

**Palli Karma-Sahayak Foundation (PKSF)**  
PKSF Bhaban, Plot: E-4/B  
Agargaon Administrative Area, Dhaka-1207



**Request for Proposal (RFP)  
For  
Selection of Consulting Firm (National)**

**Name of the Service: Selection of a consulting firm for developing a  
Crowdfunding Web Application under Rural Microenterprise  
Transformation Project (RMTP) of PKSF**

**Name of the Method: Fixed Budget Selection (FBS)  
(Lump Sum based)**

**Invitation for Proposals No: 53.23.0000.040.03.010.21.7270  
Issued on: 21 November 2022  
Proposal Package No: PKSF/RMTP/SD-03**

"Developing a Crowdfunding Web Application" under RMTP of PKSF



## **Section 6. Terms of Reference**

### **Terms of Reference (ToR) for selection of a consulting firm for “Developing a Crowdfunding Web Application under RMTP”**

#### **1.0 Background of PKSF and RMTP:**

Palli Karma-Sahayak Foundation (PKSF), an apex development organization established by the Government of Bangladesh for poverty alleviation through sustainable employment generation, has been implementing various programs and projects since its inception in 1990. Alongside its core inclusive development programs, PKSF so far has successfully implemented a good number of projects with the support of different international development partners like World Bank, ADB, DFID, and IFAD. PKSF's inclusive financing covers all segments of poor, non-poor people ranging from destitute to the micro entrepreneurs.

To promote microenterprises, PKSF is currently implementing a project titled “Rural Microenterprise Transformation project (RMTP)”. The project’s goal is to increase the income, food security and nutrition of marginal and small farmers and microentrepreneurs across selected value chains. The development objective of the project is the sustainable growth of selected rural commodity value chains with comparative advantage, market demand, growth potential, and backward linkages to small farmers and micro-entrepreneurs. An estimated 445,000 households will be direct beneficiaries of the project, of which 100,000 microenterprise borrowers and 345,000 will benefit from value chain development activities. Currently, about 104 million micro entrepreneurs are receiving various financial and non-financial services under the “Agrosor” program (program for Micro Entrepreneurs) of PKSF. A project Design Report of RMTP has already been developed that recommends exploring innovative financing mechanisms to supplement the current financing arrangements of PKSF so as to meet the increasing demand of this growing sector. Following the recommendation, a crowdfunding platform would be developed.

#### **2.0 Country background of the assignment:**

The concept of crowdfunding has already become popular around the world which facilitates pursuing business ideas or ventures by raising funds from a large number of people. Such an initiative might be very supportive to help potential entrepreneurs to bring innovative business ideas and business ventures into reality by collecting the initial funding needed. Developing crowdfunding market would complement the micro finance and traditional financial industry that almost single-handedly meets the financing needs of the country as an institutional source. Crowdfunding possibilities are largely unexplored in Bangladesh. It is high time to formulate a policy and regulatory framework in Bangladesh.

At present, there are no rules regarding crowdfunding and thus other relevant rules should be taken into consideration. It is expected that as the trend gains enough traction in the country, Bangladesh Bank and Security Exchange Commission might take it into consideration and take the necessary steps to formulate rules. In this context, Palli Karma-Sahayak Foundation (PKSF), an apex development organization established by the Government of Bangladesh, is on track to create a



crowdfunding platform on an experimental basis. The organization is already financing microenterprises to promote new potentials for expediting poverty reduction.

The microenterprise sector is a growing sector in the country which is a source of 57% of employment. The contribution of this sector for GDP is 25%. However, partner organizations of PKSF and other MFIs do not have enough resources to meet the ever increasing demand of microenterprises. Besides, many enterprising youths with innovative business ideas cannot pursue their ideas only because of a lack of access to financial services.

The crowdfunding platform can be another option to finance business ideas. On the other hand, there may be many individuals who explore opportunities for investment in reliable business enterprises. Being a government agency, PKSF will have more reliability operating the crowdfunding platform in the country. Besides, its healthy track record, experience in financial management, and linkage with donors will ensure smooth operations of the platform.

The country's startup ecosystem is booming due to the success stories of tech enabled service providers such as Pathao, Shohoz, Chaldal, Sheba.xyz among others. It is easier for startups to attract investors with their unique market offerings. On the contrary, SMEs still face a significant level of challenges in accessing funds and mentorship from the accelerator and/or incubator programs. PKSF is exploring innovative financing mechanisms, including crowdfunding, to supplement current financing arrangements so as to meet the increasing demand of this growing sector.

For crowdfunding platform, there are in total four models that work best for our country-grants, reward, debt and equity. Any type of microenterprise can participate in a crowdfunding platform with grants, reward and debt model, however, organizations with only limited company registrations can apply for the equity-based model. There are a few crowdfunding platforms launched in Bangladesh namely fundsme.com (Equity-based) by BD Venture Ltd, Oparojoy (Donation-based), Project. co (Donation and Reward based) and Ekdesh (Grants based considering the zakat money).

The crowdfunding model will be materialized by three inter related parties:

- a) Entrepreneur: The project initiator who proposes the idea and/or project to be funded.
- b) Backers/Investors: Investors groups may include venture capital firms, angel investors, incubators, accelerators, corporate partners, Non-Resident Bangladeshi, and independent individuals.
- c) The Platform: a moderating organization that brings the parties together to launch the idea. It will be an interactive web application to bring the parties together.
- d)

### **3.0 Objectives of the assignment:**

The main objective of the assignment is to develop a crowdfunding web application under RMTP. This web application will enable entrepreneurs to promote their business ideas and engage enterprises in the value chains of different potential clusters sub-projects and raise funding from multiple individuals/investors, including migrant remitters. Following the recommendations of a feasibility study done on this assignment, initially, the grants-based model approach will be promoted. Eventually, the equity-based model and debt-based, peer-to-peer (P2P) model will be implemented.



#### **4.0 Expected output of the assignment:**

The expected output of the assignment is to establish an interactive crowdfunding web application that will have the following features (**Desired features are shown in Annex-1**):

- i. The web application will have provisions for implementing three (3) models of crowdfunding.  
a) Grants/Donation based, b) Debt-based and c) Equity-based crowdfunding;
- ii. The web application will admin panels of the parties as follows- a) Partner Organizations and b) PKSF. Selected admins from these two parties will verify the registration of users and approve them as registered to the web application;
- iii. Partner organizations/Entrepreneurs will upload their specific business cluster development ideas/enterprises with geo location, necessary financial and marketing information e.g., tenure of investment, approx. ROI, current debt and liabilities, profitability, market prospect, etc. in the web application to attract the attention of the individual investor/investor group;
- iv. The individual investor/investor group will register to the web application through the registration process of the web application and will get notifications to select the business ideas to which they get interested to invest or to provide grants (Zakat money can be considered as grants);
- v. Whenever investor selects a projects, the concerned partner organization will get notification and can be able to communicate with the investor/investor group. Entrepreneurs can be also included in this stage as a registered user of the concerned partner organization.
- vi. The web application will have payment gateway integration so that, investor/investor group can provide grants/loans to the entrepreneurs and the entrepreneurs can also repay their loan.
- vii. The web application will have a podcasting menu in which the investors/partner organizations/entrepreneurs will share their ideas/interests through audio messages from their experiences.
- viii. The web application should have a provision through which Partner organizations/Entrepreneurs will review the yearly progress/status of their business enterprises.

#### **5.0 Deliverables of the assignment with timeline:**

<b>Sl. No.</b>	<b>Activities</b>	<b>Deliverables</b>
1	Preparation in Inception period	Submission of <b>inception report</b> within 15 days of contract signing that include:  i) Detail team mobilization ii) Understanding of ToR iii) Final detail action plan with timeline and specific milestone using Gantt chart.
2	Initial demo of the Web Application	Presentation of first demo of Web Application within 2 <sup>nd</sup> month of signing the contract. The consulting firm will develop and finalize following in consultation with the concerned officers of PKSF:  i) User Requirement Specification (URS) ii) System Requirement Specification (SRS)

<b>Sl. No.</b>	<b>Activities</b>	<b>Deliverables</b>
3	Final demo of the Web Application	<p>iii) Architectural Design document.</p> <p>Final demo of Web Application including full application, rolled out for field testing, piloting, data verification should be completed by 4<sup>th</sup> month. The consulting firm will provide:</p> <ul style="list-style-type: none"> <li>i) Database</li> <li>ii) Web Application</li> </ul>
4	System Implementation and capacity building	<p>The consulting firm will provide:</p> <ul style="list-style-type: none"> <li>i) Training manual: High quality training manuals (user &amp; system) must be supplied. Besides, presentation slides and other audiovisual methods implied in the training will be available to users.</li> <li>ii) Capacity building training for Personnel of POs and PKSF.</li> <li>iii) Training of Training (ToT) for at least 20 Personnel of PKSF.</li> </ul>
5	Final submission of assignment and completion report	<p>At the end of the assignment the consulting firm will submit-</p> <ul style="list-style-type: none"> <li>i) a completion report</li> <li>ii) Software (source code and installers)</li> <li>iii) System Manual</li> <li>iv) Installation Manual</li> <li>v) User Manual.</li> </ul> <p>Copyright of the crowdfunding web application will remain with PKSF.</p>

## 6.0 Technology platform:

### 6.1 Database

The proposed database for this system is:

- a) PostgreSQL 9.6 or above with Post GIS extension or
- b) MySQL 5.7 or above with Spatial extension or
- c) Oracle 12c or above with Spatial extension

### 6.2 Web application

- a) For web application development following technologies will be used.  
Java 8 or above, spring boot 1.x, JPA, Spring Security, Maven, Angular 6.
- b) For responsive web applications, Bootstrap and CSS3 will be used.
- c) For web-based map visualization, Google Maps API and Geo-Server will be used.
- d) Application server will be Tomcat 9 or above, NGINX

### 6.3 Hosting and deployment

The application will be hosted on a server provided by PKSF.

- a) Server OS: Linux (Oracle Linux).



## **7.0 Guidelines for system development and design:**

- a) The consulting firm shall adopt the design principles of Service Oriented Architecture (SOA) throughout the system.
- b) It should have web services-based Architecture to ensure flexibility and scalability.
- c) The system shall be designed in a simplified manner to avoid the need for specialized users and high maintenance overheads.
- d) The system should be robust to cope with errors during execution and cope with erroneous input.
- e) The proposed solution should be secured. The web applications will be hosted under a secure environment and could only be accessed through a secure protocol.
- f) The system should be designed in a way so that it can be extended for larger dataset and map points without changing the core architecture and implementation.
- g) The developed system is a part of PKSF's overall vision for Digital Financing, So the system should be designed considering this.
- h) The web application should have a unique yet consistent look and feel and align with PKSF's corporate website. The use of font colors and layouts should be consistent throughout the site and should follow a common theme.
- i) The web application should be easy to navigate, or in other words, to be able to find the expected data/information/section within the soonest possible time.

## **8.0 Requirement of the consulting firm and consultants:**

The team should include i) Project Manager/ Senior Software Engineer -1 person; ii) Software Developer -2 person; iii) Financial Analyst -1 person and iv) Designer/Modelling Artist-1 person. The consulting firm may select the Project Manager/ Senior Software Engineer as the Team Leader. The Team Leader for this assignment will have overall responsibility for the quality and timely development and delivery of the system to PKSF. He/she has an in-depth understanding and thorough knowledge about the requirements of the assignment.

### **(a) Experiences of the consulting firm with the required information (National):**

- i) The consulting firm must have a successful track record of minimum of 07 years in web application development with GIS mapping. A list of clients must be provided.
- ii) The firm must have proven experience/knowledge in handling modern Data Centre and Data Management.
- iii) The consulting firm should have proven experience in developing and deploying web applications with secured APIs that are interoperable and have integration facilities with different mobile and desktop applications. A list of clients must be provided.
- iv) The consulting firm should have a postal address with an electronic communication system.
- v) The consulting firm should have sufficient financial capability, updated certificate of income tax and value-added tax.
- vi) The consulting firm must have a valid registration certificate and financial audit report of at least the last three years.
- vii) The consulting firm must have necessary office space, vehicles and logistics support.



viii) The consulting firm should have a group of relevant experts. However, required qualified consultants can be hired from outside of the organization on a contractual basis.

ix) The consultants must have the ability to write reports in English with adequate skills to understand the issues of the local community.

(b) **Consultant's qualifications and experience (National):** Required qualifications and experience of each expert are given below. Additional qualifications and experience for each expert would be preferred.

i) **One (01) Project Manager/ Senior Software Engineer:** Bachelor's degree in software engineering, computer science/computer science and engineering or similar subjects. At least 07 years of experience with projects related to GIS-based web application development including system analysis.

ii) **Two (02) Software Developers:** Bachelor's degree in software engineering, computer science/computer science and engineering or similar subjects. At least 04 years of experience with projects related to GIS-based web application development as a software developer.

iii) **One (01) Financial Analyst:** Bachelor's degree in finance, economics, statistics, or relevant subjects. At least 05 years of experience in financial data analysis and managing financial management projects. Experience in consulting fin-tech solutions will be preferable.

iv) **One (01) Designer/Modelling Artist:** Bachelor's degree in any subjects. At least 04 years of experience in graphics designing using Adobe Photoshop, illustrator, etc. and 3d model design using 3D studio max, blender, etc. as a graphics designer or modeling artist.

## 9.0 Consulting Firm (National) Selection Process:

Fixed Budget Selection (FBS) method and Standard Request for Proposal (SRFP: PS-5) documents on lump sum contracts of Schedule 1 of the Public Procurement Rules-2008 of the Government of Bangladesh shall be followed in the preparation of shortlisting the firms, evaluation of documents embedded in the request for submission of proposals, selection of the firm, negotiation, signing of contract and receipt of system/software.

## 10.0 Duration of the contract:

The duration of the assignment will be in two phases. Main part is 1<sup>st</sup> phase. Its duration will be Six (6) months for development and submission of the web application and necessary reports to PKSF. 2<sup>nd</sup> phase is for maintenance services. After the submission of the web application, the consulting firm will provide maintenance services till the completion of RMTP on 31 December 2025.

## 11.0 Mode of Payment:

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

e) 1<sup>st</sup> Payment (20% of total contract value): The 1<sup>st</sup> payment will be made upon the submission and acceptance of an inception report including an implementation plan with specific milestones for the accomplishment of all tasks within one month of signing the contract.



- f) 2<sup>nd</sup> Payment (30% of total contract value): The 2<sup>nd</sup> payment will be made upon acceptance of the initial demo of the Web Application including its user requirement specification, system requirement specification and architectural design document.
  - g) 3<sup>rd</sup> Payment (30% of total contract value): The 3<sup>rd</sup> Payment will be made upon acceptance of the final demo of the Web Application.
  - h) 4<sup>th</sup> and Final Payment (20% of total contract value): The 4<sup>th</sup> Payment will be made after providing services and maintenance of the developed web application of crowdfunding after its delivery and its acceptance to PKSF.

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