

Terms of Reference (ToR)

1 Advertisement

Job ID	e-GP Tender/ Proposal ID: 1266739
Job Title	Procurement of Software Services for the Development of New Modules and Optimization of Existing Features of the 'PWD Project Monitoring System'.
Job Family	Software Development
Location	Dhaka, Bangladesh
Appointment	Local Hire
Job Posted	28/04/2026 16:30 PM
Closing Date	13/05/2026 15:30 PM
Language Requirement	Bengali [Essential], English [Essential]
Programming Literacy	Strong working knowledge of web-based development languages such as PHP (Laravel), HTML, CSS, JavaScript etc.
Appointment Type	Based on Lump-sum Contract. Approximate Duration is 1 (one) month.

2 Background and General Description

The Public Works Department (PWD) of Bangladesh is implementing the PWD Project Monitoring System (PPMS) as a centralized digital platform to monitor planning, procurement, implementation, and progress of development projects. While the system is currently operational for approved and ongoing projects, several functional gaps have been identified that limit its effectiveness in early-stage planning, inter-office coordination, task management, and data-driven progress tracking.

To address these limitations and align PPMS with evolving operational and management requirements, PWD intends to add new modules, upgrade existing features, and enhance system performance. The proposed improvements will strengthen project lifecycle coverage—from pre-approval planning to execution and reporting—while ensuring better usability for field offices and monitoring authorities.

This Terms of Reference defines the scope of services required to design, develop, test, deploy, and hand over the enhanced PPMS.

3 Objectives of the Assignment

The primary objectives of this assignment are to:

1. Extend PPMS functionality to include **upcoming and pre-approved projects**.
2. Introduce **end-to-end planning support** from Development Project Proposal (DPP) inception through approval.
3. Establish a **centralized digital repository** for planning and approval-stage documents.
4. Enhance **coordination and preparedness** among concerned offices at early project stages.

5. Improve task prioritization, task assignment, and inter-office communication within PPMS.
6. Enable **automated, BOQ-based work program generation** and realistic physical progress tracking.
7. Upgrade existing modules to ensure ease of use, system reliability, and performance optimization.
8. Developing API to connect the other existing software of PWD to PPMS.
9. Ensure successful testing, deployment, and institutional handover of the upgraded system.

4 Scope of Services (Duties and Responsibilities)

The Consultant/Service Provider shall perform, but not be limited to, the following services:

4.1 Upcoming Projects Module

- Design and implement functionality to **register, track, and manage upcoming projects** prior to formal approval.
- Enable early linkage of concerned field, supporting, and monitoring offices.
- Provide automated notifications to relevant stakeholders.

4.2 Preliminary Procurement Plan (PPP) Module

- Facilitate preparation of **Phase-1 Preliminary Procurement Plan (PPP)** by the Project Division based on attached procurement packages.
- Enable field offices to review packages, report implementation constraints, and finalize remaining parts of PPP.
- Support timeline definition for key stages such as soil investigation, design submission, and estimate preparation.

4.3 Dashboard and Task Management System

- Develop a **priority-driven dashboard** highlighting deadline-critical and immediate tasks.
- Introduce a structured **task assignment and monitoring system** for Heads of Offices.
- Implement **customized dashboards** for different user roles (Field Offices, Supporting Offices, Monitoring Offices, MIS, Chief Engineer's Office).
- Integrate an **in-system commenting and chat facility** with proper audit trails.

4.4 Work Program Automation

- Automatically generate **activity-wise work programs** based on BOQ items (manpower, materials, tools) derived from the Estimating Software.
- Allow field offices to adjust generated timelines based on site realities.
- Enable automatic mapping of BOQ items to work program stages.
- Support photo-based progress updates at item and activity levels.
- Generate photo-based progress presentations for reporting purposes.

4.5 Package Split and Merge System

- Upgrade the existing package manipulation system.
- Introduce a **formal approval workflow** for split and merge requests.

4.6 Progress Reporting

- Integrate the existing progress report functionality into PPMS.
- Test and validate the reporting module for accuracy and reliability.

4.7 API Development

- Developing APIs to connect existing software of PWD to PPMS

4.8 System Testing and Deployment

- Conduct comprehensive system testing and quality assurance.
- Provide technical support during vetting by the Software Testing Facility, Bangladesh Computer Council (BCC).
- Deploy the upgraded system in the production environment.
- Hand over **source code, system documentation**, and provide a brief orientation to designated PWD personnel.

5 Selection Criteria

Minimum Educational Qualifications

- Bachelor's degree in **Computer Science and Engineering (CSE)** or **Electrical and Electronics Engineering (EEE)** or any other relevant discipline, backed by valid academic certificates.

Minimum Relevant Experience

- Minimum **eight (08) years** of professional experience in **software system design and development**, supported by appropriate documentary evidence.
- Minimum **five (5) years** of professional experience in the **design and development of project management and/or monitoring systems** software owned and operated by any Authority, Division, or Department of the **Government of the People's Republic of Bangladesh**, supported by proper documentation.

Technical and Professional Competencies

- Proven experience in **web-based application development**, particularly using **PHP (Laravel framework)** and **database-driven systems**, especially **SQL**, supported by portfolio projects that are live, operational, and currently in use.
- Prior experience with **project management, workflow automation, or monitoring systems** will be considered an added advantage.
- Strong understanding of **system integration, performance optimization, and application security**.

- Demonstrated ability to deliver **scalable, secure, and user-friendly solutions** suitable for large public-sector organizations.
- Strong **documentation, communication, and coordination skills**.

6 Evaluation Criteria (Indicative)

Criteria	Points
Educational Qualification	15
Relevant Experience and Adequacy for Assignment	55
Suitability considering age, skill (such as training, computer skills, proficiency in English and Bengali languages and others)	20
Interview	10
Total	100

ANNEX A: Description of the Service

1 Detail of Job

SI	Module	Present Status	Modification/Enhancement Plan
1	Upcoming Projects	At present, the system accommodates only ongoing and newly approved projects and does not provide any functionality to register, track, or manage upcoming projects prior to approval.	<p>To address this limitation, the following features may be introduced:</p> <ol style="list-style-type: none"> 1. Listing and Tracking of Upcoming Projects before formal approval. 2. End-to-end planning support from the inception of the Development Project Proposal (DPP) through its approval. 3. Centralized record-keeping of all documents generated during the planning and approval process for future reference. 4. Early linkage of all concerned offices related to the project to facilitate coordination and preparedness.
2	Preliminary Procurement Plan	After procurement packages are attached by the Project Division, the concerned field offices will notify the system of any implementation constraints. If no constraints exist, the field offices shall prepare the Preliminary Procurement Plan (PPP) by indicating estimated timelines for key stages, including soil investigation, design submission, and contractor selection.	<ol style="list-style-type: none"> 1. Upon the attachment of procurement packages, Project Division will prepare Phase-1 of the Preliminary Procurement Plan (PPP) by defining design-type-based timelines, from report/design submission up to estimate preparation. 2. The concerned field office will be linked and automatically notified. 3. The field office then reviews the package, reports any implementation constraints, and—if none exist—finalizes the remaining part of PPP.
3	Dashboard	At present, all users view a generic/common dashboard on their home page that lists all upcoming tasks. Due to the lack of task prioritization, users often face difficulty in identifying immediate or critical activities among multiple pending tasks.	<ol style="list-style-type: none"> 1. Under the proposed system, users will view a priority-driven dashboard displaying immediate pending tasks, with deadline-critical activities clearly marked. 2. A structured task management system will be introduced, enabling Heads of Offices to assign, track, and monitor tasks for subordinate officers within PPMS.

SI	Module	Present Status	Modification/Enhancement Plan
		<p>Furthermore, the system does not include a dedicated task management mechanism, preventing Heads of Offices from formally assigning tasks to subordinate officers through the system. The absence of an in-system commenting or chat feature among project-related officers also makes inter-office coordination difficult and results in a lack of documented communication records.</p>	<p>3. In addition, an integrated commenting and chat system will be implemented to facilitate inter-office communication while ensuring proper audit trails and communication evidence.</p> <p>4. The system may further support customized dashboards tailored to the specific functional requirements of Field Offices, Supporting Offices, Monitoring Offices, MIS, and the Chief Engineer's Office.</p>
4	Work Program	<p>Currently, the system includes three predefined work programs consisting of 18 items, categorized based on the number of floors of the structure. Field offices can select any one of these work programs according to the building height and modify it as required. Once the work program is finalized, the system allows field offices to upload site progress information along with photographs.</p>	<p>1. The work program should be automatically generated based on BOQ items (manpower, materials, and tools) derived from the Estimating Software. The generated work program shall define activity-wise timelines based on calculated quantities of manpower, materials, and tools. Field offices will have the flexibility to adjust these timelines based on site realities before finalization.</p> <p>2. After finalization, BOQ items shall be automatically mapped to corresponding work program stages, enabling field-level progress updates with photographs for each item. This will facilitate realistic physical progress tracking.</p> <p>3. Additionally system can automatically generate photo-based progress presentations for reporting and review purposes.</p>
5	Package Split and Merge System	<p>At present PPMS has its package manipulation system, but the system needs to be modified.</p>	<p>1. The System is required to be easy to user field office.</p> <p>2. The approval process of the split-merge requests should be introduced in the system.</p>
6	Progress Report	<p>Already Done but yet to be integrated with the system.</p>	<p>The functionality of the system will need to be tested.</p>
7	API Development	<p>Currently not present.</p>	<p>Preparing API as per requirement of other existing software of PWD.</p>

SI	Module	Present Status	Modification/Enhancement Plan
8	Testing and Deployment	-	This includes - a) System testing and quality assurance. b) Technical support during vetting by the Software Testing Facility, Bangladesh Computer Council (BCC). c) Deployment of the system. d) Handover of source code with a brief orientation for designated PWD personnel.

2 Duty Station and Reporting

The Consultant shall not be required to work on a full-time basis from the Departmental premises. However, for the purpose of coordination, progress review, reporting, and consultation, the Consultant shall attend meetings at the Departmental premises whenever physical presence is required and online meetings are not feasible.

The Consultant shall maintain a structured task management and progress tracking system to regularly indicate the status of assigned activities. The Consultant shall also maintain close coordination with the officer/person designated by the Procuring Entity (PE) for effective supervision and communication throughout the assignment period.

3 Address of the Client

The address of the Client shall be specified at the time of signing of the Contract Agreement.

4 Logistics and Facilities to be provided to the Consultant

No logistics or facilities shall be provided to the Consultant by the Client, except where deemed necessary. In case the Consultant is required or intends to deliver services from the Departmental premises, basic facilities such as a desk and chair may be provided solely for seating and work purposes. No additional office equipment or support services shall be provided.

ANNEX C: Consultant's reporting Obligations & Payment Schedule

Sl. No.	Reports	Days Due from signing of contract	Contents of the Report	Payment Schedule
1	Upcoming Projects Module ? Design and implement functionality to register, track, and manage upcoming projects prior to formal approval. ? Enable early linkage of concerned field, supporting, and monitoring offices. ? Provide automated notifications to relevant stakeholders.	15	1. Listing and Tracking of Upcoming Projects before formal approval. 2. End-to-end planning support from the inception of the Development Project Proposal (DPP) through its approval. 3. Centralized record-keeping of all documents generated during the planning and approval process for future reference. 4. Early linkage of all concerned offices related to the project to facilitate coordination and preparedness.	20% of Contract Price
2	Preliminary Procurement Plan (PPP) Module ? Facilitate preparation of Phase-1 Preliminary Procurement Plan (PPP) by the Project Division based on attached procurement packages. ? Enable field offices to review packages, report implementation constraints, and finalize remaining parts of PPP. ? Support timeline definition for key stages such as soil investigation, design submission, and estimate preparation.	20	1. Upon the attachment of procurement packages, Project Division will prepare Phase-1 of the Preliminary Procurement Plan (PPP) by defining design-typebased timelines, from report/design submission up to estimate preparation. 2. The concerned field office will be linked and automatically notified. 3. The field office then reviews the package, reports any implementation constraints, and if none exist finalizes the remaining part of PPP	20% of Contract Price
3	Dashboard and Task Management System ? Develop a priority-driven dashboard highlighting deadline-critical and immediate tasks. ? Introduce a structured task assignment and monitoring system for Heads of Offices. ? Implement customized dashboards for different user roles (Field Offices, Supporting Offices, Monitoring Offices, MIS, Chief Engineer's Office). ? Integrate an in-system commenting and chat facility with proper audit trails.	15	1. Under the proposed system, users will view a priority-driven dashboard displaying immediate pending tasks, with deadline-critical activities clearly marked. 2. A structured task management system will be introduced, enabling Heads of Offices to assign, track, and monitor tasks for subordinate officers within PPMS. 3. In addition, an integrated commenting and chat system will be implemented to facilitate inter-office communication while ensuring proper audit trails and communication evidence. 4. The system may further support customized dashboards tailored to the specific functional requirements of Field Offices, Supporting Offices, Monitoring Offices, MIS, and the Chief Engineer's Office.	10% of Contract Price
4	Work Program Automation ? Automatically generate activity-wise work programs based on BOQ items (manpower, materials, tools) derived from the Estimating Software. ? Allow field offices to adjust generated timelines based on site realities. ? Enable automatic mapping of BOQ items to work program stages. ? Support photo-based progress updates at item and activity levels.	20	1. The work program should be automatically generated based on BOQ items (manpower, materials, and tools) derived from the Estimating Software. The generated work program shall define activity-wise timelines based on calculated quantities of manpower, materials, and tools. Field offices will have the flexibility to adjust these timelines based on site	10% of Contract Price

	? Generate photo-based progress presentations for reporting purposes.		realities before finalization. 2. After finalization, BOQ items shall be automatically mapped to corresponding work program stages, enabling fieldlevel progress updates with photographs for each item. This will facilitate realistic physical progress tracking. 3. Additionally system can automatically generate photo-based progress presentations for reporting and review purposes.	
5	Package Split and Merge System ? Upgrade the existing package manipulation system. ? Introduce a formal approval workflow for split and merge requests	15	1. The System is required to be easy to user field office. 2. The approval process of the splitmerge requests should be introduced in the system.	10% of Contract Price
6	Progress Reporting ? Integrate the existing progress report functionality into PPMS. ? Test and validate the reporting module for accuracy and reliability	7	The functionality of the system will need to be tested.	10% of Contract Price
7	API Development ? Developing APIs to connect existing software of PWD to PPMS	7	Preparing API as per requirement of other existing software of PWD.	10% of Contract Price
8	System Testing and Deployment ? Conduct comprehensive system testing and quality assurance. ? Provide technical support during vetting by the Software Testing Facility, Bangladesh Computer Council (BCC). ? Deploy the upgraded system in the production environment. ? Hand over source code, system documentation, and provide a brief orientation to designated PWD personnel.	30	This includes - a) System testing and quality assurance. b) Technical support during vetting by the Software Testing Facility, Bangladesh Computer Council (BCC). c) Deployment of the system. d) Handover of source code with a brief orientation for designated PWD personnel.	10% of Contract Price

* Payments shall be made upon satisfactory completion of each deliverable and acceptance by the Procuring Entity.