

## Section 6. Terms of Reference (TOR)

### Automation of Cha-Bagan Shromik Bhoishho Tohobil (CSBT)

#### A. Overview

**CSBT** is a financial institute supervised by a Trustee Board which is headed by Director General, Department of Labour, under the Ministry of Labour and Employment (MOLE). CSBT Office started its function in 1961 according to “The East Pakistan (Plantation Employees) Provident Fund Ordinance, 1959” and “The East Pakistan (Plantation Employees) Provident Fund Rules 1960” for proper conservancies of Tea Estate’s workers’ provident fund. According to “Bangladesh Labour Law, 2006” and “Bangladesh Labour Rules, 2015” the CSBT Office enrolls eligible PF (Provident Fund) members, preserves the Provident fund, invests the fund in profitable government or non-government financial institute, distributes yearly interest, finalizes the withdrawal payment of retired workers and maintained overall financial management.

As of now, 161 tea estates& gardens (210 including FARI) have been enrolled from the whole country under the management of the CSBT Office. This office preserves the accumulation of 122414 PF members (Continued 95038 + Discontinued 27376) under these estates/gardens enrolled so far. These numbers are highly likely to increase over time.

Recently, the CSBT proposed for development of an ERP as part of the ICT initiatives. The CSBT is mandated to undertake the cloud based software activities for PF accumulation of the tea estates laborers. It is very important that information dissemination, data sharing and data access are made easy for all end users.

Currently, the CSBT Management has no automated solution. To process the PF for such a large number of employees is a huge job. Due to the manual system, it requires much human effort and valuable time. Consequently, a PF member needs to wait a long time to get updated information about the account and for the withdrawal of the provident fund. Besides to record this information and to maintain these large volume of data is very difficult and error prone. The proposed automation project is designed to overcome all these problems and make the process easier.

#### B. Objectives

The ERP will be a web based system to keep a record of all the data and information related to employees’ provident fund management system. The system should enable data input from multiple sources like tea gardens, compute that information and make it available for online.

The project should automate the existing manual system of *Cha-Bagan Shromik Bhoishho Tohobil Accumulation* and CSBT Office management tasks. All the basic accounting facilities will be accumulated in this automated system.

The development of online ERP aims to:

- Provide easy access to get information
- Improve data integrity and transparency
- Minimize human errors
- Reduce face to face interaction

- Improve efficiency of the data collection, analysis and information dissemination
- Ensure accountability of the staff.

### **C. Scope of Services**

According to 'Bangladesh Labor Law, 2006' clause – 268(1), if a tea estate worker works more than a year then s/he is eligible to become a PF member. After becoming a PF member, the tea estate authority deducts 7.50% of the PF member's monthly basic salary/wages as his/her subscription and the employer's contribution will be the same 7.50%. The estate authority deposits against PF member's account a total 15% (as subscription + contribution) by cheque / pay order / demand draft or any other suitable option to CSBT office along with the deduction details of the employees.

The Tea Estate authority deposits an additional administrative charge by cheque / pay order / demand draft or any other suitable option to CSBT office for maintaining all types of CSBT Office's administrative expenses. The System should automate the Accounting, HR and payroll, stock and inventory, and GPF management of staffs.

The CSBT enhancement scope has to be expanded through 3 main stages:

1. Study and Implementation Stage
2. System Stabilization and User Acceptance Test stage
3. Support and Maintenance Stage

#### **1) Study and Implementation Stage:**

The selected firm will have to study the service process. The firm will come up with System Requirement Specification (SRS) to develop a good system after consulting with the users/stakeholders. Once the system is developed users will be trained to use and then the system will be piloted. Justified recommendations will be incorporated into the system and then final testing will be carried out before implementation of the system and other relevant solutions.

#### **2) System Stabilization and User Acceptance Test stage:**

The firm shall complete the following activities for the period of scheduled months after the delivery sign-off:

- Dedicated On-site support to the CSBT with the development team still on board.
- Preparation of UAT environments.
- Incorporate all minor and major changes such as changes in database objects and relationships among the objects, system workflows, core modules if required, and other necessary and critical changes which impact the overall working functionalities of the respective line agencies system.
- Training and workshops wherever necessary as desired by the CSBT.

### 3) Support and Maintenance Stage:

After System stabilization and User Acceptance Test sign-off, the firm shall provide free Support and Maintenance support for a period of remaining 1 year after the system is officially launched. The Consultant shall perform all maintenance activities related to the following:

- Trouble shooting at both Applications level and User level.
- Assist the ICT focal person of the CSBT in operation of the Systems.
- Solution up-gradation such as installation of patches, fixing bugs, minor changes, higher versions of the applications, etc.
- Prompt attention to the issues raised by the CSBT and line Agencies.

#### a) User Types

Serial	Agency	Users	Functionality
01	CSBT	CSBT Officials	Operation
02	System Admin	IT Personnel	Admin
03	Tea Garden	Tea Estate's Management	Data Entry, Download and print reports & Forms.
04	End Users	Public	Query

#### b) Detailed scope of work to be covered as part of this Document:

- Study the existing procedure of the various stages of work of different divisions at CSBT and document it with AS-IS workflow diagrams and get acceptance of the client.
- Apply process re-engineering wherever possible and propose TO-BE workflow diagrams. Obtain a user acceptance on the TO-BE workflow diagrams from the client.
- Prepare Software Requirement Specifications (SRS) or Functional Specifications (FS) document and Software Design Document (SDD) for the computerized web-based system and submit the same along with workflow diagrams.
- On acceptance of the SRS/FS, design and develop a non-functional prototype (HTML, CSS based) that is in line with the requirements indicated so that client gets the feel of the system that is being developed and provides necessary feedback on the frontend aspects.
- On acceptance of the non-functional prototype by CSBT, design and develop an appropriate software package that is in line with the requirements indicated.
- System Development and Deployment
  1. Finalization of Software Requirement Specifications and SRS sign-off based on the Acceptance.
  2. Architecture Design for the solution including the Security level Designs.
  3. Application development of all the system enhancement requirements.
  4. Technical testing of all the components.
  5. Submit the test cases and test plans to the CSBT.
  6. Trial Run of the enhanced system.
  7. All the Requirement, Design, Configurations and Development methodologies have to be well documented and handed over to CSBT.
  8. Well commented source codes, database scripts, test scripts, etc. to be handed over to CSBT.

9. The framework for system development should not be obsolete but it should be current and progressive.
- Training and Capacity Building
    1. Full involvement of at least 2 ICT Officials from firm to ensure proper transfer of Knowledge in terms of development know-how and sustainability of IT Systems developed as a part of this assignment (for lifecycle of project).
    2. Training of at least 4 Master Trainers from CSBT on the System Operation and functionalities. (*Consultant shall conduct training at the locations chosen by CSBT*)
    3. Prepare all the System User Manuals (Both technical and normal user manual) and hand over to CSBT.
  - System Stabilization and UAT
    1. Support in terms of System stabilization and making Systems acceptable by the CSBT for duration of 6 months from Project delivery sign-off.
    2. Conduct major additions or updates of the system wherever required.
    3. The contract with the consultant shall not be withdrawn at this phase of the project.
    4. Meet all requirements through UAT preparation and UAT sign-off.
    5. Support and recommend best practices Solution.
  - Support and Maintenance
    1. Support and Maintenance for 1 year from UAT sign-off.
    2. Solution up-gradation such as installation of patches, fixing bugs, incorporating minor changes, higher versions of the applications, etc.
    3. Project exit sign-off

## D. Modules of the System

The system shall have one common page to login for all types of users listed in the table above, however, based on their roles and access rights, only authorized information or data or functions of the system will be accessible.

### User Registration

1. The users shall be able to register online with necessary information for registration.
2. The system admin shall receive the notification of applicant via email.
3. The system shall have functions to verify the applicant and system admin could reject or approved the registration.
4. The system shall notify the applicants on the status of registration.

Each module can be separated with the following menus.

- Master – Master will be the most significant part of the software. It will capture the basic information essential for the modules to function correctly. Generally, the masters will be the entered during implementation and they rarely require modifications. Information will be given from master forms the basis for processing the daily activities in the 'Transaction' menu.
- Transaction – Transactions will be the recording of the daily and periodic activities performed by the organization. Reports will be mainly generated based on the recording in transactions.
- Report – Reports will be the presentations of the business details entered into the modules.
- Tools – Tools will be the initial settings required for the module to function. They are usually a one-time entry and based on this working of the module will be defined.
- Exit

## **Admin System**

Admin system may be aptly defined as the Gateway to CSBT ERP. It may be defined so, as it acts as the entrance into every other system of the said ERP. The main functions of this system will be user management, security management, and housekeeping. Admin systems will accept certain general settings that are needed for routine operations of other systems and take care of the User's ID and User Rights. The objectives of this system will be

- To ensure validity of all input through the system.
- To ensure completeness of all inputs through the system.
- To provide accurate and reliable reports say data entry status, audit trail as per selection for all the modules.

## **Provident Fund Management System**

This system will provide valuable information of PF members and will keep track on personal details and history. This system will be generated all statutory related reports. The details are given below.

### **a. PF MEMBERS**

The section deals with all details corresponding to the PF members in the organization. The personal as well as job details of the PF members are to be defined. It includes the categories to which the employees in the company are categorized, personal details of the employee job detail of the employees such as designation, grade, level etc. The screen may be included department, grade, employee master, member type, family details, termination details, garden, company etc.

### **b. DAILY / PERIODIC TRANSACTION**

Transactions are recordings of the daily or periodic activities in the system. It can be captured from porting or manual data entries.

### **c. PF OPENING BALANCE**

There should be an option to be used to record the PF opening balance of the PF members at the time of installation of this module. Information can be captured as per financial period.

### **d. PF SETTLEMENT**

Before giving the PF to the employees, PF amount is to be settled by the CSBT office. The PF settlement option is to be used to enter the details of PF settlement done for employees.

### **e. CALCULATION**

The calculation screen is to be used for distribution of the interest among the employees listed with the CSBT office.

### **f. ACCOUNTS UPDATE**

This screen will be allowed to automatic generated journal to final accounts. The accounts updating for the labor is to be done on weekly / monthly basis. Through this screen system can specify the liability journal posting details.

### **g. REPORTS**

As per requirement, various types of the report can be generated in the PDF format and direct excel porting as well. Some approved formatted names are C-Form, D-Form, Single Line Statutory Details, Individuals statutory details, journal voucher, outstanding statement for discharged employees etc.

**CSBT Office Management System:**

- a. CSBT Office General Accounts
- b. CSBT HR Management Systems
- c. CSBT Payroll Management System with GPF
- d. CSBT Office Stock Inventory Management

## E. Technical Requirements

**Usage:** The system will be a web-based system that will be used by a good number of tea estates situated at different geographically separated locations. The operations will be performed in a server placed in the premise of the CSBT office as well as suitable cloud-based hosting systems.

**Development Methodology:** The vendor should strictly follow some sort of development methodology during the project development.

- The vendor shall carry out assessment on existing list of services and technologies to optimally allocate or determine the product backlogs. It shall also consist of AS-IS and TO-BE workflow.
- The product backlog must consist of related services or processes of different services to efficiently carry out process.
- The vendor shall carry out user requirements of each product backlog separately and get SRS sign off to initiate the implementation of the first sprint.
- The vendor shall also sign off on each test case and present each sprint backlog integrated with the data hub staging environment. This will help in better user acceptance of the system.
- During the enhancement of the services, it should be first tested in the development machines of the vendor by the testers from the vendor's side following which access will be provided with the staging environment of the data hub where the services should be thoroughly tested before releasing it to the production environment with live data.
- Only successfully tested product backlog in the staging environment shall be migrated and released in production environment.
- After the user acceptance test succeeds, the system has to be deployed for live operation.

**Platform support:** The system must be portable. It should run in major operating system platforms such as windows (32/64-bit Windows 2007 and later), Linux, Macintosh, Android (Android 4.0 and later) and iOS. If a browser-dependent system is developed, then the system must be compatible with and well rendered in Microsoft Internet Explorer 11 and above, Mozilla Firefox 50.0 and above, and Google Chrome 55.0 and above.

**Responsiveness:** The system must run on any screen sizes. Using modern UI frameworks for responsive design is mandatory in major devices like Mobile, PC, Laptop, Notebook, Tab, etc. The system should have the necessary API support for integrating mobile applications in future.

**Security:** All the resources and documents used in this group will be highly confidential. The vendor must provide SSL (Secure Sockets Layer) certificate (Grade 2) for the site. The selected firm should ensure that the system developed is secured in nature so that both the back end system and front end user are not exposed to any kind of data manipulation and threat to the whole system. Should there be any problem related to it, the firm is responsible to ensure proper

security and protocol measures adopted. The vendor must conduct standard testing (security testing, load testing, etc.) and submit its logs and reports to CSBT office. The vendors shall be responsible to fix any vulnerability related to the system within the project contract period.

**Data Integrity:**

- Automatically cross check for data consistency and perform data validation to maintain data integrity when entering and importing data. Any data integrity problem should be flagged.
- The CSBT System should flag any conditions that impact the data integrity, and revoke any associated transactions.
- Some fields may be mandatory while the others are optional. If mandatory fields are not completed, then the CSBT System should reject the data capture form.
- Data entry checks should be performed wherever possible (e.g. dates, numeric data), with a prompt for the user to correct the information.

**Audit Trails:** The CSBT System should maintain complete logs of all the activities performed by authorized users. The logs should keep such data like date and time stamp, name of user, old value, new value, login date and time, log out date and time, etc. For public users, the system may keep the IP and MAC address with date and time stamp.

**Data Quality Matrix:**

- The firm should develop a publicly accessible Data Quality Matrix which will show the status of updating data.
- The Data Quality Matrix will have graphical and textual representation.

**Coding Guideline:** The vendor must manage its source code through standard source code management tools like SVN, Git and Trac, so that many programmers can work in parallel without duplication of work. It will also be a useful tool to track previous versions of the codes and will be useful for debugging purposes. The vendor must follow the secured coding guideline prescribed by Bangladesh Computer Council (BCC) e.g. protecting from SQL injection, Cross-Site Scripting (XSS), etc. Don't Repeat Yourself (DRY) principle in coding is recommended.

**Naming Convention /standard:** In order to keep source code organized, vendors must strictly follow standards for forms, reports, database, triggers, views, stored procedures, coding etc. across the systems they develop.

**Hardware Suggestion:** The Software Development Firm will suggest a full specification of the computer hardware (Computers for office use, server, networking, other peripherals, and accessories) that are required for the CSBT System to operate. Based on this specification the hardware will be separately arranged by the CSBT Office. Therefore, the provision of hardware lies outside the scope of this assignment.

**Resource requirements:** The resources required by the system should not be too high and must be usable by normal users. The system should be able to perform its operation without hindering the normal usability of the computer system.

**Development Language:** Any programming language may be used to develop the system. However, the following popular languages are preferred: Java, PHP, Python, Ruby, ASP.NET, C#.

The application is recommended to be implemented using web based frameworks since they adequately address protocols and standards including application security and manageability. If the developer has an alternative development language proposal, the developer may provide the details on the proposed language.

**Database System:** The database for the application is recommended to be implemented using Open Source Database such as MySQL, PostgreSQL, SQL, Oracle, SQL Server, Maria DB etc. In case, the Vendor chooses to propose any third-party tool(s) for the solution for tuning performance, adding security features, or rapid application development, or any specific add-in software package required for analysis and processing data, full justifications and cost must be provided in the proposal.

**Extendibility:** System should be scalable and upgradeable as and when the number of users and contents increases.

**Concurrent Access:** Maintain and ensure that the system supports maximum concurrent users.

**User Notification:** Email and SMS services will be provided by the system to the users for notification. The vendor should provide a free bulk SMS service once a month for the monthly deposit and once a year for the annual statement to every PF member during the one-year support and maintenance period.

#### **General Features:**

The proposed System should comply/adhere to following technical requirements/functionality, but not limited to:

- Implement data validation for both client and server
- Don't Repeat Yourself (DRY) principle in coding is recommended
- Implement "Search | Add | Modify | Delete | Save | Cancel | Preview | Close" operations and auto save if the users are idle for 60 seconds
- Adopt Role-Based Access Control (RBAC) to authorize users' access to system resources based on roles
- Maintain consistent aesthetics and UI of the software
- The web-based software should have provision to support interactive maps. This requirement can be provisioned both from front-end APIs and backend database system design by incorporating appropriate UTF based locale support.

**Integration features:** The system should be able to integrate other applications and services like TelCo, financial services (online banking, mobile banking, etc.), and devices like biometric devices in the future.

**Planning:** The vendor must provide a detailed plan of how they will hand over the codebase and developed system to the client after completing the project. The detailed plan should include training schedules and materials such as design docs, user guide, API docs, technical details of techniques, codebase with proper documentation, etc. that need to be delivered.

**System Requirement Specification (SRS):** A System Requirement Specification (SRS) must be produced. It should identify and document the user requirements & technical requirements of the CSBT system, as follows:

- Provide a detailed specification and description of the functionalities provided by the CSBT Office & its behavior for each required use case and in response to all relevant inputs and conditions.
- The SRS should be submitted to the CSBT Office for approval.

**System Design Description (SDD):** A detailed System Design should be produced, documented in a system design description (SDD), which provides a detailed description of the module structure and module functionality, the underlying system architecture of the CSBT system including table structure, entity relationship diagrams, object models, page specifications, etc. The SDD should also include a process/data flow diagram of the system.

- The SDD should be submitted to the CSBT Office for approval.

### **Quality Assurance and Operational Acceptance Testing (OAT)**

- The software Development Firm must prepare test plans, operational acceptance criteria and that should be approved by the CSBT Office.
- Conduct user acceptance testing and obtain operational acceptance.
- The CSBT Office will arrange for a group of users to participate in testing of the CSBT System to validate and verify that it meets all the functional requirements as set out in the approved System Requirement Specification (SRS) and System Design Description (SDD).
- These users will first need to be trained on the CSBT System before performing the OAT. Users will work from test scenarios developed jointly by the Software Development Firm and the CSBT Office. As each Scenario is completed, the user will note whether the test was completed satisfactorily and whether there were any errors or unexpected results. The Software Development Firm must correct any OAT issues. Any features or functionalities that fail OAT must be retested once corrected.
- Once OAT has been completed, the Software Development Firm should prepare a summary of the test results and the steps that were taken to address any issues or problems identified. In the event of any disputes about the conduct or result of testing, The CSBT Office will provide to the Software Development Firm in writing a description of the issues with specific recommendations as to how to address them. The Software Development Firm must then take appropriate steps to resolve any issues.

**Documentation and user manual:** Proper documentation for all the software components and APIs must be supplied in a standard format. User manuals for general and administrative users should also be provided for the developed software. The vendor also has to provide the installation and troubleshooting manual.

### **System Handover:**

- The Software Development Firm will be responsible for transferring system operation to the CSBT Office. In preparation the Software Development Firm must provide comprehensive training to the key officials before the system transfer. The Software Development Firm will provide a checklist of handover items with the CSBT Office so that it can be verified that all required tasks are completed before transfer of the CSBT System.
- Formal acceptance of the CSBT System will be indicated by the issuance of an Operational Acceptance Letter by the CSBT Office.

**System Ownership:**

- The CSBT System that is designed and developed during this assignment will be owned by CHA BAGAN SHROMIK BHOBISSHO TOHOBIL.
- The Software Development Firm must submit all system related documentations and the most updated source code, without any preconditions to the CSBT Office.

The consultant will have no right to commercially use or apply the software elsewhere

## F. Project General Requirements

**Installation, Configuration:**

- The system should be installed on a standard server
- The domain name has to be configured
- The cache should be configured
- Standard SSL certificates have to be configured
- Attachment storage should be configured
- The replication system has to be configured.

**Data Entry**

The vendor should start conducting data entry tasks in parallel with the software development after the work order is issued. Around 120000 PF members' profiles (C form's data) should be entered into the system. The accounting process should also exist from July 2021 to up to date with editable facilities. The PF balance of each worker as of 1<sup>st</sup> July, 2021 will be considered as initial balance. The cost of data entry is inclusive within the proposal.

**SMS Service:**

- The System should support the Standard Periodic and On-Demand backup.
- The System can be restored from the backup if needed.

**Backup and Restoration:**

- The System should support the Standard Periodic and On-Demand backup.
- The System can be restored from the backup if needed.

**Maintenance and Troubleshooting:**

- The maintenance shall include that the web-based software designed and developed by the consultant under this Contract shall have no defect arising from the design or workmanship or from any act or omission of the consultant that may develop under normal use of the supplied software. The Bidder shall specify normal operating environmental conditions in the Contract.
- The Vendor has to provide a comprehensive onsite support for maintenance and troubleshooting related issues for one year for free of cost. A Support and Maintenance personnel should stay in the CSBT premises during this period. The maintenance period will be effective upon the issuance of the Operational Acceptance Letter by the CSBT Office. During the maintenance period the Software Development Firm must maintain the

CSBT System against defects in the operation and functionality of the CSBT System and they must solve the issues if any.

- The CSBT shall promptly notify the consultant in writing of any claims arising under this warranty. Upon receipt of such notice, the consultant shall, within the maintenance period and with all reasonable speed, repair or replace the defective systems, without costs to the CSBT and within the time specified and acceptable to the CSBT.
- During the maintenance period, the consultant will provide all updates, patches/ fixes, version upgrades and new versions if any within 15 days of their availability and should carry out installation and operationalization of the same at no additional cost to the CSBT.
- If the Consultant, having been notified, fails to rectify the defect(s)/bug(s) within the period specified, the CSBT may proceed to take reasonable and remedial action as may be necessary as per this document.
- Enhancements to functionality that fall beyond the scope of the approved System Requirement Specification (SRS) and System Design Description (SDD) are not considered to be defects and so are not expected to be addressed under this maintenance arrangement.
- After the free maintenance period is over, the vendor would provide the maintenance support under a Service Level Agreement (SLA). The vendor must state the detailed service procedure and payment rate in the proposal.
- The consultant hereby represents and warrants that the system so developed will not infringe any Intellectual Property Rights held by any third party and that it has all necessary rights, or at its sole expense shall have secured in writing all transfers of rights and other consents necessary to make the assignments, licenses and other transfers of Intellectual Property Rights and the warranties set forth in the Contract, and to own or exercise all Intellectual Property Rights as provided in the Contract. Without limitation, the consultant shall secure all necessary written agreements, consents and transfers of rights from its employees and other persons or entities whose services are used for development of the system.
- The system proposed to be developed and maintained by the consultant represents a complete, end-to-end integrated solution meeting the CSBT Line Agencies' requirements and will provide the functionality and performance, as per the terms and conditions.

**Confidentiality of Data:**

Since some of the Agency specific information, findings and legacy data handled by the consultants during the engagement of the Project assignment is classified and restricted in nature, all the team members from the consultant's side must sign a Non-Disclosure Agreement with CSBT.

**Up-gradation:**

- The software must have the up-gradation facilities if the client changes its requirements.
- In case of system up-gradation or changing requirements, the client will pay the vendor after warranty period based on mutual understanding and the volume of work.

**User Registration/ Password Recovery/ Access Control:**

- There should be two types of users. One is public user (no user ID & password required) and another is authorized user controlled by user ID & password.
- CSBT System should keep authorizing the user's minimum information to register them into the system.

- There should be a password recovery system using two factor authentications without admin help.
- Public user's only IP and MAC address will be recorded when they access the system.
- Adopt Role-Based Access Control (RBAC) to authorize users' access to system resources based on roles
- Provision should be kept for public users (without ID & password) to view and export the reports produced from CSBT Office.

#### **System Administration:**

- System Administrator should have a control panel to configure the system.
- The system should provide a user-friendly Look and feel Dashboard.
- The system should include Reminders and Calendars facilities.

#### **Report Generation:**

- The system should be capable of generating Dynamic Reports based on chosen attributes.
- Report Header and Footer should be customizable.
- The system should integrate the graphical representation for the visualization of data. e.g. Bar chart, Pie chart, Line chart, etc.
- All Basic Forms should be generated by the system in appropriate templates.
- All the reports and forms should be downloadable and printable.

#### **Data Import and Export:**

- The system should be capable to import data from .xls or .csv files
- Documents / Pictures / Files should be attachable to the system.
- The system should be capable of exporting data in .xls / .xlsx, .doc / .docx, .csv and .pdf format.

#### **Data Searching and Sorting:**

- The system should provide a dynamic searching facility based on chosen attributes.
- The searched results (data) should be in standard sorted order.
- The system should have the searching facilities based on the specific range of the attributes.
- The system must provide efficient and optimized searching and sorting facilities.

#### **Acceptance criteria:**

- The CSBT will accept the commissioning and project Sign-Off only after getting an acceptance letter from all respective agencies.
- A team consisting of representatives from the CSBT, selected IT vendor, and ICT Officials from consultants will verify if all the components of the solution are working fine and if the stakeholders are satisfied with the system enhancement.
- Acceptance by the CSBT is subject to satisfactory responses from the users.

**Quality of Work:** The consulting firm shall ensure quality while implementing the system at all times. The consultant will evaluate this in the long run and this will have a bearing on awarding similar Government Projects that are in the pipeline and also those projects that will be taken by the Government in the future.

**Change Management Contract:** The Consultant shall provide post implementation support under a Change Management Contract. The change management shall be need based and shall include:

- i. Incorporation of new requirements due to change in rules and procedures at the clients site.
- ii. It will be considered change management only if there is major customization in the existing system, such as addition of new modules and process flows to the system, upgrading of the licenses for the system etc.

Change Management Charge will be estimated in terms of the **man-day rate**. In the financial proposal, the Consultant must submit the **man-day** rate for each person who will be involved in the change management inclusive of all taxes/duties. The rates should be valid for 1 year. The rates for second and third years will be negotiated later, taking the first year rate as the baseline.

The Consultant shall entertain only those requirements, which are necessary due to change in the procedures/guidelines of the CLIENT, and it must be accepted only through a Change Request Document. The man-day rate for the change management and cost of new modules if required shall be subjected to negotiation between the Consultant and the client. Any minor modifications such as fixing of bugs, software patches, minor version updates, small changes in the user interface within the existing modules without significantly impacting the process flow and database transactions shall not be covered by the Change Management Contract. Change management cannot be invoked before the project delivery sign-off.

## **G. Experience, Resources and Delivery Capacity Required**

The Firm shall be evaluated using, but not limited to, the following minimum criteria:

- The firm must describe and give a presentation on the Methodology of the assignment, and the Technical approach, the Work Plan for the assignment, and the Technology to be used (in detail) for the assignment.
- The firm should be a member of Bangladesh Association of Software and Information Services.
- The firm should submit the Company Profile showing organizational structure and logistics.
- The firm should have at least 05 (five) years working experience in Design, development and implementation of customized provident fund management software solutions with accounting.
- The firm should have experience of developing at least 3 (three) web-based software in the last five years.
- The firm should have working experience of Software Development with Government;
- The firm should have experience of Software Development work valued not less than Taka 50 (fifty) lac in a single work order within the last five years.
- The firm should have experience of developing and designing cloud base software.
- The firm must have a Bank solvency or Credit Facility Certificate.
- The firm must have a minimum 20 in-house staff including system architects, software developers, training specialists and other relevant staff members having experiences in developing applications with web-based latest technologies.
- The firm should submit the CVs of the Technical Experts (Team members) to be assigned for the assignment with photograph and original signature the CV.

- The firm should have experience of conducting Workshop, Seminars and Knowledge Sharing Session.
- The firm should have capacity of onsite as well as online and offline support for the client
- The Project Manager, System Analysts, Developers or any other technical member of the team must be involved in the project full time and shouldn't leave until the product is accepted by the CSBT, unless under force majeure circumstances whereby permission to replace a particular resource may be sought in written form, from the CSBT on a condition that there would not be a major impact on the project. Thus, it is advisable for the bidder to have a bond signed with the personnel involved in the project at least for the period of the execution of the project. Please note that the minimum requirements for the assignment are one Project Manager, one System Analyst and two Developers.

**Note:** The firm must submit the up-to-date Trade License, Incorporation Certificate, Current Bank Solvency Certificate, up to date Tax Payment Certificate, VAT Registration Certificate, Current Audit report and assignment Completion Certificates from the procuring entities, CV of Employees.

## H. Selection Criteria:

Criteria, sub-criteria and the points system for the evaluation of Proposals are:

SL	DESCRIPTION	POINTS
01	Specific experience of the Consultant relevant to the assignment	20
02	Organization and staffing	10
03	Key professional staff qualifications and competence for the assignment: 3.1 Team Leader 3.2 System Analyst 3.3 Developers/Programmers 3.4 GUI Designer 3.5 System Tester 3.6 System Trainer <i>Total points for criterion (3)</i>	16 13 13 05 04 <u>04</u> 55
<i>The number of points to be assigned to each of the above positions or disciplines shall be determined considering the following three Sub-criteria and relevant percentage weights:</i> 1) General qualifications 20% 2) Adequacy for the assignment 30% 3) Experience in similar assignment _____ 50% <b>Total weight 100%</b>		
04	Participation in government/relevant projects among proposed key staff	10
05	Completeness of the documents	05
<b>Total points for the six criteria</b>		<b>100</b>

## I. Timely Completion

- The entire work of software development and testing should be completed within **6 (Six) months** from the date of award of work.
- Adequate training of Master Trainers shall be conducted only after testing and acceptance of the system by CSBT.

The expected schedule of the deliverables is given below:

	<b>Title of the Task</b>	<b>Description of the Task</b>	<b>Timeline</b>
1	Inception Report	A report on the understanding of the scopes and work plan	2nd week
2	Requirement Analysis	An SRS report based on the findings in Requirement Analysis	6th week
3	Design and Documentation	A detailed report on design and documentation	10th week
4	Development	Development of Provident Fund Management System	20th week
5	Testing and Debugging	User Acceptance Testing (UAT) and debugging of the whole system	22th week
6	Deployment	Installation and configuration of the project on a bare metal server provided by CSBT Office as well as in a Cloud as a turnkey solution.	24th week

### Detailed Deliverables from the Bidder

The lists of deliverables from the selected consultant are as follows:

#### a) Design

- System Requirement Specification (SRS) document containing detailed requirements captured based on User and Functional requirement gathering exercise conducted by Consultant with each agency and analyzed including Functional Requirements, Interface Specifications, and Application Security Requirements.
- High Level Software Design Document including Software Architecture Design, Logical and Physical Database Design (E-R Diagrams) etc.
- Low Level Software Design document including Programming Logic, Work Flow,
- Data Flow Diagrams (DFDs) etc.
- Security Level Design document.

#### **b) Application Developments**

- Well-commented Source Code (Application development) for all system enhancement work.
- Test Plans and Test cases (including Unit Test Plan, System/Integration Test Plan, User Acceptance Test Plan, Security Test Plan, Load Test Plan, Regression Test Plan)
- Unit Testing
- Load Testing
- Integration Testing
- Implementation of Security Policy
- Testing Documentation (including details of defects/bugs/errors and their resolution)
- All database scripts.
- Setup and Release notes for each new release.

#### **c) User Training**

- Training Manuals
- User Manuals for all the enhanced systems.
- Systems Administration Manuals – Installation, Maintenance, and MIS reporting for all systems.
- Trainings and Workshops

#### **d) Compliance to IT standards and protocols**

- All the components developed shall be as per the IT standards and protocols.

#### **e) Support and Maintenance (One year after official system launch)**

- Support and Maintenance manuals including routine backup and recovery strategies.
- The Consultant shall provide all other relevant design & documents as may be required to carry out the work as detailed in the scope of work.
- Any other deliverables and related documents not covered under the above scope will be decided through mutual agreement. The Consultant shall be responsible for providing the required deliverables to the client.

#### **f) Project Sign-Offs**

- SRS Sign-off
- Design Documents and Prototype Acceptance Sign-off
- Delivery Sign-off
- UAT Sign-off
- Project Exit Sign-off

*Each sign-off will be attached with a detailed specific report in hard copy with one copy to CSB*

## **J. Project Management Review**

The CSBT would review the progress of the project at regular intervals. The selected IT vendor should send weekly progress reports & monthly status reports to the CSBT. The selected IT vendor has to obtain necessary concurrence from the CSBT if there are any slippages in the deliverables as mentioned in the earlier. The review would be supported by project ICT focal officer

## **K. Training and Knowledge Transfer**

The consulting firm will be responsible for the knowledge transfer on the enhanced systems, not limited to:

- Train and engage the ICT personnel from the consultant during the entire system development cycle to ensure that proper transfer of knowledge is being provided to the ICT personnel.
- Before the commencement of the project, the system developer should in advance train the assigned ICT Officials for a minimum of one week on the use of framework, on which the system will be developed.
- System developers should work collaboratively with ICT Officials, so that the transfer of knowledge can be very smooth. Further, as ICT Officials represent the agency, the system developer is mandated to report to assigned ICT Officials weekly on any matter related to system development, and review the progress accordingly before forwarding to the project management.
- System developers should explain the detailed logical sequence of code flow between database and corresponding classes, and its functions within the code to the assigned ICT Officials, including the interface design. Similarly, the System Developer should also explain database design with assigned ICT Officials, and explicitly mention the relationship of tables inside the Database to the assigned ICT Officials.
- Conduct for key agency personnel from CSBT comprehensively and adequately with well-prescribed manuals and references.
- The training shall be conducted at CSBT Conference Room.
- Adequate training of Master Trainers shall be conducted only after testing and acceptance of the system by CSBT. The Consultant shall provide relevant training materials to the master trainers from the CSBT with no escalation in the cost.

## **L. Facilities to be provided by the Client**

The CSBT would provide the following facilities

- The CSBT shall provide office space at the site when necessary during the project period.
- The CSBT shall provide access to its network infrastructure and server room
- The CSBT will provide a technical counterpart (Technical Working Committee and IT support team) and will liaise with the Consultant for any technical aspect.
- The CSBT shall make the necessary logistical arrangements for training.
- Accommodation may be arranged as per requisition and availability.

## M. Time Schedules

The implementation schedule for the project is as following:

The consultant needs to submit a detailed project plan on the commencement of the project.

The CSBT may also prioritize the deliverables and can ask the vendor to incrementally implement the high priority items initially during the Development Phase. The CSBT would conduct periodic reviews and audits of the work done by the consultant.

## N. Payment Schedule

The payment of the consultancy fee will be based on deliverables dependent on approval of all deliverables associated with that time period. The basis of payment of the consultancy will be percentage of the overall contract value through the duration of the contract. All payments will be done after verification of the Consultant's bill and agreement is gained from the client.

Stage Project Milestones Payment

Stage I SRS sign-off 10%

Stage II Design documents and prototype acceptance sign off. 20%

Stage III Delivery Sign-off 30%

Stage IV UAT sign off 25%

Stage V User Training/Workshops 15%

TOTAL 100%

The **Bank Guarantee** shall be released after successfully handed over the project completing all the deliverables.

## O. Summary

The world is now moving towards automation. The Automation of Cha-Bagan Shromik Bhobishho Tohobil and CSBT office management tasks will provide effective ways to process, manage, organize, and record the CSBT data. The tea labours will be benefitted as they get their PF smoothly with less processing time. It will be a useful asset for the CSBT Office as well. It will make the PF management and CSBT Office management tasks easier and reduce the human effort. The system can be accessed remotely, so the management authority can access the data from anywhere, anyplace. Most importantly this system will help to reduce the valuable time and this can help to improve productivity. By analyzing data effectively, the authority can make decisions and plan their actions accordingly.

- The End -