



Terms of Reference (ToR)

For hiring Consultant Firm

For the development of the

“Digital Training Module Development (Web and mobile based apps)”

For ‘Sustainable Enterprise Project (SEP)’ of PKSF

1.0 Background:

Palli Karma-Sahayak Foundation was established by the Government of Bangladesh in 1990 as an apex organization for poverty alleviation through employment creation. Since its inception, PKSF has been implementing various programs and projects for poverty alleviation through its Partner Organizations (POs).

PKSF launched its Micro-Enterprise program in 2001 to extend financial services to the progressive clients of its Partner Organizations (POs) for undertaking Micro-Enterprises. This program termed 'Agrosor' is being implemented all over Bangladesh through the POs of PKSF. In the microenterprise sector, attention to environmental sustainability and climate resilience is limited due to a mix of capacity, market accessibility, knowledge and financial barriers. While the statistics shows a high contribution to GDP from microenterprises, there is little evidence to show that microenterprises are growing in a sustainable way.

Understanding the need of paradigm shift of microenterprises from the Business as usual to an environment friendly business, upon the request from Government of Bangladesh, The World Bank is supporting PKSF for the implementation of the Sustainable Enterprise Project (SEP). The project aims to support microenterprises through environment friendly investments (energy, water and resource efficiency) in the agri-business and manufacturing sectors to promote environmentally sustainable technologies and practices among microenterprises in environmentally vulnerable areas, induce changes in the micro-lending ecosystem, and support the adoption of basic Operational safety norms in project-supported enterprises.

The Specific Project Development Objective (PDO) of SEP is to increase the adoption of environmentally sustainable practices by targeted microenterprises. The project focuses on the clusters of Micro-Enterprises of the agribusiness and manufacturing sectors preferably in the environmentally stressed and climate change-vulnerable (flood, flash flood, drought and salinity-prone) areas in Bangladesh. The project covers approximately 100,000 Micro-Enterprise members under PKSF Micro-Enterprise (ME) Loan Program through its Partner Organizations (POs). Capacity development of Micro entrepreneurs along with staff of the partner organizations is also a mandate of the project and training remains the core focus of capacity development.

2.0 Objective of the assignment:

The key objectives of the assignment are:

- Design, develop and deploy an online training platform with visual, shareable and interactive training content including dynamic and customizable test or assessment system to complete the training courses for the participants.
- Develop a mobile application (Android) of the platform.
- Facilitate uninterrupted and pre-planned LIVE training session through the platform to the registered user.



3.0 Scope of the work:

a) The scope of work shall include but not be limited to:

- i. Purchase and maintain Domain and Hosting (minimum 1TB) up to the project period with multi-domain SSL Certification.
- ii. Design the architecture of the training platform and develop it with flexibility, scalability, extendibility and multitenancy of the system for future expansion.
- iii. The proposed training platform should have a robust multimedia content management system with support of video, audio, pdf, word, ppt etc. It should have an on- demand video streaming capability for conducting live sessions. It should have provision for Two-way real-time audio and video chat support.
- iv. It should have a dynamic content management system (CMS) with support of contents upload, tagging, searching and download features. Content hit/view/download count will be recorded and presented in dashboard and printable reports. A user level permission will be set to control who can upload, publish and download contents.
- v. The training platform should have dynamic options to manage/set/create course plans, upload course materials and manage assessment system for the uploaded material and certification.
- vi. Ensure access control, application level security and on-demand support for uninterrupted LIVE service.
- vii. Design and develop Role-wise credential system incorporation for better user role management.
- viii. System should support user registration in multiple ways including mobile number, email, NID etc.
- ix. System shall provide the ability to encrypt user IDs and passwords and impose minimum password lengths along with ability to reset passwords following a standard password strategy. User log management shall be recorded.
- x. The system will have an e-communication module, which will be used for sending email and sms to the categorized users and relevant reports of e-communication should be produced. Frequently Asked Questions (FAQ) with solutions should be incorporated in the platform.
- xi. There will be a Dashboard presenting dynamic data in reports in tabular and graphic presentations. The data of training such as number of enrolled, number of completed, number of unsuccessful, results distribution among the participants etc. should be obtainable. The relevant data/dashboard content will be set on design phase of the development.



- xii. Develop a native user-friendly mobile application (Android) of the training platform with most features of web (features will be finalized upon discussion).
- xiii. The system should have provision for periodical & instant Data Backup & Auto Archiving System.
- xiv. Develop a user manual for the training platform which will be available in web and app.
- xv. There should be provision to integrate payment gateway integration in the system for the paid courses in future.
- xvi. Design and develop 50 different training modules covering different aspects of the projects such as awareness building, environmental and financial risk management, good agriculture practices, eco labelling, branding of products, marketing, occupational health safety, scope of environmental improvement etc.
- xvii. Each training module has to be precise and the training content must be self-explanatory with necessary audio-video tools.
- xviii. The platform can be accessed anytime so that the participant can access in his convenient time.
- xix. After enrollment of a course one has to go with necessary test to complete the course and upon completing auto generated certificates will be given to mail address.
- xx. There should be an option for submitting feedback of the participants.
- xxi. The developed platform and mobile apps should be compatible with the SEP and PKSF website and can be linked with those.
- xxii. The developed system must support Bengali UNICODE enable font so that Bengali content can be viewed properly from any machine, which support Unicode. The proposed system must facilitate for showing the content both in English and Bengali Language.
- xxiii. Update the course contents regularly up to the project period as per the market need.
- xxiv. Any part or all of the content shall not be published or released in any form without the prior approval of PKSF.
- xxv. Accomplish different audio and video editing and animation video task when required.
- xxvi. Consultant firm will ensure the system to be tested at module integration and load level. All necessary security test at application level architecture needs to be followed and conducted by the Consultant firm.
- xxvii. Any other tasks, duties or specific assignments which may arise as directed by the Project coordinator.



b) Support & Maintenance Requirement:

- i. Provide support and maintenance service of the platform and mobile app including the purchased Domain and Hosting (minimum 1TB) up to project completion period (December 2023). Support & Maintenance will cover fixing all bugs and system errors as and when identified by the system users.
- ii. Consultant shall take timely backup of the entire database to meet up the challenge of system recovery, in case of any disaster or missing data.
- iii. Upload, Manage contents as per projects requirement.
- iv. Revision/addition of reports and pages as per requirement of client should be addressed.
- v. The Consultant's team will work at their office premises, but in case of special requirement, they may work at the client's premises or any client designated location.
- vi. Assign a Project Manager who will work closely with the clients designated official to ensure proper delivery of any assignment during the support and maintenance phase.
- vii. The concerned company cannot assign the programmers to other project till completion of the assignment and will ensure the continuity of the scheduled work by other programmer in case of his/her absence.
- viii. The hired and assigned IT personals for support & maintenance must be regular employees of the vendor company.

4.0 Methodology:

- Review the SEP projects implementation on field level.
- Review present practices and procedures of ME's capacity development.
- Consult with key staffs of SEP project to prepare and deliver an inception report with detailed worlplan.
- Consult with key staffs of SEP project for the preparation of User Requirement Specification (URS) for the development of the training platform.
- Sharing the draft User Requirement Specification (URS) document and receiving feedback from key staffs of SEP project.
- Finalization of the User Requirement Specification (URS) document for developing the training platform.
- Finalization of the System Requirement Specification (SRS) document for developing the training platform.
- Finalization of the Architectural Design for developing the training platform.
- A prototype version of the training platform should be presented before the authority, for any suggestion and/or clarification. After the rectification (if any), the final version should be delivered to PKSF for acceptance.



5.0 Deliverables:

- i. Inception Report with detail workplan.
- ii. User Requirement Specification (URS).
- iii. Software Requirement Specification SRS.
- iv. System architecture and design document.
- v. Development of digital training platform.
- vi. Design and develop 50 different training modules and content with necessary audio-video tools and upload it to the platform.
- vii. Development of digital training platform Android Mobile App.
- viii. On- demand video streaming capability for conducting live sessions.
- ix. Provision for Two-way real-time audio and video chat support for registered users.
- x. Link the platform with the SEP/PKSF websites.
- xi. API support for any realtime data transfer from PKSF/SEP's existing applications of the digital training platform.
- xii. Software Deployment on Live Server.
- xiii. Easy to understand System Manual, Installation Manual and User Manual.
- xiv. Knowledge transfer through workshop/Training.
- xv. Source code & database along with other necessary tools/instruments so that the platform can be manageable by the client in future.
- xvi. Detail implementation report and installation document.
- xvii. Project completion report including upcoming challenges if any.
- xviii. Provide Support & Maintenance Service up to project completion period (December 2023).



**6.0 Development of modules:**

l.	Area of training	Module	Estimated Time	Content of the module (Mix approach)
1	Sub-sector wise training (Livestock, horticulture, aquaculture, poultry, leather processing and shoe making, mini textile, plastic factory, food processing, light engineering etc.)	Total 50 modules	Total 4500 Minutes (with at least 1000 minutes video)	<ul style="list-style-type: none">• Multimedia content (video, audio, pdf, word, ppt, excel etc)• Story Making• Information giving by still and moving picture.• Graphical Presentation• Video Documentary• Case study• Lecture• Interview• Others (if necessary)
2	Environment			
3	Climate Change			
4	Waste Management			
5	Plastic Management			
6	Value chain development			
7	Certification (sub-sector wise)			
8	Ecolabelling			
9	Brand Development (sub-sector wise)			
10	E-commerce			
11	Marketing competency development			
12	Technological intervention (sub-sector wise)			
13	Smart technology for sustainable food security			
14	Mechanization			
15	Business development			
16	Business promotion technique			
17	Procurement			
18	Finance			
19	Accounting			
20	Safe vegetable/fruits/poultry/dairy /cattle etc.			
21	Natural Farming			
22	Training of trainers (ToT)			
23	Others (If needed)			

7.0 Technological Specification:

- i. Need to use Open Source Development Platform with tool architecture framework such as (but not limited to) CakePhp/Laravel/codeigniter etc can be used.
- ii. The platform should be based on Database such as (but not limited to) MySQL/Oracle/ MSSQL/PostgreSQL server etc.
- iii. Bootstrap and CSS3 for responsive web application.
- iv. Android app should be developed in native android app development language.
- v. Future technology Change, iterative prototyping and agility in product design are the generic expectation.



- vi. Technology and all related design/data will be open to Client.
- vii. The vendor should follow any of the industry standard secure development methodology such as (but not limited to) Comprehensive Lightweight Application Security Process (CLASP) by OWASP etc. The vendor should consider (but not limited to) common vulnerabilities such as SQL Injection, Cross Site Scripting (XSS) etc. Vendor will undertake responsibility for Input Validation Controls, Authorization/Authentication Control and other security controls in place in test, production and live environment of application.

8.0 Timeline:

Duration of the contract is up to June, 2023 and to be effective from the date of signing:

Sl	Activity	Time	Estimated Completion date
	Phase-1: Development		
1	Conduct background scoping and research work, provide inception report and finalize architecture of the system with detail work plan	20 days	3 rd week of 1 st month signing of the contract
2	Development of digital training platform including Learning Management System (LMS), interactive features, mobile app, dashboard, communication etc. to incorporate client requirement as per approved SRS	90 days	3 rd week of 4 th Month of signing of the contract
3	1st level feedback collection and incorporation	10 days	4 th week of 4 th Month of signing of the contract
4	Testing, debugging, update and finalizing the platform	10 days	1 st week of 5 th Month of signing of the contract
5	Development of 20 modules and submission	60 days	3 rd week of 3 rd Month of signing of the contract
6	Development of 15 modules and submission	40 days	4 th week of 4 th Month of signing of the contract
7	Development of 15 modules and submission	40 days	1 st week of 6 th Month of signing of the contract
8	Delivery of User Accessibility Test (UAT) and 2nd level feedback collection and incorporation	5 days	2 nd week of 6 th Month of signing of the contract
9	Knowledge transfer through workshop/training	5 days	3 rd week of 6 th Month of signing of the contract
10	Delivery of the final version of the system along with all required documentation including source code, user manual and technical documentation (SRS Final Version)	10 days	4 th week of 6 th Month of signing of the contract
	Phase-2: Support		
11	Provide required and necessary support & maintenance		Up to the Project period (December 2023)

Note: Activity number 5,6,7 of module development will be done simultaneously with software development.



9.0 Cost:

The consultant firm will formally propose the cost for including work along with a separate detailed financial proposal (Including tax, vat and other as per rule) and payment terms. The cost will be expressed in Bangladeshi currency (BDT) and all payments will be made locally in the same currency. Tax, vat and others (if any) will be deducted at source as per rule. The financial proposal will include all relevant expenditures related to the consulting services.

10.0 Mode of Payment:

Payments will be made based on the following percentages and milestones:

- **1st Payment** (10 % of total contract value): The 1st payment will be made upon submission and acceptance of the inception report with detail work plan.
- **2nd Payment** (30 % of total contract value): The 2nd payment will be made upon development of digital training platform including Learning Management System (LMS), interactive features, mobile app, dashboard, communication etc. and finalizing those.
- **3rd Payment** (30% of total contract value): The 3rd payment will be made upon the development and upload of 35 modules along with necessary content.
- **4th Payment** (15% of total contract value): The 4th payment will be made upon the development and upload of 15 modules along with necessary content and delivery of the final version of the system along with all required documentation including source code, user manual and technical documentation (SRS Final Version).
- **5th and Final Payment** (15% of total contract value) will be made by December 2023 on the basis of satisfactory functioning of the modules within the existing or developed platforms.

11.0 Qualification of Consultant/Firm:

- i. Must submit valid Trade License, TIN, VAT & updated BASIS Certificate.
- ii. Minimum 5 years' experience in related industry and have similar nature of working experiences. A list of clients with the reference should be also given in the proposal.
- iii. Proven track record of at least 2 years in the field of Web-based IT solution/Software application/Portal development & deployment that works on public cloud.
- iv. At least 2 years' experience in Android apps development; graphic/ infographics designing; audio-visual and multimedia content development.
- v. Firm should have experience in e-learning/similar type of work.
- vi. Firm must demonstrate its management capacity (website link/brochures and other documents describing similar assignments, experience, availability of appropriate professional staff and experience among applicant's staff, resources to carry out the assignment).
- vii. Firm should demonstrate its logistical capability (well-equipped office space at Dhaka with necessary facilities).
- viii. List (Name, designation, years of experience, number of projects, expertise) of IT personals who can be engaged to performed the assigned task.



ix. Multiple Companies having technical and legal competency for developing such product can bid jointly but they must have legal agreement among them where one company needs to be master. Master company needs to fulfil all conditions mentioned in this ToR. Joint-venture agreement needs to have clear identification about each responsibility matrix along with IPR.

12.0 Team requirements: Having at least-

- One (01) Project Manager: At least 03 years' experience with "Digital training platform development" as project manager. The Project Manager is responsible for the operational management of the project. The person must have minimum B.Sc. degree in CSE, CS, IT, ECE, Physics, Applied Physics or any other relevant subject.
- One (01) System analyst/Software architect: At least 02 years' experience as System analyst/Software architect. He/She must have minimum B.Sc. degree in CSE, CS, IT, ECE, Physics, Applied Physics or any other relevant subject.
- One (01) Database Administrator: At least 02 years' experience as Database Administrator. The person must have minimum B.Sc. degree in CSE, CS, IT, ECE or any other relevant subject.
- Three (03) Software Engineer: At least 02 years' experience as software engineer. The persons must have minimum B.Sc. degree in CSE, CS, IT, ECE or any other relevant subject.
- Two (02) Android developer: At least 02 years' experience as android developer. The persons must have minimum B.Sc. degree in CSE, CS, IT, ECE, Physics, Applied Physics or any other relevant subject.
- Three (03) Module and content developer: At least 02 years' experience as training module and content developer. The persons must have atleast M.Sc. degree in any discipline.
- Two (02) Audio-visual and multimedia content developer: At least 02 years' experience as audio-visual and multimedia content developer. The persons must have minimum B.Sc. degree in any subject.
- One (01) communication Expert: At least 02 years' experience as communication expert. The person must have minimum B.Sc. degree in Communication/Public Relations/Journalism/ English/ Business Administration or any other relevant subject.
- Two (02) QA engineer: At least 02 years' experience as QA engineer. The persons must have minimum B.Sc. degree in CSE, CS, IT, ECE or any other relevant subject.

13.0 Institutional Arrangements:

The appointed consultant firm shall work in close cooperation with the specialists within the SEP Project Management Unit (PMU). All reports prepared by the consultant shall be submitted to the authorized representative of the SEP project management unit for analysis and further approval. All reports shall be submitted in printed copy in English. If necessary, the consultant shall respond to comments from the client by modifying, amending or supplementing the reports and resubmitting them to the client within 15 working days as from the receipt of such comments.



14.0 Professional Liabilities:

The consulting firm is expected to carry out the assignment with due diligence and in accordance with prevailing professional standard. A proper consultation with PKSF needs to be maintained in terms of planning, designing, documentation, development and reporting.

15.0 Confidentiality and Rights:

All documents, reports and information from this assignment will be regarded as PKSF's property, so the mentioned outputs or part of it cannot be sold or used in any other purpose without prior permission of PKSF. PKSF will reserve the Intellectual Property Rights (IPR) for all deliverables of the assignment.