Terms of Reference

Department of Public Accounts, Ministry of Finance, Bhutan
SOFTWARE DEVELOPER for STRENGTHENING PUBLIC EXPENDITURE AND MANGEMENT SYSTEM

Background

The Department of Public Accounts (DPA) has embarked on enhancing the current Public Expenditure and Management System (PEMS) to accommodate the e-Payment flagship initiative (a major component of the Integrated Financial Management System) to bring fiscal transparency, effectiveness and efficiency in the disbursement of public fund in close collaboration with the Bank of Bhutan Limited (BoBL), Royal Monetary Authority (RMA) and the Department of Information Technology and Telecommunication (DITT), MoIC. PEMS has been developed on .NET and MSSQL 2016 platform, and Crystal Report tools for reporting purpose. PEMS has been in use since 2010 with more than 750 users, spread across the Country.

The main business goals of the e-Payment interface are to:
a) Replace manual cheque transactions with Electronic Fund Transfer to the Banks
b) Improve timeliness and convenience in making payments
c) Automate the bank reconciliation process
d) Improve government reporting
e) Prevent excess withdrawals
f) Prevent processing of RGoB payments outside of PEMS
g) Automatic transfer of loans and remittances and reconciliation
h) Automatic payment of the utilities like Internet charges, Telephone charges, electricity bills, water & sewerage charges, Land Tax etc through integration (Web service)
i) Pave way to cashless modality and Treasury Single Account (TSA) operations
j) Minimise the risk of corruption

An ePayment team has been instituted in DPA to develop and implement the proposed e-Payment module that will link the PEMS with the Banking system for the automation of electronic payments and reconciliation of Bank statements. The team has been vigorously engaged for the past one year to meet the project dead line of 30th June 2019.

PEMS has been enhanced in-house by in order to accommodate the e-Payment initiative. PEMS enhancements includes the following but are not limited to:

A. Internal enhancements

1. System security enhancements
2. User management enhancements
3. Password policy enhancements
4. TPN Master (new process and screen)

5. Party Master screen enhancements
6. Assignment screen enhancements
7. Voucher preparation screen enhancements
8. Validation of Broad Head and its Line Items (checks and controls)
9. Voucher verification screen enhancements
10. Voucher approval screen enhancements
11. Payment instruction (new process and screen)
12. Payroll screen/process enhancements
13. Reversal screen enhancements
14. Maker checker process enhancements
15. Deposit work process enhancement
16. Remittance process enhancement
17. Bank reconciliation process enhancement
18. Deposit work process enhancement
19. Prior Year Adjustment process enhancement
20. Extract Transform and Load (ETL) process
21. Technical enhancements to accommodate the automated interface with RMA system

B. External Enhancements

1. Integration between PEMS and BOBL – for Payment processing and reconciliation
2. Integration between PEMS and GIFT (Global Interchange of Financial Transactions) – for Payment processing to Banks other than BOBL
3. Integration between PEMS and RCSC – for Payroll Control mechanism

Extensive testing of the enhancements is required to be carried out in order to ensure smooth implementation of the e-Payment initiative along with the User Acceptance Testing. Each process or enhancements has been documented for reference.

Objective

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

General responsibilities

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

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 e-Payments module in consultation with the IT Team.
- Work closely with IT Team to develop controls, new functions/modules and fix the bugs in the e-Payment module
- 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.

Duration

The Consultant will be recruited for 80 days over a duration of five (5) 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.

Deliverables

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

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

- A bi-directional data exchange interface established between the PEMS the Banking system and stakeholders systems (for Utility payments) using the web services/Application Program Interface (API) to avoid manual interventions (within 8 weeks).

- Draft final report including items listed below (10 weeks):

  a. Detailed functional and technical description of the e-Payments module/interface.

  b. Source code of the e-Payment module/interface.

  c. Recommendations for the sustainability of e-Payments and strengthening the software development skills of the MoF ICT Unit.

- Final report after draft report being reviewed by the Ministry of Finance (12 weeks)

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)

Reporting

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

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.

Payment Terms
It is a Time-based contract and the consultant will be paid on daily basis.