshooting. Provide lecture sheet, manual and other documents.

19. Deliverables:

Sl.	Deliverable	Weight	Timeline	Payment
1.	Project Inception Report, Project Management Plan	5%	End of 1st Month	5% (Upon acceptance by the client)
2.	Software Requirements Specification (SRS), System Design Documents (SDD)	3%	End of 2nd Month	5%
	UI & UX Design Finalization	1%		
	System Maintenance and Support of all systems (all Offices)	1%		
3.	Development of Data Input Management System	10%	End of 4th Month	15%
	Data Migration	4%		
	System Maintenance and Support of all systems (all Offices)	1%		
4.	Quarterly Source Code Handover	1%	End of 7th Month	15%
	Portal Personalization	5%		
	Enhancement of Job Integrator	2%		
	Content Management System	3%		
	UX Development Implementation	2%		
	Capacity Management and Knowledge Transfer	1%		
	System Maintenance and Support of all systems (all Offices)	1%		
5.	Mobile Application Development	5%	End of 10th Month	20%
	Content Outsourcing	2%		
	Enhancement of Portal Monitoring System	3%		
	Enhancement of People Participation	3%		
	Implementation of AI in National Portal	5%		
	System Maintenance and Support of all systems (all Offices)	1%		
	Capacity Management and Knowledge Transfer	1%		

Sl.	Deliverable	Weight	Timeline	Payment
6.	Analytical Dashboard of Portal	10%	End of 10th Month	20%
	Report Engine of Portal	2%		
	System Maintenance and Support of all systems (all Offices)	1%		
	Capacity Management and Knowledge Transfer	1%		
	Quarterly Source Code Handover	1%		
	Implementation of AI in National	5%		
7.	System Maintenance and Enhancement and Support (all Offices)	8%	End of 15th Month	8%
8.	Annual Source Code Handover	2%	End of 18th Month	7%
	Post-Hosting Support (all Offices)	5%		
9.	Final Report: Submission of Final Report Highlighting the major activities/tasks performed under the contract	5%	End of 18th Month	5%

20. Duration of the assignment

- (a) The duration of the assignment is 4 Months over the period of 6 Month from the date of signing the contract. For the phase of development and installation of the software
- (b) The consultant will also be engaged for 2 months over the period of 3 months for training after development of the software and relevant system as assigned in 3(3) and 3(4) of the scope of work.
- (c) 3 years period of operations and maintenance of the system and installations.
- (d) Firm will provide development, deployment, operations, and maintenance plan in details.

21. Client's/ Consultant's Inputs/ Facilities

(a) Facilities to be provided by the Client:

The Client will provide all available information, materials, and documents. One or more counterpart personnel of the Client office will be engaged to get the said support and consultation if needed.

(b) Facilities to be arranged by the Consultant:

The Consultant shall entirely be responsible for all such facilities as arranging office, accommodation of his support staff, vehicles, equipment, computers, support/secretarial services, and other logistics required for providing the services specified in the TOR.

22. Pre-bid Meeting Arrangement

In order to clarification, if any explanation on this TOR is required, a Pre-bid Meeting will be arranged by the Client. The date and time of the Pre-bid meeting will be published in the website of JF. The bidder will have to submit of their query, in written form, at least one-day before the date of the meeting. The Client holds the right to change the date of meeting if required.