TERMS OF REFERENCE
Selection and Employment of a Firm for Development and Operationalization of ULGI
Management Information System (MIS)

1.   Project Background

The Local Government COVID-19 Response and Recovery Project (LGCRRP) is a 3-year operation of the Government of Bangladesh with financial assistance from the World Bank. LGCRRP's development objective is to strengthen Urban Local Governments Institutes' (ULGI) response to the COVID-19 pandemic and preparedness for future shocks.

Component 1: COVID-19 Response Grants (CRGs)

Through Component 1, the project will provide eligible and qualifying ULGIs (329 Pourashavas and 10 City Corporations) with CRGs over a period of three fiscal years. Annual grant allocations will be disbursed on a six-monthly basis. CRGs will be used by qualifying ULGIs to finance activities that are intended to respond to the COVID-19 pandemic, for purposes of emergency response, and socio-economic recovery. Eligible ULGIs will qualify for CRGs by fully meeting a few Minimum Conditions (MCs). MCs are intended to ensure that ULGIs have basic capacities in place to use project grants effectively and appropriately.

Component 2: Implementation and capacity development support, digital technology and project management

Through Component 2, the project will finance a range of activities aimed at supporting ULGIs' response to COVID-19 pandemic, as well as at strengthening ULGIs' medium- and long-term resilience and crisis-disaster response capacities, and project management functions and activities. Support for the use and application of digital technology will cut across Component 2 activities, aimed at strengthening overall ULGI and project performance in the immediate and medium to long terms.

Implementation arrangements

LGED under Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Cooperatives (MLGRD&C) is responsible for project implementation. LGED will establish a Project Management Unit (PMU), headed by a Project Director. The PD will be assisted by two or more Deputies, deputed by LGED. The PMU will be responsible for core project management functions and the coordination of project activities. The PMU will consist of a team of consultants reporting to the Project Director and Deputy Project Directors.

To facilitate LGCRRP management and to strengthen ULGI management capacities, the project proposes to develop and operationalize a web-based Management Information System (MIS) for ULGIs. These Terms of Reference describe the objectives, scope of work and deliverables for a consultancy firm (hereafter referred to as the consultant) to develop an MIS for ULGIs.

2. Objective of the Assignment

The objective of this contract is to develop and operationalize an MIS system for ULGIs, along with the application of mobile technology to ensure that investments carried out by the ULGIs under LGCRRP can be effectively monitored and results tracked.

The consultant will be expected to: (a) develop a user-friendly web-based MIS/M&E system in both offline and on-line platform; (b) develop a compatible APP (Android & iOS both) based technology which can be operated through smart phone/Tab; (c) provide capacity building support to ULGIs and other stakeholders to ensure proper and effective use of the MIS; (d) develop a dynamic website and (e) maintain and run Help-Desk support services.

In developing the ULGI MIS, the consultant will use as a principal technical point of reference the UP (Union Parishad) MIS developed under LGSP3. The UP MIS, which has been tried, tested and operationalized across all UPs in the country, should be used as a broad template and model for the ULGI MIS.

3. Scope of work

Specifically, the consultant is expected to implement the following tasks and activities:

Task A: development of MIS and compatible Android & iOS-based application for 10 City Corporations (except Dhaka North & South) and all 329 Pourashovas.

Task A1: Development of MIS and M&E system for 10 City Corporations (except Dhaka North & South) and all 329 Pourashovas.

The ULGI MIS system is intended to capture the planning, implementation and monitoring of subprojects/schemes/activities at the ULGI level under LGCRRP financing. This includes procurement, financial information and Geotagging information. MIS system will be designed in such a way that the major activities of the 10 City Corporations and 329 Pouroshovas will be automated through the digital platform. The overall goal is for monitoring and evaluation to improve efficiency and accountability of all project related activities. The consultant will, therefore, be expected to perform and fulfil the following requirements:
(a) Developing and establishing an appropriate and relevant ULGI MIS:

- Review and familiarization with the needs of ULGIs and LGCRRP.
- Incorporating the above into the technical design of the MIS and its architecture.
- Develop and deliver a dual language MIS (Bangla & English).
- Develop a simple and user-friendly MIS–to make the system easy to use, concise for users, lightweight and as undemanding as possible in terms of data consumption
- Ensure that the system handles planning process from ward to the design and implementation of subproject/scheme/activity.
- Ensure geotagging of project pillar-wise primary information such as subproject/scheme/activity cost, length, location and other numeric data along with geotagged photos of three stages of scheme implementation: (1) before, (2) during, and (3) after completion.
- Make the MIS system capable to visualize the subproject/scheme/activity on Google Map. Before & after is preferable. Acquisition or Collection of RAW Satellite Imagery,

third party Web GIS based API or any other tools/subscriptions is consultant's responsibility.

- Ensure that the MIS covers the status and process of compliance of social and environmental safeguards.
- Ensure the system to be able to verify compliance with the agreed procedures (e.g., procurement, training, public disclosure etc.);
- Define different users' role, groups and distribute access, such as an editing function for administrators and a viewing function for users.
- Connect the MIS to a universal LGCRRP email or messaging system that can be used to communicate between the PMU, RMSU s and ULGIs.;
- Debug the system developed.
- Develop dynamic website.
- If required, integrate the MIS for API integration with LGCRRP's other web application.

(b) Training relevant personnel of PMU of LGCRRP/LGED

- The project will provide the consultant with a list of trainees.
- The consultant will prepare training modules.
- The consultant will conduct training.
- The consultant will submit reports on training activities.

Task A2: Development of Android & iOS-based Mobile Application (APP) with Geotagging

To maximize usability and efficiency, the consultant will develop an Android & iOS-based smartphone application to complement the MIS. The smartphone LGCRRP App will allow users to access and edit critical information of the web-based MIS through their cell phones. The App will complement the web-based MIS system with limited functionality.

The consultant is expected to perform and fulfil the following basic features but not limited to (more detailed specifications will be discussed and agreed with the selected consultant and the LGCRRP PMU):

(a) Development Beta version of Mobile App

- Develop an Android & iOS-based application that synchronizes with the MIS main database.
- Implement a data synchronization feature to update the App and MIS database and vice versa.
- The App must: (a) include data input in the modules; (b) capture geotagged photographs; (c) use Google maps for purposes of geotagging and show the exact locations of the subprojects/schemes/activities undertaken through the project; (d) have an offline arrangement for momentary connection inconvenience.
- Ensure that the App will allow users to have different access and edit rights.
- Ensure "basic view only" version of the App; accessible to all community members/citizens for information purposes and feedback.
- Develop a Greivance Redress System (GRS), i.e., a complaint management system as part of the App.

(b) Pilot Beta version and Release of Final version. To pilot the App, the following steps/processes will be followed by the consultant:

- Select an appropriate number of ULGIs for App piloting.
- Conduct Beta testing in pilot ULGIs.
- Release the final MIS to all ULGIs.;

- Collect feedback.
- Fix bugs.
- Upgrade.
- Submit Source Code.

(c) Conduct Training of Trainers (TOT):

- Prepare training modules (For Trainers as well as for Trainees).
- Impart training to Trainers.
- Submit report on TOT.

<u>Coordination with PMU of LGCRRP in implementing Task A</u>

Throughout software development, the consultant will ensure close coordination with the LGCRRP PMU. In development of each module the consultant will submit a report and demonstrate the module to the PMU for approval before further development. The decision of the PMU will be final with respect to critical issues arising at the time of development.

The consultant will inform the PMU of the last month's activities (progress of development) and the tentative development activities for the next month.

Task B: Maintenance and provision of support services

The firm will install/configure the software, provide training to ULGI officials and undertake maintenance and technical support/troubleshooting throughout the project period. The training will be given to trainers/trainees selected by LGCRRP management on how to use the MIS and mobile phone app.

It is intended to phase in the installation and piloting of the enhanced MIS system and mobile phone App to receive timely feedback and allow for troubleshooting. The first phase should pilot the new IT system in ULGIs where internet stability could be an issue to test the system's offline capability.

The firm is expected to perform and fulfil the following basic activities but not limited to (more detailed specifications will be discussed with the LGCRRP PMU):

(a) Install and Operationalize Help Desk/Centre

- Setup Help Desk/Centre.
- Conduct test run.
- Collect feedback.
- Roll out Help Desk facility nationally.
- Manage Help Desk facility.
- Provide a monthly/quarterly report to LGCRRP PMU on Help Desk services.

(b) Maintain system and provide support services

- Provide maintenance for the MIS and Android & iOS App, including troubleshooting.
- Receive feedback and report on how issues are being resolved and the expected timeline.
- Provide a monthly/quarterly report on maintenance.

Hosting and Maintenance: For proper and smooth running of the total system [MIS, Mobile Apps and Website] the consultant will arrange proper hosting till the end of the project or maintenance period.

Data Entry: Testing data entry (setup data) is the responsibility of the consulting firm during the testing period and the actual data entry is the responsibility of the ULGIs under supervision of PMU.

Deliverables, Timeline and Reporting

The table on the following pages provide details of deliverables, timelines and reporting requirements.

Implementation Timeline, Deliverables and Reports [May be adjusted during final contact]

Deliverables/Reports		Time period (in Weeks)	Cumulative (in Weeks)	Remarks
Submit Inception Report [1(one) Original and 2(two) copies (hard copies); soft copy in 3(three) CDS/DVDS.]				
Task A	**Development of MIS and compatible Android & iOS-based application for 10 City Corporation and 329 Pouroshova**			
Task A1	Development of MIS and M&E system for 10 City Corporation and 329 Pouroshova			
Deliverable-1	MIS system developed for 10 City Corporation and 329 Pouroshova	16	16	4 Months
Deliverable-2	Relevant Personnel of PMU/LGED trained	4	20	5 Months
Task A2	Development of Android-based Mobile Application (APP) with Geo-tagging for City Corporation and Pouroshova			
Deliverable-1	Beta version of Mobile App developed	16	16	4 Months
Deliverable-2	Beta version Piloted and final version released	4	20	5 Months
Deliverable-3	TOT for 10 City Corporation and 329 Pourasavas	4	24	6 Months
Task B	**Maintain System & Provide Support Services**			
Deliverable-1	Help Desk/Centre Installed and Operationalized	4	28	7 Months
Deliverable-2	System maintained & Support Services provided	104	132	2 Years
Draft Final Report [1(one) original and 2(two) copies (hard copies); soft copy in 3(three) CDS/DVDS.]				4 weeks before expiry of contract.
Final Report [1(one) original and 2(two) copies (hard copies); soft copy in 3(three) CDS/DVDS.]				2 weeks before expiry of contract.

The Output/ Deliverables of the assignement will be received by the Project Director.

Payment Schedule (May be adjusted during final contact)

No advance payment shall be made.

Payments shall be made <u>in line with agreed-on outputs</u> according to the following schedule:

 (a)   Twenty (20) percent of the amount for the Task-1 and Task-2 shall be paid upon submission of Inception Report for the assignment (covering Task-A, and Task-B) to and its acceptance by the client.

(b) <u>**Key Task-A1:**</u>

Fifty (50) percent of the amount for Key Task-A1 shall be paid upon submission of Source Code of Task-A1 to and its acceptance by the client.

Thirty (30) percent of the amount for Key Task-A1 shall be paid upon submission of report on completion of Training under Task-A1 to and its acceptance by the client.

 (c) <u>**Key Task-A2:**</u>

Fifty (50) percent of the amount for Key Task-A2 shall be paid upon submission of Source Code of Task-A2 to and its acceptance by the client.

Thirty (30) percent of the amount for Key Task-A2 shall be paid upon submission of report on completion of Training under Task-A2 to and its acceptance by the client.

(d) <u>**Key Task-B:**</u>

Eighty (80) percent of the amount for Key Task-B shall be divided & be paid in equal amounts after completion of every quarter upon submission of Quarterly Activity Report and its acceptance by the client.

Balance (20) percent of the amount for Key Task-B shall be on submission of Final Report and its acceptance by the client.

However, payment shall be made to the Consultant on acceptance of the reports by the client. For the unaccepted Report(s), the Client, within 60 (sixty) days from receipt of such reports from the Consultant, shall advise the Consultant in writing the reasons of non-acceptance and shall instruct the Consultant in writing to re-submit the Report(s) addressing the same, within 15 (fifteen) days from the date of receipt of such instruction by the Consultant from the Client. Payment for re-submitted reports shall be made to the Consultant within 15 (fifteen) days of resubmission of the Report(s) if accepted

4.   Team Composition, Qualification Requirements and Staff Input

The consultant will be expected to provide the following Key Experts (shown in the table below) on a full-time basis on site over the period of the assignment. The consultant will provide backup support and maintenance for the application for the project period from time of installation and will provide support for both Offline and Online Tools and Smart Monitoring System. The consultant will also maintain a regular MIS Help Desk during office time at the PMU/Consultant office to address issues and feedback from users, such as the ULGIs and others.

Team Composition [May be adjusted during final contact]

	Name of the Position	No.	Duration/Person				Total Man Months	Educational Qualification	Experience
			For Task A1*	For Task A2**	For Task B***	Total			
1	Team Leader	1	3 3	12	18	18		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 3 years' experience as Team Leader in IT project development.
2	System Analyst	1	3 3	0	6	6		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 3 years' experience in system analysis.
3	Senior Programmer / Solution Architect	1	4 0	6	10	10		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 3 years' experience Programming or Solution Architect.
4	Senior Programmer (Android Apps)	1	0 4	6	10	10		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 3 years' experience Android Apps developer.
5	Programmer (For MIS Development)	2	4 0	8	12	24		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 2 years' experience in programming using Java.
6	Programmer (For Android Apps & iOS Apps Development)	2	0 4	8	12	24		B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field with Govt. & Leading Private Companies. Minimum 2 years' experience in Apps development.

#	Position						Qualification	Experience
7	UX Designer (For MIS development)	1	2	0	0	2	2	B.Sc. in Computer Science/Software Development, M.Sc. preferred	5+ Year experience in user interface design for mobile phone applications (Android). Proven track record of available and internationally recognized applications
8	UX Designer (For Apps development)	1	0	2	0	2	2	B.Sc. in Computer Science/Software Development, M.Sc. preferred	5+ Year experience in user interface design for mobile phone applications (Android & iOS). Proven track record of available and internationally recognized applications
9	Database Expert	1	2	0	12	14	14	B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	5+ Year experience in the ICT field especially in Database (Oracle/My Sql/ Sql Server) with Govt. & Leading Private Companies
10	Support Engineer (For MIS)	1	0	0	24	24	24	B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	3+ Year experience in the ICT field with Govt. & Leading Private Companies
11	Support Engineer (For Apps)	1	0	0	24	24	24	B.Sc. In Computer Science or M.Sc. In Computer Science & Engineering	3+ Year experience in the ICT field with Govt. & Leading Private Companies
12	Telephone Operator for Help Desk	4	0	0	24	24	96	Computer Skilled, Depth understanding on various software operations.	2+ Year experience in Call Centre.
	Total	17		18	16	124	254		

* Task A1: Development of MIS and M&E system; ** Task A2: Development of Android-based Mobile Application (APP) with Geo-tagging; *** Task B: Maintenance and Support Service

5.   Data, Local Services, Personnel, and Facilities to be provided by the Client

LGCRRP would provide the firm with necessary data and documents to facilitate the implementation of the assignment, if required.

6. Institutional Arrangements

Client will provide the required office space, workstations with net connection for three of the technical experts according to the requirement of the LGCRRP for the first two years and two of the technical experts will require for the rest of the period of the project or contract.

The firm will set up a Call Centre (Help Desk) at the LGCRRP/Consultant office premise manned with a minimum four staff/ operators. The firm should arrange a hotline number for concurrent minimum four connections; provide call centre management software, setup IP Phone and control devices with total Centre arrangement /outfit.