

# Draft Terms of Reference

## 1. Background & Objectives

Government of the Punjab is executing the project “Land Records Management & Information Systems” (LRMIS) with the assistance of World Bank. The objective of the project is to improve and modernize the system of maintenance of Land Revenue Records. It aims at improving public accessibility to the land records by simplifying procedures, introducing appropriate legal changes and deploying robust software to ensure security of data and delivery of land record services to the end users. The project plans include setting up approximately 129 Tehsil Service Centers and 36 District Service Centers in the Province.

In order to ensure that the ICT systems being deployed work smoothly and services of laid down standards are delivered to the beneficiaries, the government intends to establish a system of monitoring and quality assurance of service delivery and also intends to outsource the development and running of this system to a private sector partner (herein after “the consulting firm”). Using this system the consulting firm will be responsible to monitor the quality of services and ensure standards of quality. The consultant will also analyze the performance of service centres on agreed monitoring indicators, identify issues, liaise with relevant stakeholders for resolution of these issues, provide feedback on resolution of the issues and ensure that management of LRMIS is at all levels aware of the issues in terms of quality of service delivery. The objective of such monitoring and quality assurance will be to ensure un-interrupted service delivery to the customers<sup>1</sup>. The consulting firm’s responsibilities will include electronic operation of Help Desk, identification of issues and problems in service delivery, escalation of these problems

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<sup>1</sup> “Customer” means a person from the general public who comes to the service delivery center for the purpose of i) Getting changes in the records ii) Obtaining any other service provided by the Service Centres . iii) Logs onto the web to obtain any of the services being provided by the system through internet.

to the appropriate level/stakeholder & monitoring of resolution of these problems to ensure high quality of service delivery through a software.

A brief description of the project execution flow is given below here:

The phases of the project of computerizing land records concerning QA and Monitoring of Service consultancy will start from the activity of scanning the existing land records. These records are currently kept in manually maintained paper registers and are distributed at three locations a) the District record room b) the Tehsil record room and c) Patwar Circle.

Data entry vendors shall be employed to first scan the manual records at District Record Room and Tehsil Record Room (the record at Patwar Circle will be made available to data entry vendor at Tehsil Record Room). The scanned copies of the record will be used both for entry of the same in the digital database using the software developed for this purpose and for future referencing in case any objections arise.

During the process of creating digital database of the land records we envisage two types of issues. First the issues which might be caused by a faulty or missing functionality in the software to be used for Data Entry and Second issues due to the inaccuracies of manually kept data. In the former case the issues need to be sorted out with the help of Software Vendor who developed the software; whereas in the later case the issue needs to be resolved with the help of relevant district administration. Once data entry of a Tehsil/District is completed the digital database of land records shall be deployed at a Service Centre in that Tehsil/District for the delivery of service to the end customers i.e. the Public.

Service delivery at the Service Centre will facilitate general public in providing access to authentic copies of land records and performing transactions (i.e. Mutations). This phase of the project is multifaceted and requires coordination for the smooth running of support services of the Service Centre (i.e. Connectivity Support, Hardware Support, Office Supplies, Utilities), resolution of any land records

management software issues that may be identified during service delivery and monitoring of service to the end customers.

**Expected Timelines**

<b>Timeline</b>	<b>Scanning Sites*</b>	<b>Data Entry Sites*</b>	<b>Service Centres</b>
Jul 2010 - Oct 2010	7 (7)	4 (4)	0
Oct 2010 - Sep 2012	158 (8)	36 (4)	129

\* Numbers in brackets represent sites running in parallel at any instance

All the numbers in the above table are approximations and may vary slightly

**2. Scope of Assignment**

**A. Computer Based Solutions**

To carry on the required duties the QA Consultant will have to implement and use the following computer software solutions:

- I. Issue Tracking System – web-based system to record all of the incoming requests, issues, bugs or any other type of the events related to LRMIS operations and service delivery. Each of the incidents must be processed through a certain defined workflow and its escalation status tracked to the logical resolution.
- II. Configuration Management Data base (CMDB) - web-based system to store all of the information about LRMIS software components, system software components, hardware and communication installed and maintained in each of the Service Center at any given time. Must be updated with any changes and upgrades made in any of the Centers.
- III. Help Desk – computer based CRM solution to assist Help Desk operators record and store each client call or request as well as assisting in dealing with the clients.
- IV. Knowledge Base – Web-based solution (a kind of Wikipedia) to store explanatory information related to various aspects of LRMIS operations,

troubleshooting, vendor's recommendations and just workarounds to assist Help Desk operators efficiently address clients problems.

All of the computer software systems listed above and implemented by QA will remain property of BOD/PMU altogether will all of the accumulated data. QA is supposed to act as an administrator for the BOD owned systems and data keeping all of the records up to date and reflecting the reality at the Service Centers and clients feedbacks and inputs.

**B. During Data Entry Phase:**

During data entry phase the consultant firm will be responsible for the following:

- a) Monitor that Data Entry service provider is following SOPs as defined by PMU BOR, this may require, physical as well as electronic monitoring of the operations at data entry sites all across Punjab (approximately 165 scanning sites and 37 data entry sites in total)
- b) Monitor that a minimum number of resources, as designated by PMU BOR, is being employed by the Data Entry service provider to render the services.
- c) Receive software issues/discrepancy reports about Land Records Data Entry Software from Data Entry service provider and assist the service provider in resolving the issue through knowledgebase available in-house. For example if the system is not exhibiting the expected behavior it might be because data entry operator is an inappropriate value for a parameter and confirming it from knowledgebase may resolve the issue.
- d) In such cases where a software issue cannot be resolved in-house, escalate the issue to Software Vendor for its resolution.
- e) Coordinate the installation of corrected software at all the data entry sites.
- f) Keep versioning information of software deployed at each data entry.
- g) Receive information on internal discrepancy/incorrectness of manually

kept Land Records data and its conveyance to respective District Administration by the Data Entry service provider.

h) Receive information on actions of District Administration to rectify the issue

In order to perform the tasks above, QA Consultant will also be responsible for implementing an 'Issue Tracking System' using software solution such as JIRA, Bugzilla, OTRS, IssueNet etc. or a custom-built software for the recording of any of the above incidents and shall produce weekly reports on the updates of these incidents to PMU BOR. These reports would cover at the minimum but will not be limited to following:

- i. Number of New Incidents in each class
- ii. Number of Total Incidents in each class
- iii. Number of incidents which have missed their set time limit benchmarks in each class along with their relevant details

PMU BOR should be able to view delayed/outstanding incidents at any time via secure web interface, and may also specify/modify incident escalation rules in the system.

Pursuant to bullet 'c' and 'd' above, QA Consultant is:

- a. Required to develop a Knowledgebase System Solution that will be used by the consultant personnel at Help Desk responding to requests of data entry vendor for software issues resolution during data entry.
- b. Responsible for defining groups of errors and issues to create proper classes of the same
- c. Continuously improve the knowledgebase by incorporating the lessons learned from practicing.

Pursuant to bullet 'f' above, QA Consultant is required to develop a formal CMDB Solution. This will be a comprehensive solution, which shall be used in the tracking of the versioning information of LRMIS Software deployed at any of the Data Entry Sites and Service Centers. This CMDB will also act as the Inventory Control System as mentioned later.

### **C. During Service Centre Operations:**

Once the data entry for a Tehsil is completed and the necessary infrastructure needed to start the service delivery (i.e. Service Center building, Personnel, LRMIS Software application, Network Connectivity to Central site, Hardware, Furniture, Utilities, Office Consumables etc.) is in place; the service center shall become operational. The primary focus of the services rendered through this service center will be to a) provide copies of revenue records e.g. Ownership Rights, Cultivation Rights, Family Trees etc.; and b) Recording of Mutations i.e. changes of Revenue Records. Due to the diverse nature of vendors involved in the provision of different necessities for running a service center, it is necessary to put in place an effective monitoring and coordination mechanism. QA Consultant will be responsible for developing and implementing a system that caters to the needs specified above. Following is a more detailed description of the obligations of QA Consultant under this service agreement against each area of operations:

#### **1. LRMIS Software Application**

- a. Receive software issues/discrepancy reports about LRMIS from Service Centers and assist the Service Center Staff in resolving the issue through knowledge base available in-house
- b. Escalate the issue to Software Vendor for its resolution when in-house efforts to resolve the issue fail
- c. Build upon the existing knowledge base (developed during data entry) to improve its contents based on the new experiences in the service centres
- d. Suggest improvements in LRMIS software to the Client based on the feedback of staff at service centres
- e. Coordinate the installation of corrected software at all the Service Centers

- f. Keep versioning information of software deployed at each Service Center
2. Receive reports from Service Centers on Hardware issues and coordinate resolution of the same with Hardware Vendor for issues covered in warranty and with the hardware maintenance vendor for issues not covered under warranty.
3. Receive reports from Service Centers on Network Connectivity issues and coordinate resolution of the same with Connectivity Vendor.
4. Service Center; the operations of the service centers will be managed either directly by the Government or by a private partner who will be responsible for arranging necessary resources and provisions to provide the services for public in an efficient and smooth way. The monitoring of Service Center will require that QA Consultant indirectly (i.e. through electronic means) to monitor:
  - a. The availability of minimum number of personnel for running the service center operations
  - b. The availability of minimum number of computer systems
  - c. The availability of adequate inventory of consumables (e.g. stationary, printer ink, generator fuel etc.)
  - d. Average time taken to serve a visitor
  - e. Quality of data being entered
  - f. Efficiency of the processes being followed at Service Centers and suggest improvements if any.
5. Client Facilitation:
  - a. Serve requests for info on services available through Service Center and the process to avail those services
  - b. Serve requests for update on applications deposited at service centers (e.g. Inheritance applications, Record Correction Requests requiring field visit etc.)

- c. Serve requests for verification of copies of Revenue Record
- d. Receive feedback/complaints of clients regarding services and coordinate amicable resolution of the issue

In all cases in 1 to 5 above each incident will be logged, tracked and monitored for its logical end. An 'Issue Tracking System' software shall be implemented by QA Consultant for this purpose. A benchmark for maximum time allowed for item to be resolved at one level will be defined by the Client along with a hierarchy of escalation levels so that failure to amicably resolve an issue at any stage in due time may result in escalation of the issue to next level by the QA Consultant.

Pursuant to the bullet '4' sub-item 'c' QA Consultant will implement Inventory Control Software System to record inventory data and communicate it to the central repository of Inventory information managed by QA Consultant as an integrated part of CMDB solution.

Pursuant to items under bullet 5 above, QA Consultant will set up a central Help-Desk supported by a call center to serve the requests of clients. A formal Trouble ticketing and tracking system will be implemented to log, track and flag (for escalation) all client requests. The Help Desk shall have 5 desks at the minimum with the provision available (particularly in terms of infrastructure) to increase the number to a maximum of 20, if required, later.

A weekly report on all issues will be recorded anew or pending from previous times will sent to the Client by the QA Consultant.

All Software Solutions designed and developed for rendering of service of QA Consultant shall be the sole property of the Client. In cases where a prepackaged solution is used, the license for such packages shall be in the name of the Client.

### 3. Roles & Responsibilities of Different Actors<sup>2</sup>

Stakeholders involved in the implementation of various services delivery functions/processes are Software Vendor, Data Entry Vendors, District Revenue Administration, Board of Revenue, Staff at the Service Centers (Service Centre staff), Hardware & Network Suppliers and Maintenance Vendors, Quality Assurance and Monitoring of Service Delivery Consultant, Project Management Unit-Board of Revenue and possibly private partners for service delivery. All of them will have their specific roles in each function/process with respect to the level of interaction with the system of monitoring and quality assurance.

a) *Software Vendor* will have the following responsibilities;

- i. Review and resolve incidents escalated to the level of the software vendor by the QA and Monitoring of Service consulting firm.
- ii. Review reported problems and provide approach for resolution.
- iii. Maintain infrastructure to track the change requests and their resolution progress
- iv. Review the requests for changes according to the assigned priorities and work with PMU-BOR and Change Advisory Board (CAB) to plan release resolution features.
- v. Implement, test and deliver the release.
- vi. Provide inputs into the knowledge base to include updates on the release features (used by the Help Desk/Call Centre staff).
- vii. Provide resources of remote and if needed on-site support to the service centers during each new release update installation.
- viii. Entry of records into Configuration Management Data Base (CMDB) to track each site LRMIS application software and any third party tools,

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<sup>2</sup> These are tentative roles and responsibilities. These will be specific in detail by the consulting firm, in consultation with PMU-BOR as the system of monitoring is developed and implemented.

utilities configuration items and update CMDB records in case any of the configuration items gets upgraded at a specific site.

b) ***Data Entry Vendors (for initial data entry)*** will have the following responsibilities during the data entry phase

- i. Review and attempt to resolve issues faced at the level of the data entry vendors.
- ii. Inform PMU-BOR and QA and Monitoring of Service Consulting Firm about the software issues and problems faced during data entry which could not be resolved in house.
- iii. Inform District Revenue Management of the issues in base data and get them resolved

c) ***District Revenue Management (DCO, EDO (R), DO (R), DDO (R), Tehsildar)*** will have the following responsibilities

- i. Take corrective actions in respect of security of system, staff discipline, operational support (availability of supplies and provisions) etc.
- ii. Take corrective actions about efficiency of revenue field staff in respect of their interaction with the system (particularly in respect of providing timely reports to the service centres about inheritance investigations and land surveys. For this purpose the Patwaries and Field Revenue Officer will have to have regular interaction with the Service Center for exchange of information regarding Inheritance investigations and land surveys. Similarly the Assistant Director Land Records will be responsible for verification of identities of parties involved in a transaction and shall electronically approve/disapprove Mutations and Fard Badars when the system becomes operational). Quality Assurance

Consultant will provide monitoring reports for District Revenue Administration and Board of Revenue to initiate corrective actions electronically (e-mail, fax, and phone). These corrective actions will be reported back to the monitoring system established by the consulting firm.

- iii. Proactively monitor the performance of Revenue Staff and report issues to the consulting firm through help/service desk/ Call Centre. This will be in addition to the monitoring by the consulting firm and will feed into the monitoring system established by them.
  - iv. Ask for, obtain and act on specific reports on service quality from the consulting firm. Such reports will be provided by the consulting firm
- d) ***PMU-Board of Revenue*** will have the following responsibilities;
- i. Take corrective actions in respect of security of system, staff discipline, operational support (availability of supplies and provisions) etc.
  - ii. Work on business process reengineering as required.
  - iii. Provide legal cover to the process changes.
  - iv. Ask for, obtain and act on specific reports on service quality from the quality assurance and monitoring of service delivery consultant. Such reports will be provided by the quality assurance and monitoring of service delivery consultant. In addition the Board of Revenue can ask for specific ad hoc reports.
  - v. Structure the details of relationship of different stakeholders
  - vi. Supervise the processes, maintain ownership, coordinate the communication and review incidents escalation and resolution
  - vii. Review and analyze problem patterns based on the reports provided by the quality assurance and monitoring of service delivery consultant.
  - viii. Lead the Change Advisory Board (CAB) in review & analysis of incidents and problems.

- ix. Approve the requests for changes and prioritize the processes based on the reports provided by the quality assurance and monitoring of service delivery consultant.
  - x. Facilitate the software training to and access to training material for QA and Monitoring of Service Consultant
  - xi. Monitor and review performance of QA and Monitoring of Service Consulting Firm.
- e) ***Staff at the Service Centers***<sup>3</sup> will have the following responsibilities;
- i. Inform QA and Monitoring of Service consulting firm about problems related to:-
    - 1. Software
    - 2. Hardware
    - 3. Networking
    - 4. Provision of supplies
    - 5. Human Resource Issues
    - 6. Connectivity
    - 7. System Securitythrough service desk/Call Centre mechanism.
- f) ***Hardware & Network Maintenance Vendors***<sup>4</sup> will have the following responsibilities;
- i. Provide service center in working condition and solve all the issues of hardware as well as networking.
  - ii. Entry of records into Configuration Management Data Base (CMDB) to track all of the hardware and network items changes and improvements.

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<sup>3</sup> If the service delivery is outsourced to a private partner and provision of staff at the service centre is responsibility of such private partner these responsibilities will shift to the service delivery private partner.

<sup>4</sup> This also includes the hardware maintenance vendor, if other than the hardware supplier. If the service delivery is outsourced to a private partner and provision of hardware & networking are the responsibilities of such private partner these responsibilities will shift to the service delivery private partner.

- iii. Provide the trend analysis which highlights the major issues and problems in different locations.
  - iv. Work with CAB to define hardware and network upgrade policies in resolution of the analyzed problems.
- g) ***Connectivity Service Provider*** will have the following responsibilities;
- i. Provide service center in working condition and solve all the issues of connectivity.
  - ii. Entry records into Configuration Management Data Base (CMDB) to track all of the connectivity items changes and improvements.
  - iii. Provide the trend analysis which highlights the major issues and problems in different locations.
  - iv. Work with CAB to define connectivity upgrade policies in resolution of the analyzed problems.
- h) ***Consumable Suppliers***<sup>5</sup> will have the following responsibilities;
- i. Provide the consumable goods on time in every Service Centre.
  - ii. Entry records into Configuration Management Data Base (CMDB) to track all of the consumable items provided.
  - iii. Provide the trend analysis which highlights the major issues and problems in different locations.
  - iv. Work with CAB to define consumable upgrade policies in resolution of the analyzed problems.

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<sup>5</sup> If the service delivery is outsourced to a private partner and provision of consumable goods are the responsibilities of such private partner these responsibilities will shift to the service delivery private partner.

### **List of Documents to be provided with EOI**

The following documents are required to be provided with the EOI.

1. Documentary proof of valid legal entity of the firm i.e. Registration with Securities and Exchange Commission or Registrar of Firms etc.
2. National Tax Number of the firm and General Sales Tax Number
3. Audited Statements of Accounts
4. Registration of Firm with relevant professional body, if any.
5. Undertaking that the firm has not been blacklisted or debarred by any government/semi government organization.
6. List of development projects of monitoring/CRM systems worth at least 8 million each in the previous five. The list must include a brief description of the monitoring/CRM system / software, features of the system, how a Monitoring/CRM System capable of interfacing with the service delivery, duration of the project and cost of system / software.
7. Details of the operations performed in running a Customer Relationship Management/Service Delivery Monitoring call centre for the last 3 years.
8. List of the Projects which show the experience of designing and/or managing one secure Network with at least 100 nodes in a geographically scattered distributed environment.
9. List of key permanent professional staff including detailed CVs of proposed Team Leader / Project Manager, Monitoring Lead, Quality Assurance Lead, Network Security Specialist for the assignment, showing qualification and experience including the projects on which they have worked, their role in the project and duration of their engagement with the project.