

GOVERNMENT OF THE PEOPLE’S REPUBLIC OF BANGLADESH
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT & COOPERATIVES
LOCAL GOVERNMENT DIVISION
LOCAL GOVERNMENT ENGINEERING DEPARTMENT

Char Development and Settlement Project- Bridging (Additional Financing), LGED Component

A. Terms of Reference (ToR) for Hiring a Software Consultancy Firm:

To Mobile Apps Development for Agriculture Communication and Information Technology under CDSP-B (AF), LGED Part, Project

(Package No. LGED/CDSP/PMU/M.APPS/2022-23/SE-06)

Assignment title	Mobile Apps Development for Agriculture Communication and Information Technology under CDSP-B (AF), LGED Part, Project
Assignment duration	01 Month
Primary assignment location	PMU Office, LGED, Dhaka and project location of CDSP-B (AF) Project
Funding source(s)	IFAD (Credit)

B. Context of the Assignment

It may be noted that the Department of Agricultural Extension (DAE) was not ready to join in CDSP-B (AF) but has shown interest in joining a CDSP Phase V at an appropriate time. However, the MoA has given an assurance that all field officials of DAE will continue to support the implementation of agricultural activities to be undertaken by any agencies during the bridging period. It was therefore agreed at the 6th Inter Ministerial Steering Committee meeting (CDSP IV) that “The PD LGED will incorporate a component on agricultural activities in the DPP to be prepared for the CDSP Bridging Project period.”

As per design, LGED will be responsible to manage the provision of agricultural advisory services by hiring its own outsourcing project agriculturist with field officers and through hired NGOs in the implementation of the CDSP Bridging Phase. The TA team will also provide direct support to LGED for the implementation and monitoring of this sub-component.

The hired NGO will continue the activity under CDSP IV, and expand these to areas under CDSPs I, II, III lacking such services and to the shortlisted chars for CDSP V under Upazilas of Hatiya, Subornachar, Companiganj, Sandwip, Monpura, Tazmuddin etc within Noakhali & Bhola Districts. These activities will include support for formation of new FF and reviving/strengthen old FFs from CDSP I, II and III, which have been hampered in continuing supporting farmer production as a result of the hiatus in support previously supplied by DAE. The FFs leaders and members will also receive training, demonstrations, field days, motivational tours, and establishing plant clinics. FFs will receive small tools, small equipment and new technologies in the form of farm inputs for wider adoption by members. In addition, an Agricultural Communication Information Technology (ACIT) service provider is to be contracted, with a view to establish a self-funding model based on payment for services rendered by the FFs where a partnership could be established to expand an existing ACIT into the relevant chars. General support to improve value chains within the project area will also continue.

C. Objectives of the Assignment

As mentioned above, the project is aiming to introduce Agriculture Communication and Information Technology (ACIT) to char land farmers. Experience with mobile phone-based ACIT apps from many places, including Kenya, India and Bangladesh, clearly demonstrates that farmers benefit in terms of (i) acquiring knowledge and new technologies; (ii) being able to diagnose plant and livestock diseases using photos; (iii) building linkages between farmers, traders, retailers and suppliers; and (iv) providing marketing information.

D. Logic of ACIT

A survey of FF carried out during CDSP-IV highlighted the need to provide farmers with information on the control of pests and diseases – especially for new commercial crops that have not been traditionally grown in the area. **The project will collaborate with a private company/public agency/social business NGO to deliver a mobile phone-based ACIT.** Selection of NGOs for field implementation will be given preference to those which have already marketed such types of mobile apps for agriculture, which ideally should also have a presence and/or experience in the project Chars.

The TA team will carefully ascertain what experience of ACIT exists in Bangladesh and its relevance and feasibility of application for CDSP-B. Given the limited scale and implementation period for CDSP-B, if it will not be possible to develop a new ACIT system; the project will look to use (and maybe adapt) an existing system.

The critical objective of the Agriculture Communication and Information Technology Knowledge and Learning Platform is to provide reliable, complete, accessible and understandable information in a timely manner to the system's users. It is an organized means of collecting, processing, storing, and communicating information relating to farmers' day to day needs in selecting, growing, harvesting and selling their products and can also provide access to up-to-date research and innovation.

The initial investment will include the development or adapt existing mobile app modules able to diagnose plant, livestock and fisheries husbandry and diseases using photos, as well as providing technology training, marketing information, technical support etc. and other services to the FFs members.

E. Consultancy Period

The consultant's services shall commence with effect from the date of signing the contract agreement. The assignment will be for a period of one (01) month for the development/adoption of the Mobile App and will be for training, tracking of usage etc. Other aspects relating to service providing to the farmers, suspension termination, etc. shall be as per the provisions of the contract agreement.

F. Scope of the Assignment:

The firm should follow an appropriate methodology to complete the assignment of the software development life cycle model.

- i. Requirement gathering and analysis to prepare Concrete System Requirement Specification (SRS);
- ii. Design (System Analysis and Design, Data Flow Diagram), Entity Relationship Diagram (ERD), Data Dictionary, form, Report design and so on;
- iii. Software development, Coding language determination and coding;
- iv. Deployment of the software;
- v. Maintenance and trouble-shooting;
- vi. Study and analyses data needs for effective and efficient service under the project activities;

- vii. Design appropriate modules for dispersion of data from the central database;
- viii. Manage the central transactions database of the project and developed appropriate modules/utilities for effective and regular dispersion of the data through regular web page;
- ix. Provide service to the beneficiaries for the time being;
- x. Any other tasks related to the assignment by the authority.

G. Qualification and Experience Required

Firms applying for this assignment should demonstrate:

- A software company incorporated in Bangladesh with an excellent track record of at least seven (7) years
- At least five (5) years of experience in developing ICT solutions for crops, livestock and fisheries with proven capability of implementing large projects
- Experience in developing ICT solutions for Govt. extension officers
- Experience in developing ICT solutions having minimum outreach of 1,00,000 farmers in either crops, livestock or fisheries
- Weather-based agro-advisory service development and delivery to farmers
- Experience in working with donor-funded projects in agriculture with the largest one totaling at least USD 1 million
- Annual turnover of at least USD 1 million for last 3 years
- Experience in deploying ICT solutions at national level
- Experience in deploying ICT solutions outside Bangladesh would be preferable
- Experience in developing knowledge apps specially designed for farmers with limited literacy
- Must be a legally certified and registered company incorporated with the Office the Registrar of the Joint Stock Companies and Firms, Bangladesh
- Must have audited financial reports for last three fiscal years

H. Deliverables

The firm will develop an android based smartphone application to complement the web-based MIS system. The smartphone CDSP(Farm2Go)- APP will allow users to access information of the web-based MIS system. The app complements the web-based MIS system with limited functionality. The firm is expected to perform and fulfill the following basic features, further detailed specifications will be discussed with the selected Firm and CDSP (LGED part) PMU:

1. Developing Beta version of Mobile App

- i. Develop the android-based application comprising crop based agriculture, fisheries and livestock and that synchronizes with the MIS main database.
- ii. Implement a data synchronization feature to update the app and MIS database and vice versa.
- iii. Develop an offline feature to allow users to use the app without a stable internet connection
- iv. The App must include:
 - Data input in the modules;
 - Symptoms with photos of the deficiencies and diseases for better understandings, combined with appropriate remedies
 - Major deficiencies and pests likely to be encountered with descriptions, photos and appropriate remedies with ability for the farmer to upload photos of symptoms for identification of unusual events/deficiencies and pest attack

- Options for asking technical support and marketing information
- Provision to provide metrological information as notification i.e., develop a Notice serving system from PMU
- Capture geo-tagged photographs;
- Locate the schemes in map;
- v. Ensure that the App will allow users to have different access and edit rights.
- vi. Ensure Basic view only version of the App accessible to all community members/citizens for information purposes and feedback.
- vii. Develop GRS, i.e., a complaint management system.

2. Piloting Beta version and Release of Final version

- i. Select 03 Branches,
- ii. Conduct Beta testing
- iii. Release finally to all Branches
- iv. Collect feedback
- v. Fix bugs
- vi. Upgrade
- vii. Submit Source Code

3. Roll out and support implementation of the ACIT system (Response to farmers asking) for 6 months while undertaking performance review and development of the Application

4. Conducting Training of Trainers (TOT)

5. Final report submission on Service Provide and performance of the Apps

I. General Conditions

- No activities may commence unless the contract is signed by both parties
- Upon selection, the consulting firm will ask the project team to provide all the documents and may consult relevant to the task, assist in coordination with relevant stakeholders, review the progress of the work and provide feedback as necessary, organize the validation workshop, ensure payment of agreed amounts, based on performance and any other tasks/supports as required and agreed
- All project implementation documents such as progress reports, draft project documents, templates (website, MIS), preliminary and intermediate designs, layouts, specification documents etc. shall be submitted in both soft (editable Microsoft Word and PDF Version, not secured with password to allow printing or copy and paste of extract from the reports) and in hard copies (4 copies) in a scale to be agreed with all stakeholders
- Provide information and update progress as requested by the Project team
- In the event of unavailability of the team leader or any other senior expert, the firm shall be under the obligation to provide a replacement of equal or better calibre at no extra cost
- The project Directorate reserves the right, as appropriate, to interrupt it, to request that it be corrected or modified, or to refuse to accept the service
- The products and deliverables of this consultancy are not the property of the consultancy firm. No deliverables may be shared or published without written permission from Project Directorate will be free to adapt and modify them.
- The firm will be responsible for all logistical arrangements associated with this contract including any other expenses such as travels, visas, banking/cash services, or office space and equipment (including computers and photocopiers).

- The consultancy firm is expected to use his/her own equipment, including computers. Project premises will be available for meetings and collecting inputs from other partners.
- The consultancy firm shall not make use of any unpublished or confidential information, made known to him in the course of performing his duties under the terms of this agreement, without written authorization from the Project Directorate.

J. Review Mechanism

A committee comprising of i) Project Director (PD), CDSP-B(AF), LGED part, ii) Mr. Md. Bazlul Karim, DTL, TA Part and iii) Project Agriculturist, CDSP, will be constituted for the purpose to review the performance of the Consultant as & when felt necessary, wherein at least the Team Leader of the consultancy firm will have to remain present.

In addition, the PD will review all the reports and the performance of the Consultant during the period of the assignment, wherein all the key experts of the consultancy firm will have to remain present.

K. Payment Schedule

Payments will be made only based on the quality completion of the deliverables, as approved by the Project Director. Project Director will also reserve the right to withhold all or a portion of payment (20% at 10 days later of the commencement of the work, 40% after the delivery of the deliverables as per contract and 40% after completion of piloting) if performance is unsatisfactory, if work/outputs are incomplete, not delivered or for failure to meet deadlines.

L. Management

The Project Directorate will be responsible for the selection of the firm to conduct the work described herein and will ensure administrative supervision along with issuing the contract and pay the selected firm, based on the terms agreed in the contract and after the approval of the deliverables.

For all contractual issues, the consulting firm will report to Project Director, CDSP-B (LGED Part). For technical issues, the consulting firm will work directly in coordination with the technical team (i.e., Mr. Md. Bazlul Karim, DTL, TA team) in close collaboration with the Project Director. Consultation may be done with key stakeholders from relevant Line Departments and TA team associated with the livelihood sub-component of donor agency if required.

M. Submission of Proposal

Interested entities are kindly requested to submit the following in the prescribed format with separate Technical and Financial proposals in sealed envelopes.

- Letter of interest specifying how the offer is qualified to conduct the proposed tasks
- Technical Proposal: including the firm's overall understanding of the terms of reference, relevant expertise and experience for this assignment, the proposed approach to the consultancy, a work plan and a realistic implementation timeline and relevant documentation of previous assignments to demonstrate level of expertise. The proposal must include CVs of individual experts, as well as contact references from three clients for which similar work has been carried out in the last eight (8) years.
- Financial Proposal: outlining the total costs for this consultancy with payment linked to the deliverables outlined above
- Legal registration documents and audit reports