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Terms of Reference
Department of Public Accounts, Ministry of Finance, Bhutan
SOFTWARE DEVELOPER for DEVELOPMENT AND INTEGRATION OF
SYSTEMS AND REPORTS DEVELOPMENT AND ENHANCEMENT

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1. Background

- The Department of Public Accounts (DPA) has initiated the clustering of finance services from July 2021. The broader objective of this initiative is to optimize the use of scarce resources (human, financial and time) through use of digital payments and real time systems. This initiative is also expected to improve the overall service delivery such as accounting, finance and administration related services in agencies. However, there is no common system to be used by the cluster office for recording and documentation of supporting documents for payment settlement. DPA aims to address this gap through the development of a documentation system to be used by the cluster offices. This system shall be integrated with *electronic* Public Expenditure Management System (*e*-PEMS) for real time data sharing at the process and reporting level.

- The main basis for reconciliation of payment settlement by beneficiaries such as suppliers, contractors etc. are the bank statement from the bank. However, all the required information is not captured in the bank statement due to the limited characters allotted in the narration of the payment by the agent bank. As such beneficiaries have faced challenges in reconciliation of their accounts as they are not able to identify source and other details for payments received from *e*-PEMS. The beneficiaries are required to frequently consult budgetary bodies for fetching payment details and even resort to fetching details from DPA. In order to address this issue, DPA aims to develop a portal that will provide details of the payments to the beneficiaries. The beneficiaries shall access the payment details through the portal and shall have all the required information. The portal shall be integrated with *e*-PEMS for real time data sharing.

- The enhancement of reports has been one of the priorities of DPA. Report is an integral part of *e*-PEMS to support decision making. The existing report has been developed as a module in *e*-PEMS using the crystal report tools. New development and enhancement of the reports in the existing module has been limited due to the outdated/unsupported version of crystal report tools. There have been frequent issues with the reports like slowdown in the generations and affecting the system performance. Moreover the crystal report tools do not offer the latest business intelligence and data visualization features. Such features have become necessary for enhancing analytical and decision making skills.

  DPA aims to address these gaps through the enhancement and development of reports using the business intelligence tools. The report shall be developed as a separate

system and integrated with *e*-PEMS. This shall help in enhancing the system performance and also shall have provision to generate adhoc reports based on the requirements from time to time.

The software developer shall carry out the development, enhancement and integration based on the system requirement specification (SRS) prepared by the working team in DPA.

e-PEMS has been developed on .NET and MSSQL 2016 platform, and Crystal Report tools for reporting purpose. *e*-PEMS has been in use since July 2019 with more than 750 users, spread across the Country.

The main business goals of the documentation system are to:
  a) Replace manual documentation process.
  b) Standardize the process in the Cluster Finance Services (CFS).
  c) Minimize manual interventions.
  d) Real time data sharing for decision making.
  e) Maintain proper audit trail.

The main business goals of the portal system are to:
  a) Provide timely information on payments details which are not possible through the bank statement of the bank.
  b) Facilitate the reconciliation of the payments for the beneficiaries.
  c) Update status of the payment through integration with *e*-PEMS.

The main business goals of report enhancement and development using business intelligent (BI) tools are to:
  a) Deliver fast and accurate information to decision makers using a variety of data sources.
  b) Improve and achieve accurate decision making.
  c) Enhance analytical and decision making skills through data visualization.

2. Scope of the Work

A. Task related to development of documentation system includes the following but is not limited to:
  1. User Management
  2. Password policy
  3. Document submission process by agency
  4. Financial report viewing by agency
  5. Document verification by the CFS
  6. Overall user management by the CFS
  7. Integrate with *e*-PEMS to automate the processes

B. Task related to development of portal includes the following but is not limited to:
1. User Management
2. Password policy
3. Payment details report viewing by daily, monthly and yearly.
4. Integrate with *e*-PEMS to fetch the payment details

C. Task related to enhancement and development of reports using BI tools includes the following but is not limited to:
1. All the reports used by budgetary bodies.
2. All the reports used by Fiscal Transfer and Monitoring Division (FTMD).
3. All the reports used by Treasury Management Division (TMD).
4. All the reports used by Accounts Division (AD) including the Annual Financial Statements (AFS).

Extensive testing of the enhancements and developments are required to be carried out in order to ensure smooth implementation of the systems along with the User Acceptance Testing.

5. Objective

The main task of the software developer (the Consultant) is to ensure effective implementation of the systems by working as a lead developer in the software development team and to ensure the system operates without any complications and glitches.

6. General responsibilities

The Consultant will be primarily responsible for leading the development and providing assistance to the IT Team.

7. Specific Tasks

The Consultant will perform the following tasks, but not limited to;

- Work closely with the stakeholders for understanding the functional and system requirements.
- Design, develop and modify the source codes of the systems in consultation with the IT Team.
- Work closely with IT Team to develop controls, new functions and fix the bugs.
- Participate in testing process such as unit testing, UAT and bug fixes.
- Assist the team in formalizing processes, procedures and quality control.

- Mentor and coach the IT team in order to strengthen the capability of the team to manage the expanding IT responsibilities.
- Anticipate problems and difficult situations and suggest measures to resolve them.
- Provide input on direction of and assist with ongoing development as required.

8. Duration

The Consultant will be recruited for 90 working days over a duration of four (4) months which is subject to renewal based on the performance of the selected consultant. The applicant will work full time from the DPA office in Thimphu, Bhutan.

9. Deliverables

The Consultant shall submit the following deliverables after contract signature/start of work:

D1: An Inception Report including a detailed work plan covering all activities in scope of this assignment (within 1week).

D2: Development of (a) portal for identification payment details from *e*-PEMS, (b) development of documentation system for cluster finance services and (c) reports enhancement and development with BI tools. A bi-directional data exchange interface established between the *e*-PEMS and systems using the web services/Application Program Interface (API) to avoid manual interventions (within 10 weeks).

D3: Draft final report including items listed below (11weeks):

a. Detailed functional and technical description of the interface of the *e*-PEMS and systems.

b. Source code of the portal, documentation system, reports and interface with *e*-PEMS.

c. Recommendations for the sustainability of the systems and reports and strengthening the software development skills of the MoF ICT Unit.

D4: Final report incorporating comments on the draft report (12weeks)

10. Qualifications requirements

The Applicant for this position is expected to meet the following minimum qualification requirements:

- Master Degree in Information Technology, Computer Science or equivalent with a minimum of 5 years work experience in system administration and software development; Or a Bachelor Degree in Information Technology, Computer Science or equivalent with a minimum of 7 years of work experience in system administration and software development
- At least five (5) years of software development experiences .NET, MSSQL, API &Web Services

- Experience in working in similar countries like Bhutan with similar environment, nature and IT projects on ePayment/accounting, budgeting and planning would be an added advantage
- Demonstrated strong communication and leadership skills with the ability to promote Collaborative team environments and work well with cross-functional groups
- Fluency in English is mandatory (oral and written)

11. Evaluation Criteria

Criteria	Score
Masters in Information Technology, Computer Application or equivalent OR Bachelor Degree in Information Technology, Computer Science or equivalent	(Maximum score 25) 20 points for Bachelor's degree qualification and 25 points for Master's degree qualification
At least of 10 years' experience in the system administration & software development	(Maximum score 30) 10 points for 10 years' experience. Two points for each additional year of experience beyond 10 years. 30 points flat for above 20 Years
Should have experience of at least one demonstrated PFM system development (mandatory) based on a recognized diagnostic framework as team leader/project manager in the last five years	(Maximum score 35) 25 points for experience of one PFM related software development and 35 points for more than one PFM related software development
Fluency in English is mandatory (oral and written); fluency in Dzongkha is a plus	(Maximum score 10) 5 points for English and 5 points for Dzongkha

12. Reporting

The Software Developer will report to the Project Team Lead and submit monthly reports as requested.

13. Restrictions

In addition to the standard conflict of interest restrictions specified in the consulting contract, all materials created under this Contract will remain the sole property of the Ministry of Finance of Bhutan (MoF). Re-use of the materials will require the formal, written approval of the MoF.

The Consultant shall have no material interest in any of the outputs of this assignments and technologies or related ICT services under consideration. The source code of the e-Payment module and other software components belong to the Ministry of Finance, and the Consultant

will not have any right on the source codes of the software to be developed during this assignment.

On the commencement of the assignment, the Consultant will jointly prepare with the MoF a statement of confidentiality that will bind the Consultant to nondisclosure of any sensitive information that the Consultant may become knowledgeable of during the course of the assignment. The terms of this agreement shall be made consistent with the relevant privacy laws of Bhutan.

14.Payment Terms

It is a task based with timeline contract and the consultant shall be paid as per the work progress as detailed below.

The rates quoted by the interested consultant shall be on lump sum basis and include all associated expenses related to the delivery of the services. However, the Hiring Agency shall facilitate for deliberation, consultation, discussion and imparting training to participants from relevant stakeholders.

Fee Claim: The consultant will work on lump sum cost basis and payment shall be made as per the following installments:

10% of contract price on submission and acceptance of inception report D1
20% of contract price on submission and acceptance of draft D2
30% of contract price on submission and acceptance of final D2
10% of contract price on submission and acceptance of draft D3
10% of contract price on submission and acceptance of final D3
20% of contract price on submission and acceptance of final D4

For each of the deliverables, the consultant is expected to make a presentation to the DPA officials.