



Request for Proposal

Volume I: Functional, Technical and Operational Requirements

eGovernance initiatives for Citizen Centric Services in TBI



Tea Board of India

(Under Ministry of Commerce & Industry, Government of India)

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Glossary of Abbreviations	
Abbreviation	Description
CDAC	Centre for Development of Advanced Computing
CIC	Central Information Commission
CMS	Content Management System
CSP	Content Service Provider
CVC	Central Vigilance Commission
DA	Dealing Assistant
DARPG	Department of Administrative Reforms and Public Grievances
DDTD	Deputy Director Tea Development
DeitY	Department of Electronics and Information Technology
DGFT	Directorate General of Foreign Trade
DTP	Director Tea Promotion
ED	Executive Director
eGICCS	eGovernance initiative for Citizen Centric Services
EMD	Earnest Money Deposit
FSMS	Food Safety Management System
FSSAI	Food Safety and Standards Authority of India
GFR	General Financial rules
GoI	Government of India
GoI	Government of India
HACCP	Hazard Analysis and Critical Control Points
ICT	Information and communication Technology
ISO	International Organization for Standardization

Glossary of Abbreviations	
Abbreviation	Description
IT	Information Technology
ITC	International Tea Committee
MCIT	Ministry of Communication and Information Technology
MoCI	Ministry of Commerce and Industry
MSA	Master Service Agreement
NABL	National Accreditation Board for Testing and Calibration Laboratories
NEFT	National Electronic Funds Transfer
NeGP	National e-Governance Plan
NIC	National Informatics Centre
NOC	No Objection Certificate
NPI	National Portal of India
NPS	New pension Scheme
PCC	Per Capita Tea Consumption
POC	Proof of Concept
PIs	Principle Investigators
PRAN	Permanent Retirement Account Number
RFP	Request for Proposal
SI	System Integrator
SLA	Service Level Agreement
TBAS	Tea Board Application System
TBAS	Tea Board Application System
TBI	Tea Board of India

Glossary of Abbreviations	
Abbreviation	Description
TMCO	Tea (Marketing) Control Order
TMS	Tea Management System
TRI	Tea Research Institute
UT	Union Territory

1. Introduction

Tea Board of India envisages to implement – **“e-Governance initiatives for Citizen Centric Services – (eGiCCS)” in Tea Board India (TBI)**” for enhancing service delivery to businesses and citizens and monitoring mechanism at all the offices of Tea Board of India. In this regard Tea Board of India invites bids from the interested and eligible System Integrators for providing a comprehensive solution towards Supply, Installation, Development, Integration, Commissioning, Training, Digitization, Management & Maintenance of Application and all necessary IT components pertaining to implementation of eGiCCS for all the offices and stakeholders of Tea Board of India.

Tea Board of India (TBI) invites the eligible parties (hereafter referred as “Bidder”) for appointment as System Integrator to provide a comprehensive solution as specified in the Scope of Work of this RFP.

Bidders are advised to study this RFP document carefully before submitting their proposals in response to this Notice. Submission of proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

Failure to furnish all information required as mentioned in the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect will be at the Bidder's risk and may result in rejection of the proposal

2. RFP Structure

This RFP is meant to invite proposals from shortlisted companies through an EoI dt: 08/08/2016 and subsequent presentations by the Bidders on 28th September 2016 capable of delivering the services described herein. The content of this RFP has been documented as a set of three volumes (Volume I, II and III) as explained below:

Volume I: Functional, Technical and Operational Requirements

Volume I of RFP brings out all the solution details of the “eGiCCS” system. It also gives the details of other requirements of the Tea Board project.

Volume II: Scope of Work, Commercial Specification and Bid Process

Volume II of RFP purports to detail out the scope of work, bidding process, bidding terms and conditions and all that may be needed by the bidders to understand the scope of work, project implementation time lines and approach.

Volume III: Master Service Agreement & Service Level Agreement

Volume III of RFP is essentially devoted to explain the contractual terms that TBI wishes to specify. This includes the draft Master Service Agreement (MSA), Service Level Agreement (SLA) and Non-Disclosure Agreement (NDA) that TBI intend to sign with the successful bidder or the selected Implementing Agency.

The bidders are expected to examine all instructions, forms, terms, Project requirements and other information in the RFP documents. Failure to furnish all information required as mentioned in the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect will be at the Bidder's risk and may result in rejection of the proposal.

This document is Volume I

3. Project Vision, Mission & Objectives

3.1. Project Vision & Mission

Design, Development and Implementation Services to setup a Portal for Tea Board India to cover amongst other the following:

- a. **Online Licensing System**: Tea Board is looking at implementation of an on-line system wherein application for new license, renewal of license, payment of license fee etc. are handled in a user friendly portal within the defined time lines.
- b. **Online Assistance disbursement**: Tea Board gives assistance to small growers, estates, manufacturers and exporters and is looking at development of an on-line work flow based system, wherein all the applications (either received online through the proposed portal or manually received application fed into this proposed portal), site visit reports, recommendation, approval and disbursement (using NEFT/RTGS/DBT) is done electronically with clear tracking of time taken at each level.
- c. MIS Reports for Licensing and Online Assistance disbursement

3.2. Project Objectives

Tea Board “eGiCCS” broad objectives are defined as below:

- i. Efficient delivery of e-Services to License holders, Tea Garden owners, Manufacturers and other Stakeholders
- ii. Empower Tea garden owners, small tea growers and workers through dissemination of information about various schemes and other information
- iii. Business Process Reengineering of existing processes; optimal use of Information Technology and other modern day innovative technologies like M-Governance, UMANG, RAS, eTAAL, SMS, PAYMENT GATEWAY etc.
- iv. Integration with current IT initiatives of Tea Board of India as well as MeitY, GOI and/or any other Ministries as per directive of Govt. of India
- v. Storage, BI & analytics and easy retrieval of data for statistical analysis
- vi. Management Information System

- vii. Dashboard for Chairman and higher management

This project envisages delivering the following benefits to the Citizens, Business, Government and Employees of Tea Board of India; the Selected Bidder's solution too should cater to the list indicated below:

Citizen:

- o Quick Response Time: eGiCCS solution will benefit the citizens (unregistered tea buyers, SGs, brokers, dealers, exporters, international buyers/importers, research scholars, press and media personal etc.) with state of the art information updates relating to the progress of the services requested, i.e., through online portal, pull & push based SMS, email etc. Department officials to respond to citizen's queries within the defined SLA.
- o Online submission of applications for issuance and renewal of Licenses/ permits/ registration etc.
- o Online status tracking facility for the applicant, i.e., through online portal, pull & push based SMS, email etc
- o Convenient payment mode for payment of license fees using online payment gateway as well as facility to enter details of cash, draft, cheque received manually
- o The applicant can obtain digitally signed copy of the license / certificate directly from the portal once it is approved and issued
- o Anytime, Anywhere application submission over internet
- o System generated acknowledgement (containing unique application number, date and time stamp) after submission of application
- o Alert mechanism for Applicant through online portal, SMS, email etc
- o Communication to the Small Tea Growers about various schemes and participation along with facility to departmental users to promote schemes and initiate awareness campaign to all or selected growers registered on the portal through online portal, SMS, email etc

Business

Quick Response Time: eGiCCS solution will benefit the citizens with near real-time information updates relating to the progress of the services requested. Department officials to respond to citizen's queries,

within the defined SLA. A trigger would be generated automatically on breach of SLA and matter would be escalated to the next higher authority and so on.

- o Availability of Correct Information: Availability of information in digital format will facilitate citizens to get the accurate and up-to-date information readily or on request.
- o Improved Quality of Service –Defined SLA for each service will ensure better customer experience. Successful adherence of the same along with an effective escalation matrix will help in bringing more accountability of employees. .
- o Effective Grievance Redressal Mechanism will help in addressing queries/ complaints within stipulated time frame (as defined in the SLA)
- o FAQ section to be developed to reduce Grievances

Government

- o Effective planning, monitoring and implementation of various schemes and mapping it to schedule.
- o Effective governance, regulation and enforcement as per the Tea Act.
- o Speedy processing of files by leveraging Document and Knowledge Management Systems.
- o The workflow engine and Role Based Access Control (RBAC) will enable efficient administration of internal office procedures and HOD's functions.
- o Timely fund allocation, need based plan development, effective management, monitoring & communication facility among officials.
- o Efficient and transparent institutional processes across the departments for strict adherence to the quality standards.
- o Adopting best practices and modernization of infrastructure will help in enforcing the present rules and regulation strictly
- o Enhanced information dissemination will help in taking on time decisions
- o Single sign on facility for the stakeholders

Employee

- o Operating Guidelines: The departmental processes as well as intra department processes will be standardized. This will help effective and efficient way of working within the department and benefit the different levels of employees to work in collaborative manner

- o Intervention of Technology: With the help of e-Governance solution, the information will be available at a single location and the same information will be available to all users resulting in seamless information flow, all databases in a single location and accessible to concerned people using access rights and control mechanism.
- o Process Re-engineering: E-Governance solution will transform the working of the departmental processes by undergoing Business Process Re-engineering (BPR) which will reduce the cycle time by eliminating non-value added activities and will enhance the productivity.

4. Project Governance & Implementation Framework

eGovernance initiatives for Citizen Centric Services (eGiCCS) project shall be implemented across the offices of Tea Board and for all the stakeholders of Tea Board India.

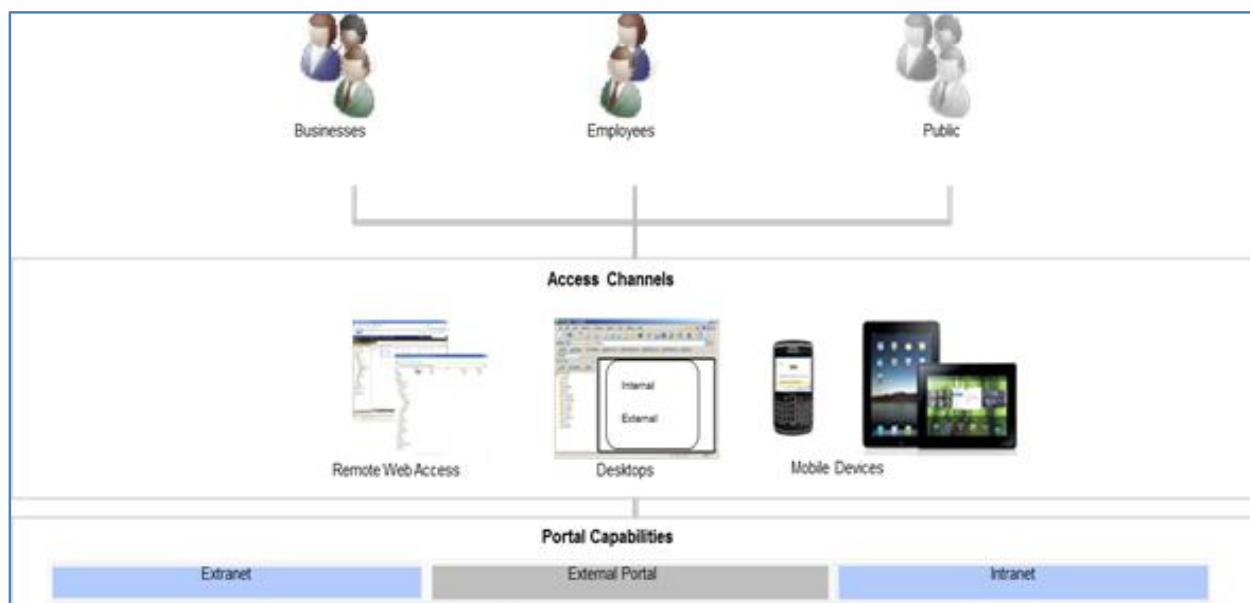
There shall be a Project Steering Committee headed by the Chairman, Tea Board or a person from Tea Board nominated by the Chairman, Tea Board and committee members selected by Chairman, Tea Board. The steering committee shall be the highest body for the management and governance for the eGiCCS project. There shall be a Project Implementation Committee (PIC) consisting of the members nominated by the Chairman of Tea Board, and this unit shall monitor and manage the progress of the eGiCCS project along with the responsibility of highlighting and solving administrative issues or any other relevant issues raised by the bidder and accepted by this PIC. Further this PIC shall recommend its observation and advise the steering committee for taking various decisions pertaining to this project. A project Management Unit (PMU) shall be available to assist, monitor, review, assess, advise for the successful implementation of the eGiCCS project. PMU shall monitor and evaluate the Selected Bidder's work by its recommendation and present the same to PIC or steering committee as required from time to time. The diagram illustrating the key stakeholders is shown below:

The eGiCCS portal and application are envisaged below to be accessed by multiple channels. The diagram provided below explains the access channels required for the successful implementation of this project:

1. The application software will be hosted in the cloud enabled government Data Centre; the infrastructure services will be arranged and provided by the NIC/Tea Board. Integration and scalability facility shall be available in the proposed solution and service of the bidder through

mandatory adherence to technical specifications and e-Governance standards, besides facility to use MSDG/Payment Gateway, SMS Gateway, RAS, GEM, UMANG etc. Compliance to latest Unicode standard for local language content/data encoding and e-Governance Standards are also mandatory. The Integrated Framework shall be treated as part of this RFP and shall be followed with appropriate modifications, required by the Board.

- Two key aspects of the implementation are Business Process Re-engineering (BPR) and creation of databases based on e-Governance standards for the purposes of ensuring interoperability. BPR is intended to enable process simplification and significant value addition. Tea Board as part of its e-Governance initiative has undertaken the BPR activity and the same may be provided to the successful bidder, after entering into an agreement for this project. However, the bidder after studying the BPR document is encouraged to suggest simplification to the processes, if necessary and feasible.



- The solution architecture of the eGiCCS project envisages a centralised application and database and with the option of integration and interoperability with required gateways and applications as required. However, the bidders can propose better or improved solution architecture as part of their response to this bid.
- Further eGiCCS shall be integrated with a mobile service delivery gateway and Aadhaar initiative of the Unique Identification Authority of India. Localisation of the application will be carried out as per the requirement of the Board in terms of local language and other needs.

5. The eGiCCS project envisages centralised architecture with common application software for each of the identified services for all the offices and stakeholders as applicable.
6. Integration with other government institutions or application shall be enabled, through mandatory adherence to technical specifications and e-Governance and localization standards. The detailed guidelines in this regard have been issued by Ministry of Electronics and Information Technology (ME&IT), Government of India.
7. The eGiCCS application has to be developed for all Mobile Platforms (i.e. Android, Windows, iOS etc) and also integrate the same with MeitY, GoI mobile platform.
8. Time to time changes in the rules of TBI to be incorporated in the eGiCCS application by the selected bidder free of cost during the currency of contract

5. Stakeholders, Roles and Responsibilities

5.1. Key Stakeholders

S No	Stakeholder Group	Stakeholder
1.	Citizen	• Small Tea growers • Self Help Groups • Citizen • Tea garden workers • Tea Factory workers • Unregistered tea buyers, SGs, brokers, dealers, exporters, • International buyers/importers, research scholars, press and media personnel etc.
2.	Business	• Tea Exporters and Importers • Manufacturers • Tea Factories • Brokers and Auctioneers • Tea Research Institutes , Universities

S No	Stakeholder Group	Stakeholder
		• Association of Tea Producers • Buyers • Tea and soil Testing Laboratories • Tea garden, factory owners
3.	Employees	• All sub-regional, regional, zonal and head office employees of Tea Board
4.	Government	• Ministry of Commerce & Industry, GoI • Officials of Tea Board • Regulatory Bodies like “Food Safety and Standards Authority of India (FSSAI)” etc.

5.2. Roles and Responsibilities

The responsibilities of the stakeholders to ensure successful implementation of envisaged eGiCCS are broadly described as below:

1. Project Steering Committee

- o Provide overall strategy and policy guidance to the eGiCCS project.
- o Resolution of issues brought before it by PIC or PMU.
- o Facilitate TBI in getting approvals from other government agencies / departments / ministries etc.
- o Final authority to approve all the engagement documents

2. Project Implementation Committee:

TBI will have the responsibility for overall policy directives, guidance and coordination for all project activities related to eGiCCS. At a strategic / managerial level, this responsibility will be vested in the Project Implementation Committee (PIC).

The PIC will be responsible for:

- A. Guiding the work of the Project Management Unit (PMU) & Selected Bidder
- B. Reviewing implementation progress periodically
- C. Review Change Requests indicated by the Selected Bidder/PMU and take appropriate decision thereof.
- D. Considering recommendations put forward by PMU
- E. Identifying single point of contacts from each division and region to support the project in all the stages.

3. Project Management Unit:

Under the supervision of the PIC, the Project Management Unit (PMU) will supervise and monitor project implementation, and coordinate with TBI. PIC to facilitate smooth implementation of the project, and, for meeting the administrative requirements pertaining to eGiCCS

The responsibilities of the PMU are as follows:

Pre Implementation Phase

- a. Approving the Integrated Project Management Plan (IPMP) and eGiCCS Inception Report submitted by the IA to implement the eGiCCS project within a defined timeline. The IPMP shall comprise of the all the components of deliverables prepared for eGiCCS, Inception Report

Implementation Phase

- a. Approving the project reporting formats submitted by the Selected Bidder to monitor and analyse the progress of the project.
- b. Conducting Weekly / Monthly project review with the Selected Bidder in regards to the progress of the project
- c. Appraising the PIC about the progress of the project and report any risk arising
- d. Reviewing and approving/organizing approvals for all the deliverables such as SRS, SDD, Design Documents etc. submitted by the Selected Bidder within a defined timeline throughout the implementation phase

- e. Evaluate and inform Selected Bidder about the recommendation of IA about the usage of Digital Signatures, and, facilitate the procurement of Digital Signatures for the concerned officials, if required.
- f. Reviewing the installation/configuration and deployment of sub-components of eGiCCS system
- g. Establishing appropriate processes for notifying the Selected Bidder of any deviations from the norms, standards or guidelines at the earliest instance after noticing the same to enable them to take corrective action
- h. Review and approve the data migration/digitization work progress and quality compliance
- i. Coordinating with the relevant officers at all levels ranging from the HQ to the other offices for effective implementation of the project and helping resolve issues requiring high level interventions
- j. Orienting the regional and operational offices on the structure and methodologies of eGiCCS implementation.
- k. Coordinating with the PIC to get the names of the personnel to be trained by the Selected Bidder on different IT Components / tools
- l. Reviewing the UAT readiness & overseeing the UAT and the results thereof
- m. Overseeing the progress of user training and coordinate signoff activities
- n. Review and monitor the completeness of the eGiCCS solution with respect to requirements and performance/acceptance expectations from the solution
- o. Co-ordinate with Selected Bidder and third party for audit of the eGiCCS system, if required.
- p. Co-ordinate with the Selected Bidder and TBI for all the activities needed for successful rollout of the eGiCCS solution

Operations and Maintenance

- a. Direct and supervise the activities needed for stabilizing the system and tuning the system for meeting the performance expectations during the early phase of O&M post-go live
- b. Oversee the handholding activities of the Selected Bidder at identified locations of TBI during the initial two quarters post system go-live

- c. Monitor SLAs reporting on a continuous basis; the Selected Bidder shall prepare and deliver SLA reports to PMU for review
- d. Review/monitor and approve the disaster management plans / readiness and mock drills on a periodic basis and oversee the remedial action taken by Selected Bidder
- e. Orienting the TBI HQ and other offices, and conducting periodic workshops to discuss the acceptance of the eGiCCS and identify the issues faced by users and provide guidance to Selected Bidder for addressing such issues.
- f. Apprising the PIC about the acceptance/utilization of the system and report any risk arising.
- g. Review and approve patches/upgrades identified by the IA in software applications
- h. Review and provide recommendations on the change requests identified by the Selected Bidder and assist PIC in approving/modifying/rejecting such requests

4. TBI Employees

The employees of TBI will play a major role in making the project a success.

The responsibilities of the employees will be as follows:

- a. Each department / region shall identify and nominate an eGiCCS project champion to push the eGiCCS project in their respective departments / regions
- b. The project champion would be the single point of contact for the department / regions for the eGiCCS project. He / She would coordinate with the respective department/ regions employees to support the cause of the project in all possible manner
- c. Comply with the suggestions of the PMU and PIC
- d. Provide function related data to the Selected Bidder, as and when requested on a timely fashion
- e. Ensure the quality of input data while sharing with the Selected Bidder
- f. Play a proactive role in identifying day-to-day operational issues with the application and intimating the same to the PMU
- g. Participate in usage of all functionalities of the developed applications

5. System Integrator

- a. Prepare and submit the Integrated Project Management Plan (IPMP) for implementation of the eGiCCS project to TBI/PMU for approval. The IPMP shall comprise of the all the components of deliverables prepared for eGiCCS Inception
- b. Prepare the project reporting formats to report the progress of the project to PMU for approval
- c. Participate in Weekly / Monthly project review in regards to the progress of the project
- d. Identify and escalate issues/risks to the PMU and provide the mitigation plan
- e. Adhere to the directions of PMU as and when provided
- f. Prepare and deliver for approval all the deliverables such as SRS, SDD, Design Documents, BPR, Capacity Building & Change Management Plan, Exit Management Plan etc. within a defined timeline, as agreed in the IPMP and to the satisfaction of PMU / TBI, throughout the implementation phase
- g. The Selected Bidder shall identify and inform TBI about the usage of Digital Signatures for various officials in the business process workflow.
- h. Collaborate with the HW/SW vendors and Cloud Service Providers in installation of products
- i. Procure/Install/configure/deploy all the components (IT) of eGiCCS system and get approval from PMU
- j. Conduct the data migration/digitization and meeting quality standards and updating the status to PMU
- k. Provide detailed training plan to PMU and train the personnel identified by the PMU and report the results
- l. Develop eGiCCS application portal as well as Mobile App (i.e. Android, Windows, iOS etc) and also integrate the same with MeitY, Gol mobile platform. Ensure UAT readiness & conduct the UAT and report the results thereof to the PMU and obtain acceptance thereof. The UAT report should also include the feedback of the UAT participants
- m. Ensure completeness of the eGiCCS solution with respect to requirements and performance, acceptance expectations from the solution and get signoff from appropriate authority through the PMU
- n. Time to time changes in the rules of TBI to be incorporated in the eGiCCS application by the selected bidder free of cost during the currency of contract

Operations and Maintenance Phase post go-live

- a. Adhere to the directions of PMU / PIC as and when provided
- b. Deploy and manage helpdesk and Infrastructure support team for addressing the issues and incidents raised by users; resolve such issues and report the status to the PMU on a periodic basis
- c. Tune and stabilize the system to meet the performance expectations during the all phases based on the System Audit Report of O&M post-go live at no extra cost to TBI.
- d. Handhold users of TBI at identified locations during the first quarter post system go-live
- e. Prepare SLA report based in the SLA parameters given in RFP Vol III on a continuous basis and deliver it to PMU and PIC for review and necessary action
- f. Prepare and deliver for approval all the deliverables such as Disaster Management Readiness Mock Drill Report, O&M SLA Metrics, Issue Log and Resolutions etc. within a defined timeline, as agreed, and to the satisfaction of PMU / TBI, throughout the O&M phase
- g. Prepare and update disaster management plans, report to the PMU; readiness and conduct mock drills on a periodic basis, report to the PMU, and, implement the remedial action to address issues
- h. Conduct the data migration and digitization work with quality and report the progress to PMU and PIC
- i. Assisting in quality audits of the system as and when required by the PMU
- j. Identify any patches/upgrades required and report it to PMU and if agreed, Implement those
- k. Identify change requests and report to PMU for necessary action. Minor customizations in the software, as demanded by PMU from time to time, may be done by the System Integrator during the Operations and Maintenance Phase without any additional charge.
- l. Minor changes in the existing modules, including addition/ deletion of fields, development of web service for external connectivity, changes in MIS report format and new report generation, integration of App with other State/ Govt apps using web service etc. should be done free of cost by the selected bidder during the currency of contract.
- m. Only entirely new modules, if any, would be treated as fresh development and would be paid for on man month basis and the same would be discovered in terms of application

and database personnel efforts required for the development of the new modules. The effort required for development of new modules, in terms of man month and type of resource, would be finalised on mutually agreed terms and based on the commercials given by the selected bidder in its bid.

Stakeholders such as Ministry of Commerce and Industry, External Organizations and the general public will be users of the information available on the eGiCCS portal.

6. Business Function Requirements

The services envisaged from eGiCCS system would be requested and rendered through a Portal. The portal would be common façade for requesting and rendering services by the various stakeholders. eGiCCS Project aims at delivery of services and internal operation through the use of IT/ICT. The functional modules which are part of the scope of the Selected Bidder to deliver under this project are described below and the detailed functional requirements are given in Annexure FRS, which is part of this RFP.

Indicative Portal functional features are also provided in the **Annexure FRS** document.

S. No.	Functions /Processes
Licensing	
1.	Issuance of Exporter License
2.	Renewal of Exporter License
3.	Temporary to Permanent Exporter License
4.	Issuance of Distributor License
5.	Issuance of Registration Cum Membership Certificate
6.	Renewal of Registration Cum Membership Certificate
7.	Issuance of Buyer Registration

S. No.	Functions /Processes
8.	Issuance of Tea Waste License
9.	Renewal of Tea Waste License
10.	Issuance of Tea Warehouse License
11.	Renewal of Tea Warehouse License
12.	Issuance of Broker License
13.	Renewal of Broker License
14.	Fresh Enlistment of Tea Testing laboratory
15.	Renewal of Enlistment of Tea Testing laboratory
16.	Issuance of Flavoured Tea Registration
17.	Issuance of Certificate of Change of Ownership of Registered Tea Garden
18.	Issuance of Certificate of Change of Ownership of Registered Tea Factory
19.	Issuance & Renewal of Auction Organizer License
20.	Recording Change of Office Address
21.	Allied Services
Development	
1.	Plantation Development
2.	Tea Quality Up gradation and Product Diversification (QUPD)
3.	Small Growers Development
Dashboard	
1.	- Controller of Licensing (CL) Dashboard - Development Directorates (DD) Dashboard

S. No.	Functions /Processes
	• Citizen / Applicant Dashboard

7. Technical Requirements

7.1. General Requirements

- I. **Application should have a generic workflow engine.** This generic workflow engine will allow easy creation of workflow for new services with minimum technical programming support and thus enable the TBI to create new services as and when required by the various Departments without creating a change request.
- II. *The application should have a module for management of digital signature and eSign including issuance, renewal and suspension of digital signatures/ eSign based on the administrative decisions taken by the Tea Board. In case of any change (transfer, promotion, leave, suspension, termination, superannuation etc.) of the officials under Project, a copy of order should be marked to the digital signature/ eSign management team for assigning and revoking of the access rights. The following section details the requirement for Digital Signatures in the EGICCS application:*
- III. **Using Digital signatures, eSign to authenticate existing databases:** The eGiCCS project envisages to use digitally signed databases and verification reports based upon field visits. It is also possible that the data in such digitally signed databases would undergo periodic revision and updation. Hence, the Selected Bidder must provision for designing an appropriate set of tools for:
 - digitally signing different databases used in different applications by appropriate authorities,
 - effecting changes in digitally signed documents including cancellation
 - tracking of database records which are digitally signed and digitally not signed
 - posting of appropriate notifications to the users in case of demand for service in respect of which the relevant data record has not been digitally signed by the competent authority
 - verification of digital certificates (e.g. a website to authenticate a particular certificate on the basis of certificate details or barcode)

IV. **Integration of Digital Signatures, eSign with eGiCCS Application**: The eGiCCS portal should be made accessible to government official users / registered users over internet through secure user id and password. The biometric/digital signatures/ eSign need to be integrated for enabling authenticity of the approving authority.

- Identification of Officials authorized for delivering services/ authenticating the electronic records.
- Designing policies and procedures for management of digital signatures.
- **Procurement of Digital Certificates, eSign for the authorized officials from competent certifying authority**

V. **Capacity Building and Institutional strengthening to manage Digital Signature, eSign**: the System Integrator should plan the process for institutionalizing the management (issuance/ renewal/ revocation) of digital certificates/sanction letter/licenses etc. for Tea Board.

- eGiCCS application and its Digital Signature Certificate, PKI Infrastructure for eGiCCS application must be operational in all LINUX platform (REDHAT, SUSE, UBUNTU), MICROSOFT platform (XP, Windows 7, Windows 8 and higher versions) or any other proprietary or Open Standard platform.
- End-to-end processes for issuance of Digital signature right from application collection to issuance and delivery of signature to respective officials must be managed by the Selected Bidder's resources and Selected Bidder to ensure such delivery of DSCs, eSign within 48 hours of receipt of application. In such cases Selected Bidder is required to use their crypto token from their existing stock, which can be subsequently adjusted through delivery of new DSC to officials and receipt of old crypto token.
With the supply of new digital signatures, eSign to new officials, the changes in databases of the officials in the eGiCCS application have to be updated by the Selected Bidder through an automated process without any delay.

7.2. Solution and Technology Architecture

A centralized architecture (servers and processing at single and central location) has been proposed for the eGiCCS project. All requests from internal and external users will be sent to this system, located in a central place for processing. All users will access the application through local or remote terminals using a browser (through internet for external users and through internet or VPN for internal users).

The overall technology solution shall be based upon the most relevant and suitable architecture standards including standards for Service Oriented Architecture (SOA), XML services & necessary protocols for internet applications, NIC Cloud Data Centre standards etc.

The design should include integration with existing IT infrastructure selected under cloud enabled SDC/NIC/Government Data Centre and any other Project for the implementation of eGiCCS Project. eGiCCS Application developed should be integrated with SMS Gateway, Payment Gateway etc. Requirement for these should be included in the FRS, SRS and Design.

A cloud enabled data centre of state/central government or PSU will be provided by Tea Board of India and the application will be hosted at the same.

7.2.1. Application Architecture

It has been proposed that the applications proposed for design and development for the TBI must follow best practices and industry standards. In order to achieve the high level of stability and robustness of the application, the system development life cycle must be carried out using the industry standard best practices and adopting the security constraints for access and control rights. **The various modules / application should have a common Exception Manager to handle any kind of exception arising due to internal/ external factors.**

Similarly the modules of the application are to be supported by the Session and Transaction Manager for the completeness of the request and response of the client request. The system should have a module exclusively to record the activities/ create the log of activities happening within the system / application to avoid any kind of irregularities within the system by any User / Application.

Application Architecture to be proposed by the bidder should be of N-tier architecture.

7.3. Integration & Interfacing Requirement

The Tea Board Portal and Application shall be open for integration, interfacing and data exchange with other Government Applications with platform and technology independent facility in eGiCCS. Further the proposed application should have integration facility with MSDG/Payment Gateways and further getting and effecting the data received through any integration in the eGiCCS database.

7.3.1. Payment and SMS Gateway

National Payment Gateway and SMS Gateway may also be used for this project and proposed solution should have the facility to integrate with these gateways. If the National Payment Gateway and SMS Gateway are not available, then TBI will procure Payment Gateway and SMS Gateway services from the open market and Selected Bidder has to integrate the same

7.3.2. e-Sign and Digital Locker

The Selected Bidder should integrate the eGiCCS application with e-Sign and Digital Locker facilities provided by Government of India.

7.3.3. UMANG, RAS, eTAAL

The Selected Bidder shall integrate the eGiCCS application with UMANG (Unified Mobile App for New-age Governance), a master app developed by Government India which will have all the government services integrated. Similarly, integration of eGiCCS application with Government of India developed Rapid Assessment System (RAS). It provides an online mechanism for getting feedback from citizens on e-services provided by Governments across the country. Also, it facilitates analysing the feedbacks and generating knowledge out of it, which in turn, helps in improving the users/ citizens' experience in availing public services. Based on the feedbacks/ user experience, the PMU may ask System Integrator to make necessary changes in the application during the Operations and Maintenance Phase without any additional cost. Also, eGiCCS application is to be integrated with eTaal (Electronic Transaction Aggregation & Analysis Layer) portal of Government of India which is being used for dissemination of e-Transactions statistics of National and State level e-Governance Projects.

7.3.4. Web Portal and Mobile App

The Selected Bidder shall develop eGiCCS application web portal as well as Mobile App for all platforms (i.e. Android, Windows, iOS etc) and also integrate the same with MeitY, GoI mobile platform.

7.4. Deployment Environment and Strategy

7.4.1. Envisaged Arrangement for DC- DR Requirement

TBI has requested for some allocation from the government NIC cloud. Selected Bidder has to ensure that the proposed solution functions on the VM environment already available with the cloud operator.

TBI will send a request to the NIC cloud data center operator for providing the actual VM configuration as proposed by the selected bidder during their bid response.

The cloud data center operator will do the initial configuration of the VM as per the request of the selected bidder. Then the VM's access would be handed over to the Selected Bidder for further tuning and configuration in terms of hosting, installation and configuration of all applicable components proposed by the Selected Bidder.

The Selected Bidder has to install the proposed OS and provide the virtual machines to TBI. The proposed OS should be either RHEL 6.x or Windows Server latest edition.

The maintenance, further configuration and the scaling of the VM during contract period would be the Selected Bidder's responsibility.

TBI will Host the application in a government cloud enabled DC, the probable offerings from the government cloud are listed below.

1. Provide 99.5% uptime.
2. The NOC (network operation centre) of cloud data centre may provide managed services
3. The Cloud services should be accessible via internet and private connectivity like Leased line and MPLS links
4. The self-service portal provided by the cloud environment may automate for network provisioning including the VLAN and IP subnets, load balancer provisioning, firewall ACL rules provisioning, server provisioning etc.
5. A dashboard may be provided for complete automation of the orchestration, administration, provisioning, management, features that may be provided are :
 - a. Easy-to-use interface: The simple, flexible web-based user interface
 - b. Granular control of resources: ability to configure servers, supporting the customization

- of CPU, memory and storage on servers
 - c. Granular Network Management: Provision, Addition and change of IP address, coupled with firewall management with global IP address translation, inbound/outbound policy creation and management, Load balancer management, etc.
 - d. Role-based Access Control (RBAC): Granular administrator permissions controlling the activities of each administrator like Network administrator, Server administrator etc.
 - e. Server Anti-affinity: May have the capability to allow users to define anti-affinity rules for their servers to ensure application availability even if more than 1 physical blade is down
 - f. Separate dedicated physical layer-2 VLAN provision with firewall ACLs at IP and port level between the VLANs and for every network segment created by client.
 - g. May provision for deploying Web/App/DB tiers in separate security zones with ACL control between them.
- 6. Cloud Servers will support popular operating systems including Linux, Microsoft Windows
 - 7. The cloud environment may provide built-in security like IDS / IPS, DDoS mitigation, firewall and load-balancer should be provided by the cloud platform

Note: The development environment will not be provided by TBI. Only the staging & production environment will be provide by TBI from the cloud enabled DC.

Indicative arrangement for DC & DR:

- 1. As a part of the bid response the Selected Bidder has to provide the configuration that they propose for each VM in terms of vCPUs, RAM and Storage.
- 2. An indicative VM configuration for the server instances at DC and DR is provided below.

7.4.2. Indicative VM configuration**Note: Bidders are free to propose the sizing of the VMs as per their solution.**

For DC	Server Type	VM configuration	Total Additional Storage	Minimum Indicative Number of servers
	Application Server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	2000 GB	2
	Database Server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	2000 GB	2
	Web Server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	-	2
	Staging Server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	-	2
	Management Server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	-	1
	Back Up server	1 VM with 8vCPU, 32GB RAM and 60GB Storage	-	

For DC	Server Type	VM configuration	Total Additional Storage	Minimum Indicative Number of servers
For DR (DR will run at 50% capacity of the DC)	FOR DR			
	Application Server	1 VM with 4vCPU, 32GB RAM and 60GB Storage	2000 GB	1
	Database Server	1 VM with 4vCPU, 32GB RAM and 60GB Storage	2000 GB	1
	Web Server	1 VM with 4vCPU, 32GB RAM and 60GB Storage	-	1

8. Data Digitization and Migration

8.1. Data Digitization

The objective of data digitization is to utilize the data for searches and modifications. As the data digitization estimates can be made post Database design only, this section captures the broad level concept of the data digitization for various modules. The Selected Bidder should engage the digitization team to undertake the activities and TBI will provide the required data to be digitized. It will be the responsibility of the Selected Bidder to return all the collected hardcopy in the original shape to TBI without any damage/loss. The transfer of hardcopy documents used for digitization between TBI & Selected Bidder will be done in writing and should be accepted by transfer. Data digitization activities shall be done at the physical location of the records to be digitized or at a nearest office in a consolidated manner in agreement with TBI.

It is expected that the Selected Bidder will design data entry forms and prepare software for data entry/digitization which will have all valid checks and balances. At any point of time the software should be able to intimate TBI the number of records entered into the system.

8.1.1. Data Digitization Deliverables and Sign Of

- I. Data Digitization Strategy Document
- II. Data entry module for entry of Master Data and importing Historical Data
- III. Approval by TBI on successful digitization of data, completeness of the activity and quality of the digitized data

8.2. Data Migration

The following table provides a snapshot of the existing systems at TBI and which are considered to be migrated /integrated with the eGiCCS project. The volume given in this table is indicative in nature.

S No	Application Name	Back end details	Data to be migrated
1.	Online Checking of Import and Export Data	C++/SQL	Less than 20 GB in MS excel, doc, pdf, mdb, gif, tif, jpeg, etc. format and Oracle 8, SQL data base
2.	INFAST*	.NET/SQL	
3.	TMS	.NET /SQL	
4.	Biometric Attendance System (Integration only for Head office as of now and can be extended to other offices in future)*	Proprietary	
5.	Form E Submission	.NET /SQL	
6.	Licensing data	Oracle 8	
7.	Fund Flow Financial Management Integrated with Payroll System*	.NET /SQL	

*The DATA contained in these applications would be migrated at a later stage; the system should be designed in such a manner to address this requirement.

9. Adherence to Standards

9.1. Open Standards

eGiCCS application must be designed following open standards, to the extent feasible and in line with overall system requirements set out in this RFP, in order to provide for good inter-operability with multiple platforms and avoid any technology or technology provider lock-in.

9.2. Interoperability Standards

Keeping in view the evolving needs of interoperability, especially the possibility that the solution shall become the focal point of delivery of services, and may also involve cross-functionality with the e-Government projects of other Government / businesses in future, **the solution should be built on Open Standards**. The Selected Bidder shall ensure that the application developed is easily integrated with the already existing applications and hardware. **Every care shall be taken to ensure that the code does not build a dependency on any proprietary software, particularly, through the use of proprietary 'stored procedures' belonging to a specific database product.**

9.3. Scalability

One of the fundamental requirements of the proposed application is its scalability. The architecture should be proven to be scalable (cater to increasing load of internal and external users and their transactions) and capable of delivering high performance for at-least five years from the date of deployment. In this context, it is required that the application and deployment architecture should provide for Scale-Up and Scale out on the Application and Web Servers, Database Servers and all other solution components.

9.4. Security

The systems implemented for project should be highly secure, considering that it is intended to handle sensitive data relating to the stakeholders of Tea Board. The overarching security considerations are described below.

- i. The security services used to protect the solution shall include: Encryption, Identification, Authentication, Access Control, Administration and Audit and support for industry standard protocols.
- ii. The solution shall support advanced user authentication mechanisms including digital certificates.
- iii. Security design should provide for a well-designed identity management system, security of physical and digital assets, data and network security, backup and recovery and disaster recovery system.
- iv. The solution should provide for maintaining an audit trail of all the transactions and should also ensure the non-repudiation of audit trail without impacting the overall performance of the system.
- v. The overarching requirement is the need to comply with ISO 27001 standards of security.
- vi. The application design and development should comply with OWASP top 10 principles.
- vii. The System Integrator is supposed to close all the open points/ vulnerabilities identified while conducting security audits, from time to time, during the currency of contract, including security audit conducted prior to Go-Live. The whole activity is to be carried out at no additional cost to the selected bidder.

9.5. Compliance with Industry Standards

In addition to above, the proposed solution has to be based on and compliant with industry standards (their latest versions as on date) wherever applicable. This will apply to all the aspects of solution including but not limited to design, development, security, installation, and testing. There are many standards that are summarized below. However the list below is just indicative and is not to be treated as exhaustive.

- i. Portal development W3C specifications and GIGW guidelines
- ii. Information access/transfer protocols SOAP, HTTP/HTTPS
- iii. MeitY/ GOI guidelines
- iv. Photograph JPEG (minimum resolution of 800 x 600 pixels)
- v. Scanned documents TIFF (Resolution of 600 dpi)
- vi. Biometric framework BioAPI 2.0 (ISO/IEC 19784-1:2005)
- vii. Latest HTML standards

- viii. **The solution should be preferably built on open source technologies and should follow the MeitY Gol's open source guidelines/standards/policies.**

9.6. Specification

- I. The Selected Bidder shall adhere to all the standards published by the Ministry of Electronics and Information Technology, Government of India.
- II. Digital signature RSA standards
- III. Document encryption PKCS specifications
- IV. Information Security to be ISO 27001 compliant
- V. Operational integrity & security management to be ISO 17799 compliant
- VI. IT Infrastructure management ITIL / EITM specifications
- VII. Service Management ISO 20000 specifications
- VIII. Project Documentation CMM Level 3/4/5/IEEE/ISO specifications for documentation

10. Training & Evaluation Requirement

10.1. Training

- i. Imparting training in Information Technology (IT) and Change Management.
 - A. Such trainings and skills will be imparted to all levels of employees involved in the processes pertaining to the services.
 - B. These would range from senior officers up to the officials working in the field offices
- ii. Prepare and organize training programs to facilitate the user departments in the efficient usage of the new system training will be provided to department's employees whose Information & services will be provided through eGiCCS Application.
- iii. Training shall encompass the knowledge of basic functionalities of eGiCCS Application, Guidelines and other backend processes required during the maintenance phase.
- iv. Training shall also be provided for teaching the basic trouble shooting activities in case of problems.
- v. Trainings shall be provided to all the new employees as and when joining the TBI and for this the Selected Bidder should have adequate crypto token installed with demo Digital Signature Certificate for the purpose of providing training using the development/training

server to be installed at DC and equipped with demo PKI server component. The following table captures officers to be trained in processing the selected services:

10.2. Evaluation

The selected bidder apart from training the TBI employees shall also evaluate and assess the performance of the trained employees. It would be pertinent to note that the training plan should be discussed and approved with Tea Board before it's commencement.

After the training and evaluation by the bidder, the result of the training and evaluation would be provided to the departmental heads. After the evaluation, if the departmental head finds inadequacies in the work performance of any employee, the departmental head shall request Selected Bidder for additional training for such employees without any financial implication to Tea Board

In this context, the bidder is requested is provided an approach and methodology for training and evaluation and retraining, when necessary.

Indicative list of staffs at various offices of Tea Board (The indicative staff list may also be referred from <http://teaboard.gov.in/pdf/rtiact>)

Note: This list may be referred by the bidders while proposing the training plan, handholding and support etc.

S No	LIST OF OFFICES	NO OF STAFF
1.	AGARTALA	9
2.	TEA BOARD TEA CENTRE, KOYEMBEDU, CHENNAI	3
3.	THE SECRETARIAT, TEA BOARD TEA ROOM, CHENNAI	3
4.	COIMBATORE	9
5.	COONOOR	25
6.	DIBRUGARH	7
7.	STGDD, DIBRUGARH	11
8.	GUDALUR	7
9.	GUWAHATI	35
10.	ITANAGAR-ARUNACHAL PRADESH	2

S No	LIST OF OFFICES	NO OF STAFF
11.	JALPAIGURI	9
12.	JORHAT	7
13.	KOCHI	15
14.	KOLKATA	198
15.	KOTAGIRI, TAMIL NADU	5
16.	KUMILY	5
17.	KUNDAH	6
18.	KURSEONG	12
19.	MUMBAI	6
20.	NEW DELHI	69
21.	PALAMPUR	6
22.	SILCHAR	3
23.	SILIGURI	20
24.	TEZPUR	6
25.	Others	56
26.	Thirumala	6
TOTAL		540

10.3. Capacity Building on Digital Signatures

- I. **Training on use of Digital Signatures:** As the eGiCCS project would entail significant amount of field verification and relevant updating of records, digital signatures have to be used by various levels of officials. These officials may also keep on changing due to transfers / superannuation, etc. Hence the Selected Bidder should ensure the following:
- A one-time training to all the concerned officials in the usage of digital signatures
 - As and when required, training / on-demand web based training for the new officials taking charge of eGiCCS service provisioning.

11. Application Hand Holding and Help Desk

11.1. Application Hand Holding

The project would require provisioning of dedicated manpower at below locations for handholding and support. The below manpower requirement is minimum and indicative in nature.

Location	Department	Month 1	Month 2	Month 3	Total Man Month
HO	Licensing	2	1	1	4
	Development	1	1	1	3
21 RO	for above departmental activities	21	10	5	36
ZO Guwahati	Licensing	1	1	1	3
	Development	1	1	1	3
ZO Coonoor	Licensing	1	1	1	3
	Development	1	1	1	3
	Total	28	16	11	55

The following needs to be considered when identifying manpower for rollout / implementation support at TBI offices:

- I. The Selected Bidder would be required to position resources to provide technical support at TBI offices after the implementation period. This would be essential to ensure sufficient handholding is provided to department personnel in the head office and field level offices to manage the system after the end of Selected Bidder's Contract Period.
- II. The Selected Bidder should ensure that the roster schedule of all deployed manpower for each day at the required locations has been communicated in advance to TBI. No change to the deployed staff shall be done by the Selected Bidder without written approval from the TBI.
- III. Adherence to all laws pertaining to personnel, labour laws, etc. for any manpower deployed by the Selected Bidder on this Project shall be the responsibility of the Selected Bidder

- IV. The Selected Bidder would issue Identity cards to each of the staff members deployed at the TBI offices.
- V. The Selected Bidder will maintain adequate leave reserve for the staff, so that the work in the respective offices remains unaffected in all cases.

11.2. Help Desk and Troubleshooting

The selected Bidder as part of providing support for TBI users at each location and to support and resolve the issue as per MSA – SLA (RFP Vol. – III). Selected Bidder shall arrange a 2-member helpdesk team persons for helpdesk support at TBI premises (in Kolkata) for coordinating and resolving the user issues/queries. Necessary infrastructure to operate Help Desk, i.e., Help Desk Software to log calls & generate tickets, Dashboard to analyze the nature of calls & action to be taken to improve the services, Reporting Tool to monitor the SLA performance by the System Integrator, Computer, Printer, UPS, GenSet, Toll Free Line, Consumables would be arranged by the System Integrator. The TBI would provide necessary space to the SI for setting up of HelpDesk. This includes Table, Chair, Room Lighting etc.

The Selected Bidder shall station in Tea Board of India, Kolkata Office, a Single Point of Contact, for escalating all functional, technical and operational issues which TBI employees might phase in either Implementation or Operations & Maintenance phase

The selected bidder shall provide technical resources (Application / System and Database etc.) to resolve technical issues and performance tunings / improvements in pre- defined timelines during the O&M period

11.3. Functional Assistants

Tea Board may need support of Functional Assistants to support the Licensing & Development Directorate during the operation of the eGiCCS system. In this context, the selected bidder would provide computer literate resources to assist the department. The resources should possess following educational and other qualifications:

- (i) 10+2 from a recognized Board of School Education/University
- (ii) One-year Diploma in Computer Science/Computer Application/ Information Technology from a recognized University/Institution
- (iii) Computer typing speed of 30 words per minute in English or 25 words per minute in Hindi

- (iv) Working Experience of minimum two years

OR

- (i) 10+2 from a recognized Board of School Education/University
- (ii) 'O' or 'A' level Diploma from National Institute of Electronics & Information Technology (NIELIT)
- (iii) Computer typing speed of 30 words per minute in English or 25 words per minute in Hindi
- (iv) Working Experience of minimum two years

OR

- (i) 10+2 from a recognized Board of School Education/University
- (ii) Diploma in Information Technology (IT) from a recognized ITI/Institution
- (iii) Computer typing speed of 30 words per minute in English or 25 words per minute in Hindi
- (iv) Working Experience of minimum two years

It is envisaged that Tea Board may require ten resources for a duration of twelve months. However, Tea Board may extend the contract to the Functional Assistants beyond the period of 12 months. The extension of contract may be done on a mutually agreed terms and conditions

The bidder shall provide the resource cost in Commercial Formats provided in RFP Volume II.

12. Operations and Management Requirement

The selected Bidder is responsible for the day to day maintenance of the system for the entire period of Contract. For the ICT components procured as part of this RFP, the selected Bidder will be responsible for Operations and Maintenance Services for the period of 5 years of onsite warranty/ AMC support from the date of Go-Live date of the project covering the following:

- I. Onsite Warranty support for complete system
- II. Onsite Periodic and AMC support including repair and replacement
- III. Annual Technical Support (ATS) for all the licensed software

Providing Help desk support with Escalation matrix for registration of complaints related to the ICT components, software and application procured/developed through this RFP at the TBI designated premises.

12.1. Overview of Post Implementation Services

An indicative list of activities and nature of support to be provided are mentioned below:

12.1.1. System Administration and Trouble Shooting

- a. Overall monitoring and management of all ICT components deployed by the selected Bidder for the Project including utility software, system software, application, database, and all other services associated with these facilities to ensure service levels, performance and availability requirements as prescribed in the RFP are met.
- b. Repair or replace ICT components deployed for this Project, either directly or through a third party warranty provider depending on the case
- c. Replace component due to technical, functional, manufacturing or any other problem with a component of the same make and configuration. In case the component of same make and configuration is not available, the replacement shall conform to open standards and shall be of a higher configuration and shall be approved by the TBI
- d. Perform system administration tasks such as managing the user access, creating and managing users, taking backups etc.
- e. Performance tuning of the system to ensure adherence to SLAs and performance requirements as indicated in the RFP.
- f. Maintenance of eGiCCS application developed by the Selected Bidder
- g. Management of eGiCCS application and up-gradation as when required along with troubleshooting

12.1.2. Database Administration and Trouble Shooting

Undertake end-to-end management of System and database on an on-going basis to facilitate smooth functioning and optimum utilization including regular database backup and periodical testing of backup data, conducting configuration review to tune database, maintaining the necessary documentation and managing schemes to database schema, disk space, user roles, and storage.

12.1.3. Overall

- a. Undertake regular and preventive maintenance (any maintenance activity that is required before the occurrence of an incident with an attempt to prevent any incidents) and carry out the necessary repairs and replacement of ICT components wherever needed to keep the performance levels of the ICT components in tune with the requirements of the SLA. Such preventive maintenance shall not be attended during working hours of the TBI, unless inevitable and approved by the TBI.
- b. Undertake reactive maintenance (any corrective action, maintenance activity that is required post the occurrence of an incident) that is intended to troubleshoot the system with sufficient teams.
- c. Escalate and co-ordinate with its OEMs/ OEM's subscribers for problem resolution wherever required

12.1.4. Warranty Support

As part of the warranty services Selected Bidder shall provide:

- I. Selected Bidder should provide comprehensive support & warranty for 5 years from the date of Go Live for all artifacts which would be provided by the Selected Bidder.
- II. Selected Bidder is responsible for sizing and procuring the necessary software/tools etc. licenses as per the performance requirements provided in the RFP. During the warranty period Selected Bidder shall replace or augment or procure higher-level new licenses/tools at no additional cost to the TBI in case the procured artifacts supplied by the Selected Bidder is not adequate to meet the service levels.
- III. The Selected Bidder shall ensure that the warranty complies with the agreed Technical Standards, Security Requirements, Operating Procedures, and Recovery Procedures.
- IV. Any component that is reported to be down on a given date should be either fully repaired or replaced by temporary substitute (of equivalent configuration) within the time frame indicated in the Service Level Agreement (SLA).
- V. The Selected Bidder shall develop and maintain an inventory database to include the warranties of the supplied artifacts by the Selected Bidder.

13. Exit Management

13.1. Purpose

- I. This sets out the provisions, which will apply on expiry or termination of the MSA, the Project Implementation, Operation and Management SLA.
- II. In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
- III. **The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.**

13.2. Transfer of Assets

- I. Transfer of assets would be done at any time during the time of exit management. TBI shall be entitled to serve notice in writing on the Selected Bidder at any time during the exit management period as detailed herein above requiring the Selected Bidder to provide the TBI with a complete and up to date list of the Assets within 30 days of such notice. TBI shall then be entitled to serve notice in writing on the Selected Bidder at any time prior to the date that is 30 days prior to the end of the exit management period requiring the Selected Bidder to sell the Assets, if any, to be transferred to TBI or its nominated agencies at book value as determined as of the date of such notice in accordance with the provisions of relevant laws.
- II. Upon service of a notice under this Article the following provisions shall apply:
 - A. in the event, if the Assets to be transferred are mortgaged to any financial institutions by the Selected Bidder, the Selected Bidder shall ensure that all such liens and liabilities have been cleared beyond doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to the TBI.
 - B. All risk in and title to the Assets to be transferred / to be purchased by the TBI pursuant to this Article shall be transferred to TBI, on the last day of the exit management period.
 - C. The outgoing Selected Bidder will pass on to TBI and/or to the Replacement Selected Bidder, the subsisting rights in any leased properties/ licensed products on terms not less favourable to TBI / Replacement Selected Bidder, than that enjoyed by the outgoing Selected Bidder.

- D. The Intellectual Property Rights (IPR) for any bespoke development done during the implementation of the project will lie with 'TBI'
- E. All IPR and materials developed or otherwise obtained independently of the efforts of a party under this Agreement ("preexisting work") including any enhancement or modification thereto shall remain the sole property of that party. During the performance of the services for this agreement, each party grants to the other party (and their sub-contractors as necessary) a non-exclusive license to use, reproduce and modify any of its preexisting work provided to the other party solely for the performance of such services for duration of the Term of this Agreement. Except as may be otherwise explicitly agreed to in a statement of services, upon payment in full, the System Integrator should grant 'TBI' a non-exclusive, perpetual, fully paid up license to use the preexisting work in the form delivered to 'TBI' as part of the service or deliverables only for its internal business operations. Under such license, either of parties will have no right to sell the preexisting work of the other party to a Third Party. 'TBI's' license to preexisting work is conditioned upon its compliance with the terms of this Agreement and the perpetual license applies solely to the preexisting work that bidder leaves with 'TBI' at the conclusion of performance of the services.

13.3. Cooperation and Provision of Information

13.3.1. During the exit management period:

- I. The System integrator will allow the TBI or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable the TBI to assess the existing services being delivered;
- II. Promptly on reasonable request by the TBI the Selected Bidder shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the System integrator or sub-contractors appointed by the System integrator). The TBI shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The System integrator shall permit the TBI or its nominated agencies to have reasonable access to its

employees and facilities as reasonably required by the PIC to understand the methods of delivery of the services employed by the System integrator and to assist appropriate knowledge transfer.

13.4. Confidential Information, Security and Data

- I. The System integrator will promptly on the commencement of the exit management period supply to the TBI or its nominated agency the following:
 - A. information relating to the current services rendered and customer and performance data relating to the performance of sub-contractors in relation to the services;
 - B. documentation relating to complete EGICCS Project's Intellectual Property Rights including the complete source code
 - C. documentation related to sub-contractors
 - D. all current and updated data as is reasonably required for purposes of TBI or its nominated agencies transitioning the services to its Replacement System integrator in a readily available, nominated by the TBI or its nominated agency;
 - E. all other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable TBI or its nominated agencies, or its Replacement System integrator to carry out due diligence in order to transition the provision of the Services to TBI or its nominated agencies, or its Replacement System integrator (as the case may be).
- II. Before the expiry of the exit management period, the System integrator shall deliver to the TBI or its nominated agency all new or up-dated materials related to this project and shall not retain any copies thereof, except that the System integrator shall be permitted to retain one copy of such materials for archival purposes only.
- III. Before the expiry of the exit management period, unless otherwise provided under the MSA, the TBI or its nominated agency shall deliver to the System integrator all forms of System integrator confidential information, which is in the possession or control of Chairman, TBI or its users.

13.5. Employees

- I. Promptly on reasonable request by TBI at any time during the exit management period, the System integrator shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to the TBI or its nominated agency a list of all employees (with job titles and Fulltime or Part time engagement details) of the System integrator dedicated to providing the services at the commencement of the exit management period.
- II. Where any national, regional law or regulation relating to the mandatory or automatic transfer of the contracts of employment from the System integrator to the TBI or its nominated agency, or a Replacement System integrator ("Transfer Regulation") applies to any or all of the employees of the System integrator, then the Parties shall comply with their respective obligations under such Transfer Regulations.
- III. To the extent that any Transfer Regulation does not apply to any employee of the System integrator or its Replacement System integrator may make an offer of employment or contract for services to such employee of the System integrator and the System integrator shall not enforce or impose any contractual provision that would prevent any such employee from being hired by the Chairman, TBI or any Replacement System integrator.

13.6. Transfer of Certain Agreements

On request by the TBI or its nominated agency the System integrator shall effect such assignments, transfers, licences and sub-licences as the Chairman, TBI may require in favour of the Chairman, TBI, or its Replacement System integrator in relation to any equipment lease, maintenance or service provision agreement between System integrator and third party lessors, vendors, and which are related to the services and reasonably necessary for the carrying out of replacement services by the TBI or its nominated agency or its Replacement System integrator.

13.7. Rights of Access to Premises

- I. At any time during the exit management period, where Assets are located at the System integrator's premises, the System integrator will be obliged to give reasonable rights of access to

(or, in the case of Assets located on a third party's premises, procure reasonable rights of access to) the TBI or its nominated agency and/or any Replacement System integrator in order to make an inventory of the Assets.

- II. The System integrator shall also give the TBI or its nominated agency or any Replacement System integrator right of reasonable access to the Selected Bidder's premises and shall provide the TBI or its nominated agency or its nominated agencies and any Replacement System integrator rights of access to relevant third party premises during the exit management period and for such period of time following termination or expiry of the MSA as is reasonably necessary to migrate the services to the TBI or its nominated agency, or a Replacement System integrator.

13.8. General Obligations of the System integrator

- I. The System integrator shall provide all such information as may reasonably be necessary to effect as seamless a handover as practicable in the circumstances to the TBI or its nominated agency or its Replacement System integrator and which the System integrator has in its possession or control at any time during the exit management period.
- II. For the purposes of this Schedule, anything in the possession or control of any System integrator, associated entity, or sub-contractor is deemed to be in the possession or control of the System integrator.
- III. The System integrator shall commit adequate resources to comply with its obligations under this Exit Management Schedule.

13.9. Exit Management Plan

- I. The System integrator shall provide the TBI or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
 - A. A detailed program of the transfer process that could be used in conjunction with a Replacement System integrator including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the

- cessation of the services and of the management structure to be used during the transfer;
- B. plans for the communication with such of the System integrator's sub-contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on the TBI's operations as a result of undertaking the transfer;
 - C. Proposed arrangements for the segregation of the *Selected Bidder's* networks from the networks employed by *TBI* and identification of specific security tasks necessary at termination;
 - D. Plans for provision of contingent support to TBI, and Replacement System integrator for a reasonable period after transfer.
- II. The System integrator shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
 - III. Each Exit Management Plan shall be presented by the System integrator to and approved by the TBI or its nominated agencies.
 - IV. The terms of payment as stated in the Terms of Payment Schedule include the costs of the System integrator complying with its obligations under this Schedule.
 - V. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.
 - VI. During the exit management period, the System integrator shall use its best efforts to deliver the services.
 - VII. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
 - VIII. This Exit Management plan shall be furnished in writing to the TBI or its nominated agencies within 90 days from the Effective Date of this Agreement.

14. Annexure: Bill of Material

S No	Item	Quantity
1.	System Software Subscription Cost for 5 years	Lump sum
2.	Middleware Subscription Cost for 5 years	Lump sum
3.	Database Subscription Cost for 5 years	Lump sum
4.	Digital Signatures	100
5.	Anti-Virus for proposed servers / VMs	Lump Sum
6.	DR Management and Synchronization Tool	1
7.	SMS Gateway Integration	Lump Sum
8.	Payment Gateway Integration	Lump Sum
9.	Enterprise Management System Subscription Cost for 5 years	Lump Sum
10.	Application Development Cost & Customization Cost during the currency of contract	Lump Sum

****It is recommended to propose enterprise grade open source technology stack at all layers of the envisaged system along with Annual Technical Support (ATS) backed by the principal for the O&M period of 5 years. Technical Support for the proposed stack should be available through both web interface and telephone.***

***** The Bill of Material is indicative in nature. Bidder can increase / decrease item(s) in order to meet the SLAs.***