Expression of Interest (EoI)

for Proposals on

Integrated Land Management System (ILMS)

Revenue Department

Government of Gujarat

EoI No.: SW29012016002

(January 2016)

EoI processing Fees: Rs. 5,000/-

Last date of submission of the queries: 03.02.2016 upto 1500 hrs.

Date of Pre-bid meeting: 10.02.2016 at 1500 hrs

Last date of Submission of Proposal (Online): 24.02.2016 upto 1500 hrs.

Last date of Submission of DD (Physically) at GIL: 24.02.2016 upto 1500 hrs.

Opening of Proposal: 24.02.2016 at 1600 hrs.

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

GiL
GUJARAT INFORMATICS LIMITED
(A Government of Gujarat Company)

Table of Contents

1.Background

The Gujarat Informatics Limited (GIL) on behalf of Revenue Department (RD), Government of Gujarat invites EOIs detailing Proposals on Integrated Land Management System (ILMS) and followed by prequalification evaluation and presentation/demonstration of the proposed technology/solution.

This EoI is intended to evaluate the technical and operation feasibility of the proposed solution. Based on the evaluation of the technical proposals and demonstration, RD/GIL shall define the next steps for the actual selection of agency and project implementation process.

1.1 Introduction

The role of land records department in India's system of land records is crucial for proving ownership of one's land. It is also important for land taxes, reforms, and administration of land. Indeed, creation of an accurate, complete land information system is one of the key challenges for governance today. Although land records can cover a wide variety of information, the most important area involves geological data (such as land shape, size, boundaries, forms, and soils); economic data related to crops, irrigation, and land use; and information about land transfer history, legal rights, liabilities, and taxation.

Manual maintenance of land records, however, does not facilitate this objective. It also hinders effective collection and analysis of the data that are crucial for, among other things, increasing bank loans, resolving legal disputes, promoting accurate crop data and insurance, and ensuring efficient land markets.

The main objective of the Integrated Land Management System (ILMS) planned by the Department of Revenue, Government of Gujarat is to develop a modern, comprehensive and transparent land records management system in the state with the aim to implement the guidelines issued by the NLRMP, Government of India with the help of innovative technical solutions, best practices adopted by other states/countries. The Project envisages facilitating department by providing a clear legal title & complete updated information to land owners, tenants, and clarify issues regarding title, possession, claims & surcharges, easements (Common areas, parks etc.) and disputes & court cases.

The core aim of the ILMS would be to build conclusive land-titling system with title guarantee, which will be based on following principles, i.e,

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

- Standardization and Implementation of automated process, land title registration & updating Land records
- GIS based mapping from digitized maps/satellite images/aerial photography. GIS application development and integration with other systems
- Single window for Revenue Department to handle land records (including the maintenance and updating of textual records, maps, survey and settlement operations and registration of immovable property)
- An integrated Centralized Integrated Land Records System to get the real time updated spatial and textual data in a single database in State Data Center.
- End to End Integration of registration and land records maintenance systems
- Automatic mutation following registration for all types of Lands
- Build robust MIS Reporting Business Intelligence and Analytics Capabilities
- Conduct necessary awareness and communication among the stakeholders enabling the acceptance of online work environment
- To ensure the necessary legal and policies are updated accordingly to a smooth functioning of online system

1.2 Land Parcel Activities

A land parcel, basic unit of land owned by a citizen/farmer in the state is an intrinsic and core constituent of the land records management system. Revenue Department controls different types of mutations, title verification, validations, maintenance of Record of Rights (RoR) on the land. Fundamentally, Land parcel would fall in following categories:

- Agricultural Land
- Non Agricultural Land
- Gamtal Land

At present, Land record databases are being created & maintained at tehsil/taluka/revenue circle level with non-spatial data. Registration database is being maintained at Sub- Registrar offices. The databases capture the information pertaining to ownership with plot details such as area; crop; irrigation; soil and transactions etc. There are master registers which contains the details of land ownership and plot details. These master registers are often known as khata register and plot register. These plot register contains the land records details of all the plots or land parcel. Following are the

administrative officers working in Head office or field to ensure the efficient management of Land records;
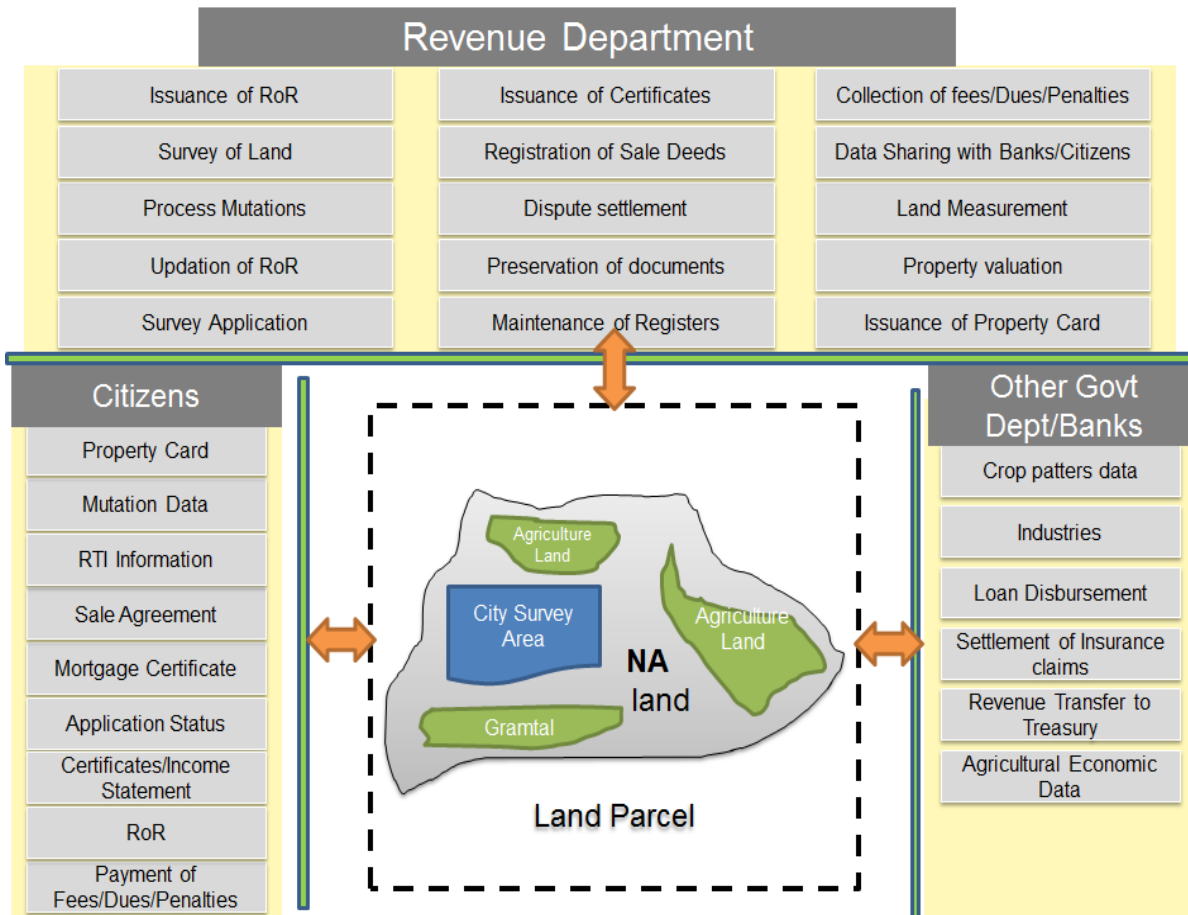
- Principal Secretary, Revenue Department is the State-level implementing authority.
- Collectors, Additional/Deputy/Assistant Collectors are designated as Nodal Officers in their respective districts.
- Mamlatdar, overall administrators for land records for their Talukas, are responsible for the up-to-date maintenance of RoR and 'Register of Mutation' in respect of lands in all villages within his jurisdiction.
- Deputy Mamlatdar are designated as the administrators for e-Dhara Kendra where Record of Rights (RoR) – Hakka Patrak, is issued and on-line mutation workflow is done.
- Talathis are deputed in villages/group of villages to maintain land ownership registers, khata/plot registers, and crop details of land.

1.3 Objectives of Integrated Land Management System

The objective of the Integrated Land Management System (ILMS) is to increase the efficiency of the Revenue Administration through automation of workflow, backend digitization, integration of multiple applications of different HODs and adoption of innovative modern technology interventions.

- ➢ Single window to handle land records (including the maintenance and updating of textual records, maps, survey and settlement operations and registration of immovable property)
- ➢ An integrated Centralized Integrated Land Records System to get the real time updated spatial and textual data in a single database in State Data Center.
- ➢ End to End Integration of registration and land records maintenance systems
- ➢ Automatic mutation following registration for all types of Lands
- ➢ Elimination of Manual Records
- ➢ Computer controlled mutation process
- ➢ To ensure the necessary legal and policies are updated accordingly to a smooth functioning of online system
- ➢ Infuse transparency in providing the services to citizens
- ➢ Ease of administration
- ➢ Facilitate easy maintenance and Prompt updation of land records
- ➢ Making land records tamper proof
- ➢ Conduct necessary awareness and communication among the stakeholders enabling the acceptance of online work environment
- ➢ Build robust MIS Reporting Business Intelligence and Analytics Capabilities
- ➢ Training & capacity building

1.4 Revenue Department Structure:

Revenue department, Government of Gujarat is the nodal agency to provide land titles to landowners. Department is headed by the Principal

Secretary (Revenue) and has different cadres for officers deployed at Dstirct, Taluka and Village headquarters.

Department primarily handles following subjects:

- Record of Right
- Non Agricultural Permission
- Land Grants
- Agriculture Land Ceiling/Tenacy
- City Survey
- Conversion of Land tenure

Department administration is governed by following acts and rules in the state of Gujarat

- The Bombay Land revenue Code, 1879
- Gujarat Agricultural Lands Celling Act, 1961
- GUJARAT ACT NO.7 of 2010
- The Gujarat Tenancy and Agricultural Lands Laws (Amendment) Act, 2015

Gujarat Revenue Tribunal	Gujarat State Disaster Management Authority(GSDMA)	Special Secretary Reveue Department (SSRD)
Settlement Commissioner and Superintendent of Land Records	**Revenue Department**	Commissioner of Relief
Inspector General of Registration and Stamps	Commissioner of Land Reforms	Revenue Inspection Commissioner

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

2.Existing Technical Architecture

Revenue department has been using multiple IT systems designed and developed by National Informatics Center (NIC), Private vendors to maintain land records information. Applications have been designed considering the need of the stakeholders at that time, limiting access of updated data and information to the sub-department users. Department intrinsically need a comprehensive integrated technology architecture and framework to manage the seamless flow of information amongst these applications.
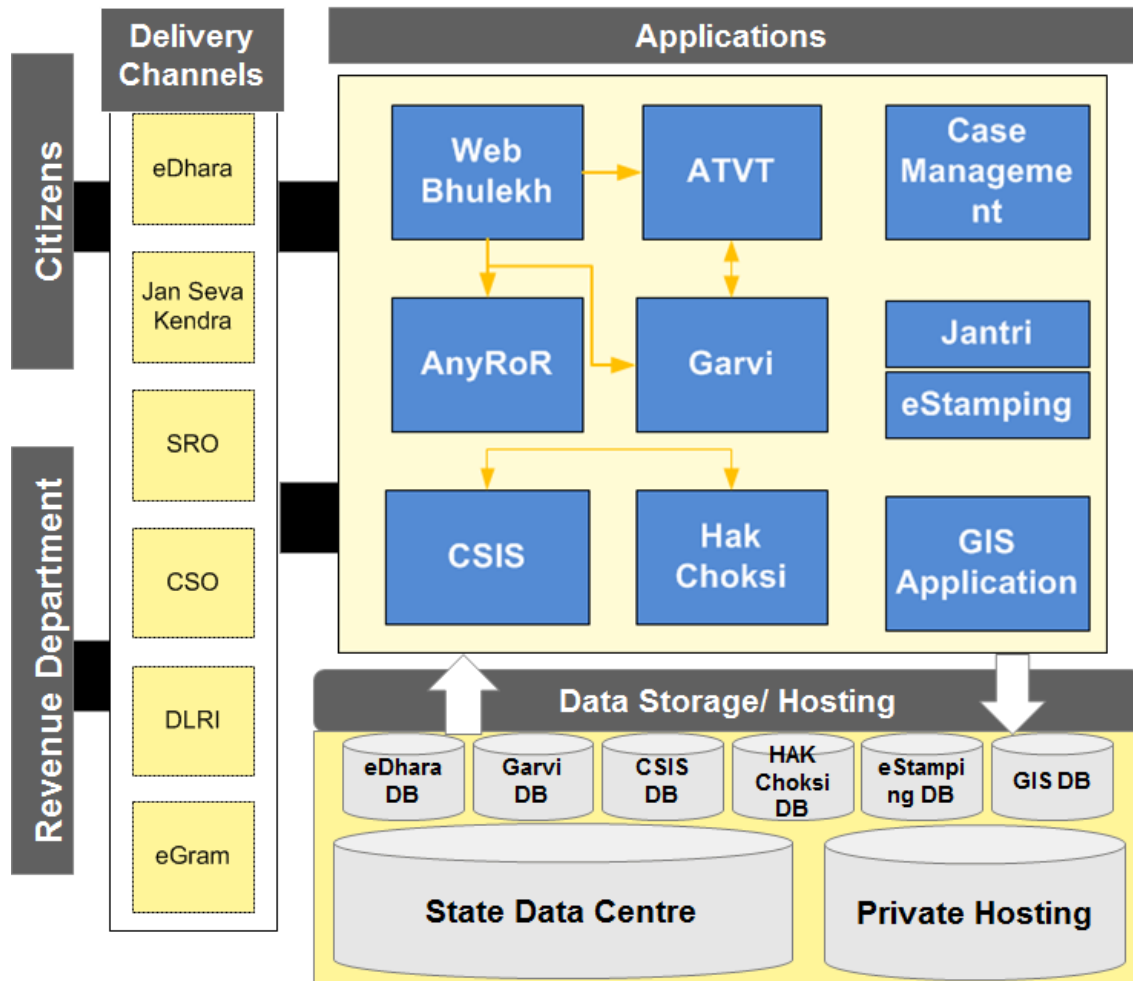
Note: The details of the existing applications which are in use is given in Annexures.

3. Scope Of Work

A government department typically uses multiple software applications that are custom -built, Acquired from a third party, part of a legacy system, or a combination of all of this, operating in multiple tiers of different operating system platforms. In order to support common business processes and data sharing across applications, these applications need to be integrated. Application integration needs to provide efficient, reliable and secure data exchange between applications with heterogeneous technology platforms/architecture. Revenue department, Government of Gujarat intends to integrate existing applications with having following agenda;

- Unified Common Information Portal for all key stakeholders
- Seamless Data Replication
- Common applications for shared business functions
- Real time data availability to officers and citizens
- Use of GIS to uniquely identify each parcel of land

The project also aims to achieve enhancement / modernization of the existing systems of land record management to help in conducting searches and managing back office operations. The envisaged system will facilitate in prompt resolution of Court Cases in all revenue courts right up-to the courts of Special Secretary of Revenue Department. The key components of the envisaged project would be follows:

For achieving the project's objectives, the proposed integrated solution shall introduce the following new systems;

4.2   Centralised Database

4.3   Spatial Data Management System (SDMS)

4.4   User Interface

4.5   Business Process Reengineering

4.6   Land Record Proposed Modules

5.5.1 Dispute Management

5.5.2 Scanning and Preservation of document

5.5.3 Mobile Interface

5.5.4 Reports Managements

5.5.5 Enterprise Workflow Management

5.6   Scope for data exchange with existing applications

5.6.1 Agricultural Land Records

5.6.2 Integration of City Survey data and Gamthal data

5.6.3 Integration of Municipal Corporations / Councils Data

5.6.4 Integration with Sub Registrar Office

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

3.1 Centralized Database

The envisaged system will have a Centralised database of the property holdings, giving view of following information:

a) GIS data collected during filed level survey activities
b) property identification data and property attributes
c) ownership data
d) farm, cultivator data
e) property usage data (commercial / agriculture/ industrial)
f) details pertaining to collection different taxes on land
g) tagging of the property that will have a bearing on the RoR data (mortgage, disputes, restrictive covenants).
h) transactions on the property
i) all historical information of changes in important data fields

The centralized database would have geotagged with a unique identifier for each land parcel in the state.

3.2 Spatial Data Management System (SDMS) - ETS/DGPS Handheld Devices

Large numbers of Revenue Officers have been deployed on field Taluka, village areas. These officers performs important activities of conducting surveys, land boundary measurement, monitoring encroachment, crop inspection, land dispute resolution, land inspections to take decisions in day to day operations. Department intends to provide ETS/DGPS handheld devices (having accuracy of 2 cms)to field officers to equip them to access real time land records database during site visits. Executing Agency ("EA") shall suggest robust technology platform, ETS/DGPS handheld device capabilities, specifications, application architecture which could be used to exchange information with field officers. GIS/GPS enabled mobile devices will be used to capture geo-spatial coordinate of the land parcel/plot and centralized database will be synchronized on real time basis. EA shall develop a GIS application (to be installed on portable devices) to dynamically fetch and update real time data stored on the centralized server.

The Execution Agency will be responsible to design, develop and implement a web based centralized geospatial solution for the revenue department. Revenue officers deployed on field shall be able to access, modify, delete, and approve the geospatial data stored on the centralized server. The proposed solution shall address the complete workflow for GIS

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

enablement of land records, registration and integrated with the enterprise application. The GIS System shall constitute the Survey / Resurvey and real-time updation of the records, Web /Mobile Based GIS Application development. All GIS maps could be opened to public access to mark annotations about land ownership.
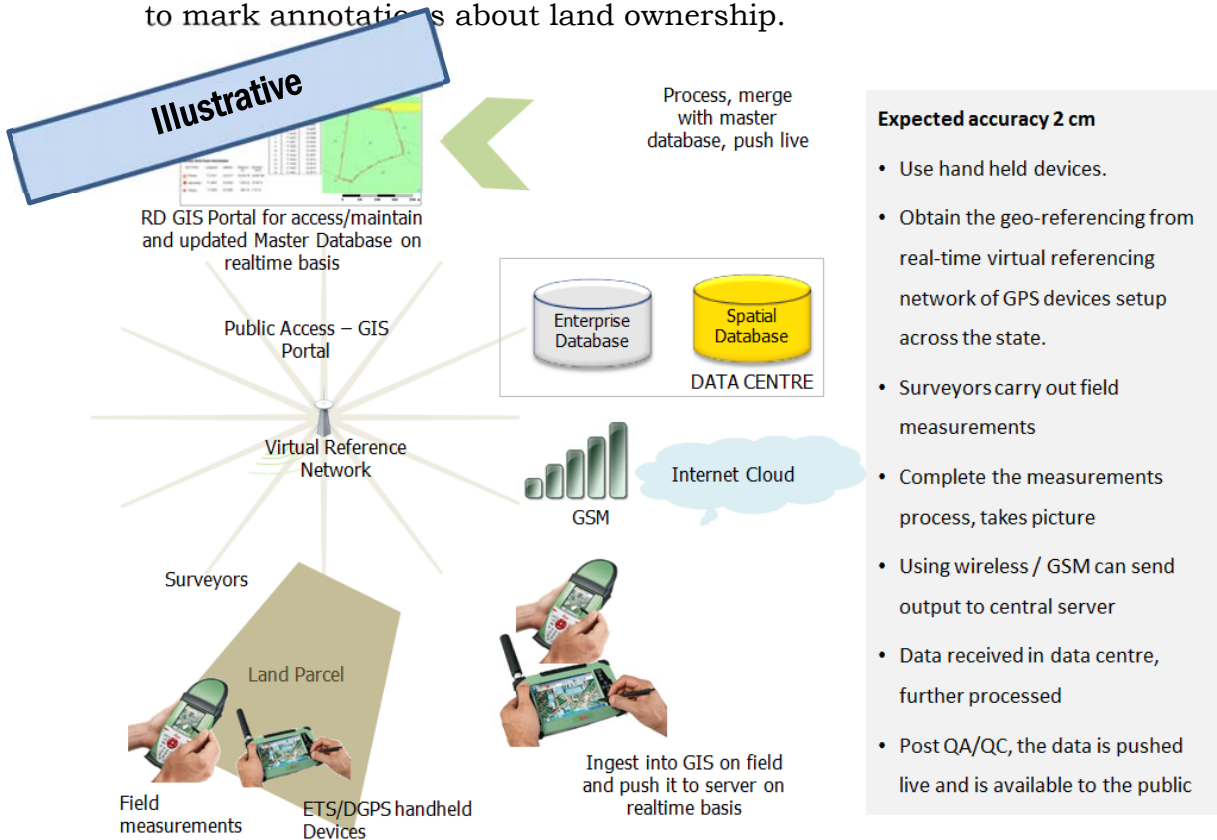
Envisaged blueprint of the GIS based solution for field officers

Spatial Data Management System (SDMS) shall be capable to perform the following activities;

- Handling of spatial data collected during the field visits
- Creation of digitized maps with the help of captured GIS coordinates
- Mapping of digitized maps with textual and biometric data of Land Owners
- Issuing and management of unique GIS based Identification number to each Land parcel
- GIS Layer preparation for existing database of eDhara, CSIS or other existing applications
- Satellite Image procurement & processing
- Vector Maps creation

- Automatic generation of Village Forms for Gamthal and City Survey Land
- Integration of SDMS with existing HAK Choksi application for validation and promulgation of captured data
- Integration of SDMS with CSIS application for the issuing of GIS based Property Cards for Gramthal and City Survey Land
- Integration of SDMS with existing NIC application eDhara for issuing of GIS based RoR copies for agricultural land
- Maintenance and real time updation of spatial, biometric and textual data
- Privileged base user access of database to different department officers
- Facility to Revenue Department's officials for real-time access of database

Some the important key feature of SDMS would be as per follow;

- Basic map functions (zoom, pan, distance calculation, surface area calculation, etc.),
- Feature creation (add, edit, delete),
- Feature query (spatial and non-spatial),
- Attribute information editing (editing controls such as default value setting, multiple choice setting, etc),
- Vector/raster data support,
- Reporting (creating and editing report templates),
- Labelling, thematic mapping, data import/export,
- Layer controls (on/off, locking, etc.),
- User management,
- Defining & managing coordinate systems, geocoding,
- Bird-eye maps,
- Support symbol (icon) functions (symbol creation, editing, changing symbol size according to zoom levels, etc.),
- Redlining,
- Integrated mobile and Tablet based solutions for periodic property monitoring and updating process
- Creating hyperlinks to the third party applications (hyperlink to the pictures and video, mechanical engineering drawings of assets on land parcels transformer, building, etc.)
- All the above mentioned functions should be enhance able and/or new functions can be created through a Java based, SDK. Web (Java Applet), Client, Server supports Unified API

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

- Provision for Multistory building sketching and management
- Visualization of Land parcel data on 3-Dimensional map data format need to support
- Visualization of Land parcel in 3-D (DEM – Digital Elevation Model) superimposable on HRSI (High Resolution Satellite Imagery) of 50 centimetres.
- GIS should provide the feature to do Hysterical data analysis of Land parcel information using 4-D Time series.
- Should supports connection to multiple relational databases (different brands like Eg: Oracle, Sybase, MySQL, PLSQL, HiRDB etc) at the same time.
- Should provide the feature to create relationship between tables (records) on different databases and query data from these tables at the same time. This shall allow GIS to create complex meta data models between land parcels, land parcel status information, land parcel asset information related to buildings, utilities like (transformers, lines, poles and equipment etc).
- Distributed transaction need to be supported. Two-phase commit from the business application and GIS application should be made possible. This shall allow multiple users to edit the map data at the same time without having data conflicts.
- Data schema on DBMS should be open (not closed), so as to enable land parcel big data management.
- As a part of land parcel big data management DBMS' spatial index and R*-tree index need to be supported. By this way the system performance (query for a specific feature in the database) can be increased especially when the database size gets bigger.
- Possible to create server clusters with load balancing and fail-over functionality. And also, multi-thread transaction/query, data compression and asynchronous map view need to be supported for higher performance. (Static, Dynamic Cache is also supported).
- Need to have the feature to configure menu items and parameter information (Menu Structure and Command placing, Command names and titles, toolbar icons, etc.) through xml files.
- Feature to define and configure log contents through XML files and also SQL log need to exported.
- User authorization and User Authentication should be GUI based, which enables authorizing users and granting rights of access and data manipulation. A feature that would enables decentralized / centralized

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

land parcel data management and map data access at Sate, District, Talukas and block level.

- Should be possible to monitor dynamically the server operation and status such as: Log-in user status, server load, data access status.)
- Should be possible to create custom GUI without business customization through designated application without additional cost, to bring down the total cost of ownership

3.3 User Interface

- EA shall design & develop the user interface, advance content management system for revenue officers. The interface shall contain admin section where selected users shall be provided authentication for accessing the content on the basis of role based access. Admin shall have facility to add, modify, delete, and reset user's access for the system.
- Interface shall be integrated with all the existing applications and shall have capability to fetch and upload the real-time data from centralized database.
- Interface shall have features to fetch the real-time data for verification at various user levels.
- Interface should follow the e-Governance Standards laid down by DeitY, Governance of India in the implementation and managing the contents.
- Interface shall provide a way for enterprises and organizations to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different web entities at various URLs.
- The features available may be restricted by whether access is by an authorized and authenticated user (employee, member)
- Interface would be primarily available in Gujarati & English languages.
- There should be different user interface for variety of users as per the information required
- Interface can be accessed via a variety of established channels, including client systems, Government Service delivery counters, mobiles and hand handled devices etc.
- Interface should be capable of exchanging the information & services seamlessly across state government departments as required
- Robust content management system should be in place so that the Content can be regularly updated
- An SMS gateway and mailing solution would also be integrated with the system for notifications

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

- Multiple user levels should be provided to manage the hierarchy and log updation for each of the activities should be embedded
- User Interface shall be integrated with payment gateway for receipt and processing of various types of payments

3.4 Business Process Reengineering

Assessment

- Study of the present structure, functions and services of the department.
- Study of the existing back-end processes in the Department
- Identify the key Processes of the department for Government Process Reengineering (GPR) and enablement.
- Detailing key activities of the project, finalizing the approach and methodology to be adopted

Design

- Design of the re-engineered processes (for the prioritized services/ functions) to make effective use of IT for improving the efficiency of the department.
- Identify the needs and requirement of the interfacing with other process
- Identify the reports requirements of the Department and design a system for the project execution
- Identify workflows and prepare Functional Requirement for e-Enablement of Reengineered Government Processes
- Identification of regulatory/statutory changes and drafting the changes for approval from department

Construct

- Prepare the Solution Architecture Report
- Prepare the Functional Specification Requirements (FRS) document for the Re-engineered Government Processes of the Department
- Suggest hardware requirements for the execution of this project
    - Hardware/software (system/ license Software)/networking requirements (including Bill of Material (BoM) and specification of Hardware etc)
    - Information security requirements
    - Other requirements

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

3.5   Land Record Proposed Modules

3.5.1 Dispute Management

- Linking the Court Case number to Unique Geotagged ID of the Land Parcels and Khata Number
- Design of the Dispute Management System for lodging the cases, appeals to decision making authorities in Revenue Department like
    - Surveyor
    - Mamlatdar/Deputy Mamlatdar
    - Prant Officer
    - Collector
- Data access to judiciary for resolving the land disputes in civil/criminal courts
- As-Is study of the current processes adopted in dispute resolution
- Designing electronic workflow management of different stages in appeals processing like;
    - Lodging of Appeals/Cases with System generated case number and linkage to Khata Number
    - Capturing details of appellant/Advocates/Parties involved in the dispute
    - System generated notices to parties involved in the case
    - Online generation of stage-wise notices.
    - Generation of hearing records, capturing the hearing details, evidences details
    - Facility to appellants/advocates to search for case status through online portal
    - Provision to send Emails, SMS Message alerts to parties involved in the litigation
    - Integration of Revenue Court Case Management Module with the Court Case Management System designed by NIC, Gujarat.
    - Generation of Final case order through system and publication on public portals
    - Display of upcoming and archive Boards with important updates
- Generation of reports for monitoring the performance and efficiency of decision making authorities
- System shall be able to capture the approval and refusal cases in Integrated Land Management System.
- System shall capture the log details and reasons for approval and refusal. In case of any wrong decisions made by any of the revenue officers or any other employee, the system should be capable of incorporating the decisions taken with proper reasoning and sufficient

proofs. For example if during mutation or appeal or court orders, there is change in registration details, the system should capture the relevant change with remarks and should notify the higher authorities by generating alerts and notifications about the relevant changes and the system should replace the scanned Registration of Document with the modified one in the centralized database.

- System should notify about any changes to the relevant modules.
- System shall be capable of modifying/updating the electronic process flows of the module in case of any changes occurs in Rules, Acts and Guidelines in future without affecting the previous data.

3.5.2 Scanning and Preservation of documents

- EA shall provide integrated web based workflow system which would include Document management, Records management, Archival, Imagining & Information Rights Management based on eGov Standard formulated by DIT-GoI
- Also any documents submitted as proof at the department premises would also be required to be uploaded on the system for easier access and retrieval
- System should cater to all requirements of department related to management of documents submitted by registered and unregistered citizen with the department
- System should be integrated with existing and new designed applications for it's maintenance, updation and verification
- System should allow the department officials to easily store and retrieve data based on the unique number of the request with full authentication including Digital Signature and Login details. The system should provide clear metadata for categorization of any document entering the system. The system must also support a string based search.

Salient features of system would be as per follows;

S No.	Features
1.	The application must provide best of breed content and document management functionality which would be used by department for storing, searching, retrieving, security, collaboration, versioning and traceability of documents covering all processes. It should also significantly enhance the compliance requirements of department of revenue, government of gujarat's processes. Some of the key functionalities in the application would be as under:
2.	Must support drag and drop to move documents from one folder to another folder
3.	Must provide the capability to automatically collect / upload document files from specific file directory
4.	The automatic file collection must provide flexibility in defining rules of what files get uploaded
5.	The user can upload more than one document files for a document object
6.	For the multiple file document, the user can download each individual document file or download all of the document files
7.	Features for annotation must be provided for image files. Must allow ability to seamlessly view the image file content in its native form using a built-in viewer
8.	For the multiple page TIF files, the image viewer must be able download a particular page at a time to reduce time taken to download image files with many pages
9.	Must support content reuse through management of links *as* pointers to a single document
10.	Must support filing of a document into multiple folders
11.	Shall allow the users to link different documents as compound document. The document relationship can be pointing to a latest major version, latest minor version or a specific version of the document
12.	When editing, the document must be checked-out from the repository (locked) preventing other users from making changes at the same time
13.	Users must be able to continue viewing the document when a document is checked out. The GUI (user interface) must provide a visible symbol indicating the checkout and an attribute to indicate who checked out the document

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

S No.	Features
14.	Shall provide offline capabilities allowing users to check out a document offline and then check in the documents with the repository when online
15.	Must support de-duplication, in which only 1 copy of the document file will be saved, in the situation that the user file into a duplicate copy of the exact document
16.	Must provide capability to annotate PDF documents without requiring any additional license

3.5.3 Mobile Interface

Mobile technology has become an integral part of citizen's life. The smartphone user base has increased significantly in last 5-10 years. Alerts/Updates regarding services delivered to common man easily provide updated real time information to end users. Hence EA shall design and develop an android based mobile application for revenue officer and citizens. The application shall provide facility to query regarding land ownership information using Khata Number, Survey Number, and Name etc. Also all the existing software applications would be integrated with SMS gateway to send/receive messages form users.

EA shall design a mobile interface to run on smartphones, tablet computers and other mobile devices for accessing the Process, Forms and Reports related to Registration, Land records and GIS Survey for the stakeholders. Mobile interface should be defined on the basis of roles defined to the users/stakeholders in the project.

Mobile interface should be designed for all the stakeholders in the project as per the defined roles to them. Department users shall access the mobile phone to access (role based access) the process involved in the GIS Survey with the help of ETS/DGPS handheld devices.

3.5.4 Reports Management

- o EA shall design reporting tool in the system to generate the reports by accessing the application
- o A tool should be available to fetch the customized data from available databases and generate report and should also support menu driven query and reporting tool
- o System should have provision to print and export the report generated in the pre-defined file format (e.g. spreadsheet, word processing, etc. as per desktop office solution)

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

3.5.5 Enterprise Workflow Management

- EA is required to provide integrated web based workflow system using web services and others
- Workflow management system shall maintain to-do list for the department users and provide the notifications
- Workflow would be required for various instances, such as but not limited to:
    - E- Form submission post system checks
    - Web portal of the department
    - Mailing and messaging services
    - Approvals for any services
    - Approvals for internal matter of department
- Workflow Management would be based on predefined workflows and should also incorporate ad hoc workflow requirements

3.6 Scope for data exchange with existing applications

3.6.1 Agricultural Land Records

- Integration of the Land Records Mutation data with the GIS enabled Resurvey data collected for agricultural land
- Generation of Village Forms from the GIS enabled Resurvey data
- Design and Automatic generation of Village Form No 1
- Design and Automatic generation of Village Form No 2
- Design and Automatic generation of Village Form No 3
- Generation of Record of Rights (RoR) form No 6, 7 and 8A from the GIS data collected during resurvey activities.
- Designing of application interface to digitize the pre-registration form endorsed by Talathis to authenticate the Agricultural Land Seller's identity
- Integration of SDMS with eDhara existing database and maintaining textual and spatial data of land owners

3.6.2 Integration of City Survey data and Gamthal data

City Survey office is currently using an application named CSIS for the creation of Property Cards for the owner of Land which falls under Judiciary of City Survey office. CSIS is creating and updating the database of Land Owners with the support of DILR office and Hak Choksi.

There is no database available for Gamthal Land comes under Village. For Integration of City Survey Data and Gamthal land following steps would be required;

- Integration of CSIS software with Hak Choksi for data updation and generation of property cards for gamthal land declared as a city survey area
- Integration of CSIS Survey database with centralized scanning and preservation system for updation and preservation of land owners details
- Integration of Property Card Module with Centralized scanning and preservation for updation and preservation of land owners details
- Integration of Spatial Data Management System Module with City Survey Information System

3.6.3 Integration with Sub registrar Office

Sale/Purchase transactions of the land are registered with Inspector General of Registration and Stamps office after payment of stamp duty and registration fees. At present, mutations of agricultural land sale transactions are automatically updated after the registration of the sale deed. The sale transactions of land under jurisdiction City Survey Land are and Gamtal areas are not updated in the final Property Card issuance system of the Settlement Commissionerate.

EA shall design software interface to pull data from software application being used for Registration of Sale Documents. Property Card Issuance Application database will be updated with details like Buyer/Seller details, GIS coordinates of land parcel, UIDAI number/ Biometric data of the parties, Change of ownership rights, date, time, type of transaction etc.

3.6.4 Integration of Municipal Corporations/Councils Data

Gujarat state has created 6 Municipal Corporations and 159 Municipal Councils to provide citizens services in the urban areas of Gujarat. These Urban Local Bodies are primarily responsible for execution of State/Central government schemes, monitoring of the execution of work in divisions, wards, maintenance of assets built with own/sponsored funds. All works are carried out with proper planning, authorizations and allocation of funds. ULBs levy Octroi, Property Tax, Water tax on citizens/businesses amongst these taxes; Property tax is the single most important tax revenue source available for most of the Urban Local Bodies (ULBs) in Gujarat. Corporations and Councils uses

ETS/DGPS enabled devices to gather the updated records of land ownership, type of land, uses of land etc. These IT systems could be integrated with Revenue Department's database to update and manage a single database with real time information. In this context, EA shall make provisions to design and develop web services to import/export data from Revenue database and Urban Local Bodies.

3.6.5 Integration with GIS Applications of BISAG

Bhaskaracharya Institute for Space Applications and Geo-informatics (BISAG), a State level nodal agency to facilitate the use of spatial and geo-spatial technologies for the planning and developmental activities pertaining to Agriculture, Land and Water Resource Management has designed GIS maps, GIS layers, GIS databases with land attributes. The EA shall study the existing applications and databases available with BISAG and shall build a technology platform to exchange data with Revenue database.

3.6.6 Integration with Other departments

Revenue Department needs to interact with various other departments for sharing and updating of its current database for various activities. EA shall design the system which shall be capable to exchange and transfer the spatial and textual data with following departments as per requirement;

- Gujarat State Road Transport Corporation
- Land Acquisition Department, Gujarat
- Forest department, Gujarat
- Town Planning Data, Gujarat
- Treasury Department, Gujarat
- UIDAI Department
- Banks and other Financial Institutes

3.7   Training & Capacity Building

Regular training programs help government employees in understanding of new system and provide comfort for using it. The EA is expected to deliver comprehensive training programmes consisting of functional sessions, technical sessions and basic IT literacy sessions to Talatis, Deputy Mamlatdar, e-Dhara Deputy Mamlatdar, Circle officer, Mamlatdar, Prant officer, e-Dhara operators and Senior Revenue Officers

3.8   Data Migration

Data Migration in the context of Revenue Department is the process of transporting of the existing data that is stored in multiple isolated databases into the newly designed centralized database. Some of the key statistics about the work completed by department officers using existing IT systems are :

- Copies of ROR- Approx. 48 lacs per month
- Internet Access of ROR- Approx. 7 lacs per month
- Mutation Entries - Approx. 1 lacs per month
- Auto Mutation- Approx. 6000 per month
- Total ROR(e-Dhara) in 2014 : 3,96,74,486
- Total ROR(AnyRoR) in 2014 : 1,36,13,991
- Total Mutation Entries in 2014 : 11,43,398
- Total ROR(e-Dhara) : 25,91,95,419
- Total ROR(AnyRoR) : 4,63,14,442
- Total Mutation Entries : 1,15,29,172

Data Migration would comprise of the following activities:
- Study of the existing data structure, identification of the potential problems that may create troubles during the data migration and documentation.
- Identification of specific activities involved in the data migration process, preparation of detailed work breakdown structure for the data migration project and submission of relevant documents for each of the activity to the department for approval.
- Design of an extensible data model according to the requirements.
- Conversion of non-Unicode data in the existing databases to Unicode data.
- Porting data (typically village-wise) into the new structure using ETL tools, scripts or customized application and validation of the data after porting. The entire activity has to be audited in detail to find out any issue that may lead to loss of data.
- Validation of migrated data against the source data using relevant Tools/scripts/customized applications and documentation.
- The EA should document each and every activity related to the database migration and the same to be submitted to the department. When it comes to data, the EA must maintain the

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

details of each and every record that is corrected/ cleansed in the audit logs.

- The EA must constantly validate the transported data with highest accuracy level, failing to which result in non-acceptance of the migrated data. In such cases the EA has to redo the migration of data.

3.9 Data Validation

- The data is very sensitive and critical in nature; hence it has to undergo validation at multiple levels.
- Village will be the basic unit for all considerations of data migration and data validations.
- Auditing the data migration activity is to ensure that the data migrated is 100 % replica of the existing data. Data migration audit provides an assurance that data requirements for the target, the Selected IA should perform data migration audit and validation as mentioned system has been appropriately identified and documented.
- Data Migration will require a proper validation of it to ensure the completeness of the full migration. Indicative method of the data validation has been depictive below:
  - **Programmatic Binary data analysis**
    - Number of records migrated should equal the number of records in the source database
    - Number of fields which are having NULL entry should match
    - Number of fields which should not be null; but are having null values in the source database and migrated database should match
    - Count of Owners in the source database and migrated database should match

3.10 Query/Advance Search

- The system will have facility to inquire the title of particular property using browser based front end over the internet.
- Property record details can be searched using a combination of criteria such as:
  - Unique Land Identification Number (UPIN)
  - Owner Name As discussed earlier name matching would be difficult and may result in no match or mismatch if mis-spelled.
  - Ward No./Survey No./Colony/Landmark/PIN
  - Date Range

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

- o Transaction type and date
  - o Property Identifying Parameters
- Search application should work like a search engine in the project

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

4 Envisaged Blueprints

4.1 Outcomes of Envisaged System

Integrated Land Management System shall enable access to all stakeholders abut single version of updated database. The data exchange among the applications will eliminate the discrepancy, ambiguity in providing conformed title guarantee to land owners. Department has identified expected outcomes/benefits as mentioned below:

➢ Real-time updation of mutations for all types of land in the state.
➢ Seamless Integration of discrete land record modules/applications
➢ GIS based updated RoR of Agriculture/Non Agriculture and Gramtal land
➢ Unique GIS based Land Parcel ID – To identify land parcels
➢ Digitized Property Card and Rural property Card System
➢ Case management System integrated with centralized Land records database for all Revenue Courts in the state
➢ Real-time Dispute Management
➢ Comprehensive MIS reports for all revenue officers
➢ Automation of department's work
➢ Availability of right information at right place
➢ Single version of land title information in the system

4.2 Technical Envisaged Architecture
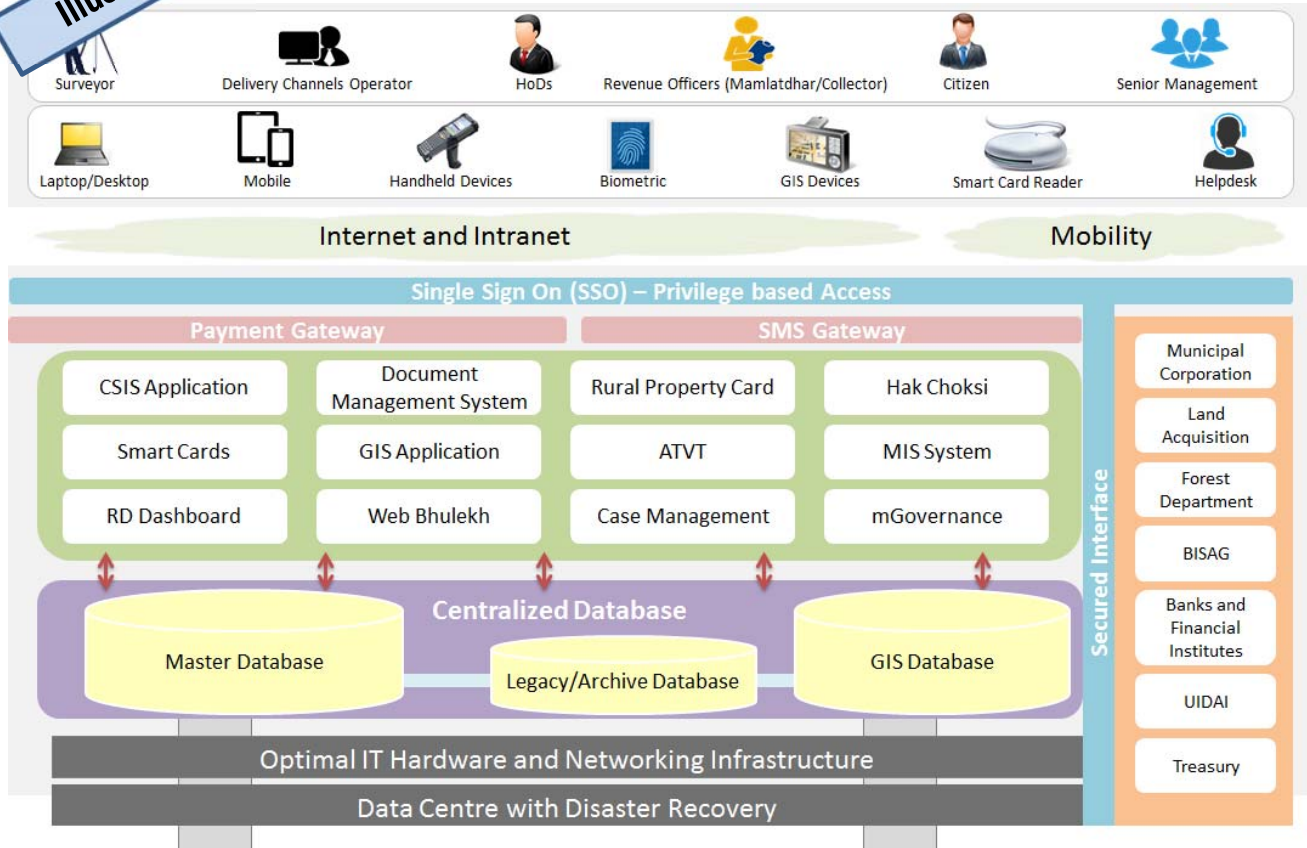
5 Instructions to Interested parties

5.1 The interested parties shall have to elaborate the below mentioned components in the technical proposal:

1. Detailed Technical Solution design confirming the aforementioned solution requirements.

2. Define the business model to be adopted for project sustainability

3. Elaborate the technology platform used for implementing the solution. The technology platform should be based on open standards to ensure data exchange with Government e-Governance Applications

5.2 Clarification of Bidding Documents

1. A prospective Bidder requiring any clarification of the bidding documents may notify the Tendering Authority in writing at the Tendering Authorities address as under. The Tendering Authority will respond in writing to any request for the clarification of any EoI documents, which it receives in the given time limit.

2. Pre bid meeting is fixed for clarification at **Revenue Department, Block no. 11, 9th floor, New Sachivalaya, Gandhinagar.** In the event of any clarification required and issued in writing, it shall form the part of the EoI document.

5.3 Completeness of Response

Interested parties are advised to study all instructions, forms, terms, requirements and other information in the EOI documents carefully. Submission of the proposal shall be deemed to have been done after careful study and examination of the EOI document with full understanding of its implications.

5.4 EOI Proposal Preparation Costs & related issues

a) The interested parties is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/presentations, preparation of proposal, in

providing any additional information required by GIL/RD to facilitate the evaluation process.

b) GIL/RD will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the EOI process.

c) This EOI does not commit GIL/RD to award a contract or to engage in negotiations. Further, no reimbursable cost may be incurred in anticipation of award or for preparing this EOI.

d) All materials submitted by the interested parties will become the property of GIL/RD and may be returned completely at its sole discretion.

5.5 Right to Terminate the Process

a) GIL/RD may terminate the EOI process at any time and without assigning any reason. GIL/RD makes no commitments, expression or implied that this process will result in a business transaction with anyone.

b) This EOI does not constitute an offer by GIL/RD. The interested parties' participation in this process may result in GIL/RD short listing the interested parties to submit a complete technical and financial response at a later date.

5.6 Submission of Technical Proposal

a) The Technical Proposal shall be submitted in a single sealed envelope and superscripted Name of the assignment and EoI reference no. This envelope should contain single hard copies of EOI proposal marked as First Copy and one soft copy in the form of a non-rewriteable CD/DVD. CD/DVD media must be duly signed using a Permanent pen Marker and should bear the name of the interested parties.

b) Bids shall consist of supporting proofs and documents as defined in the Pre-qualification section.

c) Interested parties shall submit all the required documents as mentioned in the Appendix .It should be ensured that various formats

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

mentioned in this EoI should be adhered to and no changes in the format should be done.

d) Envelope should indicate clearly the name, address, telephone number, Email ID and fax number of the interested parties

e) Each copy of the EOI should be a complete document and should be bound as a volume. The document should be page numbered, must contain the list of contents with page numbers and shall be initialed by the Authorized Representative of the interested parties.

f) Different copies must be bound separately.

g) Interested parties must ensure that the information furnished by him / her in respective CDs is identical to that submitted by him in the original paper bid document. In case of any discrepancy observed by the GIL in the contents of the CDs and original paper bid documents, the information furnished on original paper bid document will prevail over the soft copy.

h) EoI document submitted by the interested parties should be concise and contain only relevant information as required under this EoI.

5.7 Bid Submission Format

a) The entire proposal shall be strictly as per the format specified in this Invitation for Expression of Interest and on https://gil.nprocure.com.

5.8 Venue and Deadline for Submission

a) Proposals must be submitted online on https://gil.nprocure.com in the given time limit.

b) The DD of Bid processing fees will be submitted physically in GIL on/before given time limit.

c) Any proposal received by the GIL after the above deadline shall be rejected and returned unopened to the interested parties.

d) The bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

e) GIL shall not be responsible for any postal delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained.

f) GIL reserves the right to modify and amend any of the above- stipulated condition/criterion depending upon project priorities vis-à-vis urgent commitments.

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

6 Pre-Qualification Criteria

Sr. No.	Pre-qualification Criteria	Documentary Evidence
1	The bidder should be registered under the Companies Act, 1956 should have registered offices in India and should be in existence for at least the last 5 years, as on 31.03. 2015.	Copy of certificate of Incorporation issued by Registrar of Companies
2	The bidder should have achieved combined an average annual turnover of at least INR. 500 Crores in the IT (Software development & Integration Services, GIS based Software Development & Integration Services) business, during each of the last three financial years as on 31.03.2015 (i.e. 2012-13 to 2014-15) in India	Statutory auditor certificate declaring the annual turnover is required
3	The bidder must have an experience in execution of at least 1 projects providing total IT solution in e-Governance domain worth of Rs. 50 Crores in any of the state / central government / PSU / Government organization in India during last three years as on last date of submission of bid.	Work order OR Completion certificate from competent authority
4	The bidder should have positive net worth over the last three financial years. Annual audited reports for the previous three years (3) financial years (i.e. 2012-13 to 2014-15) should be submitted along with the bid.	A certificate from the competent authority is required
6	The bidder should be a System Integrator (SI) with ISO 9001:2008 certification and CMM level 5 and operations in India.	1. ISO 9001:2008 certification 2. CMM level 5 Certification
8	The Bidder shall not be under a declaration of ineligibility / banned / blacklisted by any State or Central Government / any other Government institutions in India for any reason as on last date of submission of the Bid	A self-declaration government notarized copy is required
8	The Bidder must have its registered office in State of Gujarat / India as on 31-Mar-2015 OR should furnish an undertaking that the same would be established within 45 days of signing the contract.	Undertaking in this regard by the authorized signatory of the bidder as per format given

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

10	The Bidder must have valid registration certificate of Commercial tax (VAT / CST) , Service tax registration / PAN Number, Excise as applicable	Copy of valid certificate is required
11	Consortium will not be allowed.	Self-certificate will be attached

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

7 Process of shortlisting of interested bidders:

Eligible bidders based on the pre-qualification criteria will call for detailed technical presentation. The presentation will be carried out on the following points for 100 marks. Minimum 70 marks is required to shortlist. .

Proposed Technical Approach and Solution structure addressing but not limited to the following items:

- Approach & Methodology of the Proposed Solution
- Deployment Architecture
- Availability and Scalability of Proposed Solution
- Development and Deployment Platforms
- Database Integration & Migration Strategy
- Security Measures and Industry Standards Management
- Strategy for Data Management

8 Appendix I: Bid Submission forms

The interested parties are expected to respond to the EOI using the forms given in this section and all documents supporting Pre-Qualification / EOI Criteria.

Proposal / Pre-Qualification Bid shall comprise of following forms:

Form 1: Covering Letter with Correspondence Details

Form 2: Details of the interested parties' Operations and IT Implementation Business

Form 3: Detailed Technical Design Solution Document

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

Form 1: Covering Letter with Correspondence Details

<Location, Date>

To,
Director, e-Governance,
Gujarat Informatics Limited

Dear Sir/Madam,
We, the undersigned, offer to provide the IT Implementation services for <Name of the Assignment>.

Our correspondence details with regard to this EoI are:

#	Information	Details
1	Name of Contact Information	<Insert Name of Contact>
2	Address of the Contact Person	<Insert Address>
3	Name, designation and contact, address of the person to whom, all references shall be made, regarding this EOI.	<Insert Name of Contact>
4	Telephone number of the Contact Person.	<Insert Phone No.>
5	Mobile number of the Contact Person	<Insert Mobile No.>
6	Fax number of the Contact Person	<Insert Fax No.>
7	Email ID of the Contact Person	<Insert Email>
8	Corporate website URL	<Insert Website URL.>

We are hereby submitting our Expression of Interest in both printed format (2 copies) and as a soft copy in a CD/DVD. We understand you are not bound to accept any Proposal you receive.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process or unduly favours our company in the short listing process, we are liable to be dismissed from the selection process or termination of the contract during the project.

We hereby declare that our proposal submitted in response to this EoI is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Sincerely,
[Interested parties's Name with seal]

<Applicant's Name with seal>

Name: <<Insert Name of Contact>>
Title: <<Insert Name of Contact>>   Signature: <<Insert Signature>>

Form 2: Details of the interested parties' Operations and IT Implementation Business

S. No.	Information Sought	Details to be furnished
1	Name and address of the bidding Company	
2	Incorporation status of the firm (public limited / private limited, etc.)	
3	Year of Establishment	
4	Date of registration	
5	ROC Reference No.	
6	Details of company registration	
7	Details of registration with appropriate authorities for service tax	
8	Name, Address, email, Phone nos. and Mobile Number of Contact Person	

Details to be filled as per information required in Pre-Qualification criteria

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

9 Annexure

9.1 Annexure I – Background : Revenue Department

9.1.1 Settlement Commissioner & Superintendent of Land Records

Settlement Commissioner and Director of Land Records is the head of the Department. He prepares and implements schemes under control of the State Government. The department consists of field organization and headquarters. The head office is responsible for guidance and control in activities of regional offices. At headquarters in Gandhinagar, there is an establishment of the Dy. Director, Land Record (General), Dy. Director (Land Records), Dy. Director (Consolidation), Dy. Director (Inspection), 6 Office Superintendents, one Accounts Officer and One Asst. Consolidation Officer. Field Officers include Dy. Director, Land Records, Superintendent (Land Records) and Superintendent (Land Records cum Consolidation Officer), District Inspectors, City Survey Superintendent, Assistant Consolidation Officers, Inquiry Officers and Survey Mamlatdars.

9.1.2 City Survey

City Survey is associated with the administration of Record of Right in city survey area.

Objectives: There are three major objectives of survey of city.
- Administrative: To provide maps having particular details of houses, roads, open space etc. which can be useful for administrative purposes such as urban planning or land acquisition for water supply, drainage line, gas line, roads etc.
- Financial: To supervise revenue related matters, to prevent encroachment of land and its improper usage etc.
- Legal: To finalize legal rights and borders, to prevent litigations between land holders which may give rise to animosity amongst them, to remove doubts amongst the Government or local bodies and private landholders and to prevent litigations amongst them.

9.1.3 Inspector General of Registration and Stamps

Stamp Act is an Act related to revenue receipt of the State. Some documents require payment of Stamp Duty which is based on

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

fundamental principles, whereby stamp duty is to be recorded on nature of transactions.

The overall control on the levy and collection of stamp duty and registration fees rests with the Revenue Department. The Inspector General of Registration (IGR) and Superintendent of Stamps, Gandhinagar is the head of the Department. The IGR is assisted by the Sub-Registrar (at the district and taluka level) whereas the Superintendent of Stamps is assisted by the Deputy Collector (Stamp Duty Valuation Office) [DC] at the district level.

9.1.4 Information of Present Applications in Revenue Dept.

9.1.4.1   Settlement Commissioner & DILR

Web-Bhulekh

- Mutation entries for change in ownership of land
- Updation VF6, 7/12
- Generation of notice to all parties

IGIS-LIS Application

- Application for GIS and Image Processing used for Resurvey by DILR

CSIS (City Survey Information System)

- Recording the sale transaction of the property
- Issuance of Property Card to Citizens
- Issuance of 135D notice to Citizens

Hak-Choksi Software

- Digitization of maps and textual data of Land comes under city survey office for generation of property card

Any RoR

- Web service to check the status of requested RoR

9.1.4.2   Inspector General of Registration and Stamps

Garvi

- Registration of Property Sale Transaction, Party Details
- Repository of Scanned Documents

- Issuance of Index-I, Index-II

eStamping

- Acceptance of Stamp Duty Fees from Citizens

Jantri

- Online pdf published to display ready reckoner rates in Gujarat state

9.1.4.3   Citizen Facilitation Interface and services

ATVT

- 180 various Services to city centric citizen at Jan Sewa Kendra

9.1.4.4   SSRD

Case Management System

- Online Inward and new registration of cases into the Court Case Management System from 1st January, 2015.
- Display of upcoming and archive Boards with important updates on SSRD web portal
- System generated Notices dispatched through speed-post.
- Secured Login facility to staff and Officer at SSRD office.
- Case updation on board from Court-room itself.
- Automatic updation of daily board.
- Online generation of stage-wise notices

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

10   Annexure II – Hierarchy wise Roles & Responsibilities of various Applications

10.1 Inspector General of Registration & Superintendent of Stamps

Name of Application	GARVI
Application Developer	NIC
Technology used	Microsoft .Net 3.0 and MS SQL
Main function	Property Registration
Hierarchy wise Roles and Responsibilities	
State level:	
IGR	• Overall monitoring of Property Registration activities at State level
Dy. IGR	• Assisting IGR for controlling and monitoring the Property Registration activities
Assistant IGR	• Assisting IGR & Dy. IGR for controlling and monitoring the Property Registration activities
District level:	
Inspector of Registration	• Overall Monitoring of Property Registration activities at District level offices
Clerk	• Assisting Inspector of Registration
Taluka level:	
Sub-registrar	• Document Verification and Registration activities at Taluka level
Clerk	• Handling of Registration Document

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

10.2 Settlement Commissioner and Director of Land Records

10.2.1   Resurvey

Name of Application:	Resurvey
Application Developer	District wise Private Vendors
Technology used	Microsoft .Net 3.0 and MS SQL
Main function	Resurvey of agriculture and create new records of right
Hierarchy wise Roles and Responsibilities	
State level	
SC & DLR	- Selection of Vendor - Over all monitoring - Policy formulation and issuing - Payment to vendors
Dy. Director	Monitoring the overall project
Office Superintendent	Meeting with survey agencies, data checking & assisting SC&DLR
District level:	
Superintendent Land	Record promulgation and approval against record promulgation, maintain district progress and reporting
District Inspector of Land Records	Nodal officer for resurvey in district, records verification, day to day progress, guidance and monitoring agencies work reporting

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

10.2.2   HAK Choksi & CSIS

Name of Application:	Hakk-Chouksi & CSIS
Application Developer:	NIC
Technology used:	.Net and MS SQL
Main function:	Creation & Maintenance of Record Of Rights
Hierarchy wise Roles and Responsibilities	
State level:	
SCNDLR	- Overall monitoring, review of creation & maintenance of record of rights activities in state. - Tendering and selection of Agencies for new cities, city survey subject related Policy making decision. - Controlling the whole activities. - Directing & issuing required circular.
Deputy Director	Assisting SCNDLR in controlling and monitoring of creation & maintenance of record of rights activities in the state
District level:	
Superintendent Land Record	- Overall monitoring, review of creation & maintenance of record of rights activities in district. - Certifying & promulgating the records.
Taluka level:	

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

C.S.S./ D.I.L.R.	• Create new property record by measuring, collecting require document of Record of right and verify it.
Maintenance surveyor	• Measuring property, collect document of Record of right and enter in records * other day to day job.

10.3 Revenue Department

10.3.1 State Monitoring Cell

Name of Application	eDhara
Application Developer	NIC
Technology used	.Net, SQL server 2008 and SSRS 2008 IIS on windows 2008 R2
Main function	Maintenance of Land records specially Village form 7, 8, 12 & 6
Hierarchy wise Roles and Responsibilities	
State level:	
State Monitoring Cell	• Over all monitoring of project • Access to state level reports • Sharing of information with other departments
District level:	
Collector	• Auto mutation access by order • Access of district level reports
SDM	• Auto mutation by order • Data promulgation

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

	• Access of district level reports
Taluka level:	
Mamlatdhar	• Mamlatdar for auto mutation by order • Access to Taluka level reports
Deputy Mamlatdhar	• eDhara related process based roles to all operators • Verification of data entry
Operator	• Data entry for various process • Biometric and image capturing

10.3.2   ATVT

Name of Application:	**ATVT – Taluka Jan Seva Kendra**
Application Developer:	**NIC**
Technology used:	Development tool/ Language : Asp .Net 4.0 Database : MS SQL 2012
Main function:	ATVT is single window Citizen Centric Service delivery system. System rendering G2C and G2B services.
Hierarchy wise Roles and Responsibilities	
State level:	
Secretary	• Overall monitoring and review of application as well as activities of ATVT at State level
Deputy Secretary	• Monitoring and review of application and activities of ATVT
OSD	• Monitoring and review application under ATVT

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

SO	• Monitoring and review application under ATVT
Dy. SO	• Monitoring and review application under ATVT
District level:	
Collector	• Monitoring, Supervision, Review and Authentication of application comes under his authority i.e. renewal of gun license.
Dy. Collector	• Monitoring, Supervision, Review and Authentication of application comes under his authority i.e. renewal of crop gun license.
Mamlatdar	• Monitoring, Supervision, Review and Authentication of application at District Level comes under his authority i.e. scrutiny of application of land measurement. Carry forward and assist higher level authority about application for authentication.
Deputy Mamlatdar	• Monitoring, Supervision, Review and Authentication of application at District Level comes under his authority i.e. scrutiny of application of land measurement. Carry forward and assist higher level authority about application for authentication.
Operator	• Data entry of physical application to the ATVT system and assist higher level authority about application till District level.
Taluka level:	
Mamlatdar / TDO	• Monitoring, Supervision, Review and Authentication of application at Taluka Level

	comes under his power. Assist higher level authority for authentication.
Dy. Mamlatdar/ Dy. TDO	• Monitoring, Supervision, Review and Authentication of application at Taluka Level comes under his power. Assist higher level authority for authentication.
Operator	• Data entry of physical application to the ATVT system and assist higher level authority about application till Taluka level.

10.3.3   SSRD

Name of Application	Case Information System
Application Developer:	NIC
Technology used:	PHP and MySQL
Main function:	Judgment for the Appeals and Revision Application
Hierarchy wise Roles and Responsibilities	
State level:	
1. Hon'ble Appellates	Disposal of Appeal and Revision cases as per delegated powers under schedule -3 & schedule - 7.
2. Mamlatdars	Administrative work related to management of Appeals & Revision Applications and Admission of case, issue of notices and final orders .

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

3. Dy- mamlatdars	Assisting Hon'ble Appellate Authority and Mamlatdars for all court proceedings.
4. Clerks	Preparation maintenance of Case Files and assisting Dy. Mamlatdars.

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

11 Annexure III -Technical Specifications of existing applications

S No	Name of the Application	URL	Hosting	Vendors	Technology Platform
1.	Jantri	garvi.gujarat.gov.in	Public Portal	NIC	NA
2.	e-stamping	www.shcilestamp.com /estamp_intro.html	Not Available on Portal	SHCIL	NA
3.	e-registration	Not Available	GSWAN	NIC	NA
4.	e-Dhara (e-Jamin)	e-dhara.gujarat.gov.in	GSWAN	NIC	NA
5.	Web-Bhulekh	e-dhara.gujarat.gov.in	GSWAN	NIC	NA
6.	AnyROR@Anywhere	anyror.gujarat.gov.in	Public Portal	NIC	NA
7.	Win Bhulekh	Installable set up	GSWAN	NIC	NA
8.	Win ROR	Installable set up	GSWAN	NIC	NA
9.	Win RC-PFP	Installable set up	GSWAN	NIC	NA
10.	Win Generation	Installable set up	GSWAN	NIC	NA
11.	Win VF6 scan upload	Installable set up	GSWAN	NIC	NA
12.	Resurvey	resurvey.gujarat.gov.in	GSWAN	NIC	NA
13.	ATVT--Taluka Jan Seva Kendra	atvt.gujarat.gov.in/	Public Portal	NIC	NA
14.	Registry & File Tracking System	Not Available	GSWAN	NIC	NA
15.	GARVI	garvi.gujarat.gov.in/	GSWAN	NIC	.Net 3.0 and Ms
16.	Hak Chouksi & CSIS	csis.gujarat.gov.in/	GSWAN	NIC	.NET and MS SQL
17.	Case Information System	ssrd.guj.nic.in	GSWAN	NIC	PHP and MySQL
		www.revenueappeals.gujarat.gov.in	Public Portal	Private Vendor	.Net4.0 /SQL server 2005
18.	Inward and outward of an office	http://registry.guj.nic.in		NIC	.Net / Sqlserver

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

12   Annexure IIV – Key Functions of the Revenue Department

- ➢   Maintenance of RoR of Agriculture Land
- ➢   Maintenance of Ownership Records of City Survey Land
- ➢   Maintenance of Ownership Records of Gramtal Land
- ➢   Carryout Mutations
- ➢   Assistance to other departments in Land Acquisition
- ➢   Maintenance of Maps of Lands Ownership Titles
- ➢   Dispute Resolution
- ➢   Collection of duties/levis/Penalties
- ➢   Registration of Sale deed, Mortgage deed and collection of Stamp Duty
- ➢   Land Measurement

13   Annexure V - Current Processes

In Revenue Department there are various processes going to controls different types of mutations, title verification, validations, and maintenance of Record of Rights (RoR) on the land. Some of the existing process as per following;

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

13.1 Agricultural Land's Mutation Process Flow

Agricultural Land Mutation Process Flow
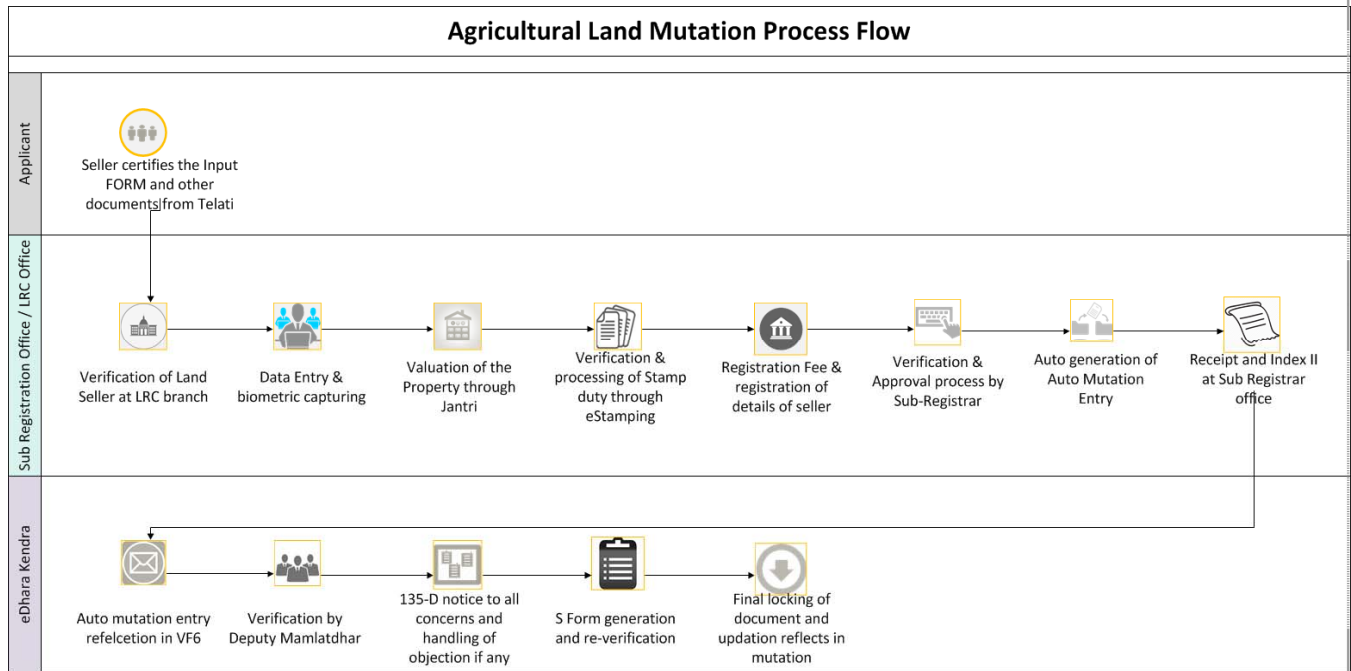
13.2 Non Agricultural Land's Process Flow

City Survey Land Mutation Process Flow
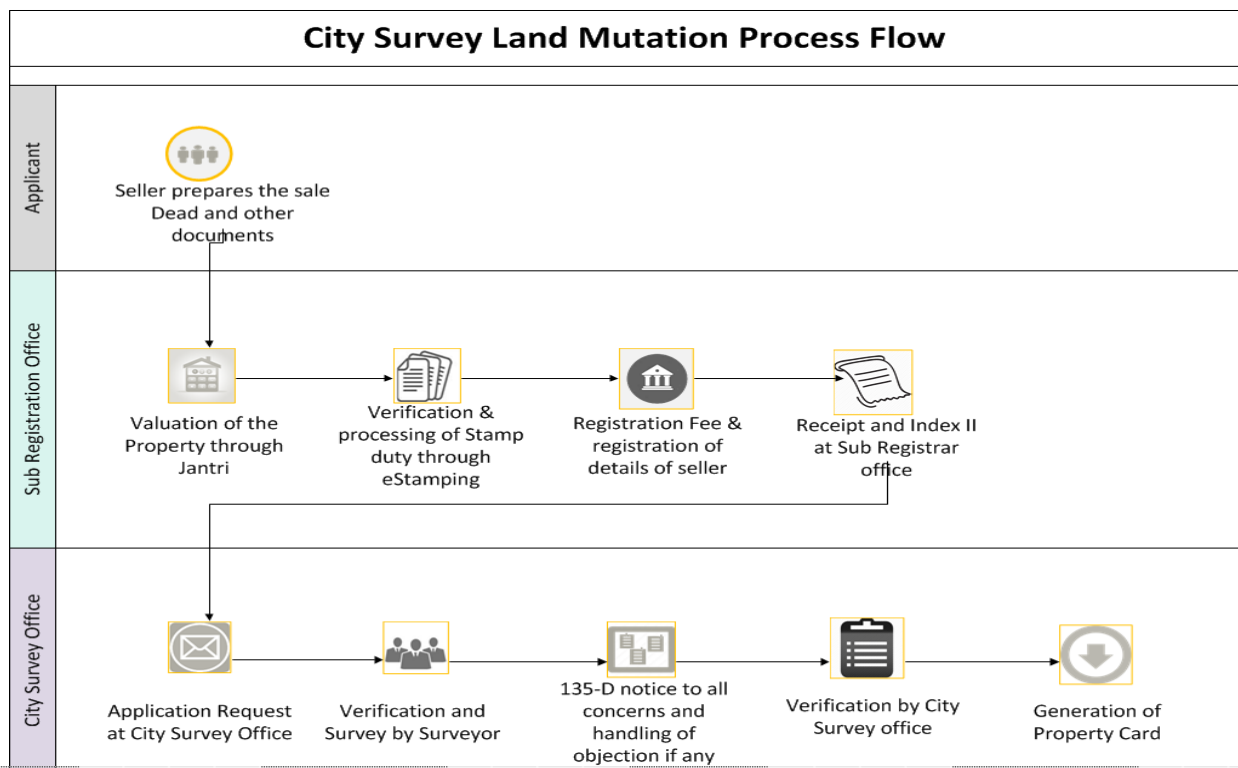
13.3 Resurvey for Agriculture Land

Resurvey is an initiative going under DILR department with the purpose to update and prepare textual and spatial records. Various stages of Resurvey are as per follows;

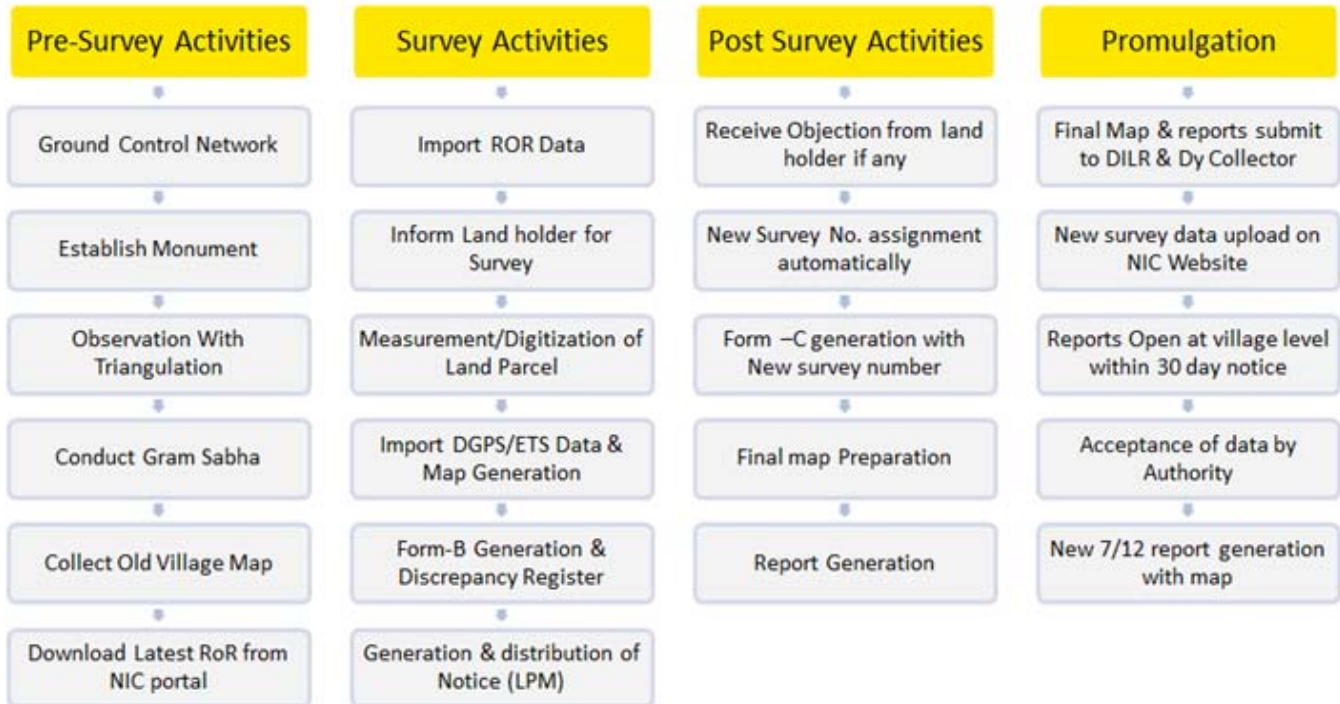| Pre-Survey Activities	Survey Activities	Post Survey Activities	Promulgation
Ground Control Network	Import ROR Data	Receive Objection from land holder if any	Final Map & reports submit to DILR & Dy Collector
Establish Monument	Inform Land holder for Survey	New Survey No. assignment automatically	New survey data upload on NIC Website
Observation With Triangulation	Measurement/Digitization of Land Parcel	Form –C generation with New survey number	Reports Open at village level within 30 day notice
Conduct Gram Sabha	Import DGPS/ETS Data & Map Generation	Final map Preparation	Acceptance of data by Authority
Collect Old Village Map	Form-B Generation & Discrepancy Register	Report Generation	New 7/12 report generation with map
Download Latest RoR from NIC portal	Generation & distribution of Notice (LPM)		

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

13.4 Annexure IV - Existing Forms in Revenue Department

Following are the exiting forms used by Revenue Department to carry out their various processes:

S No	FORM Number	Description
1	FORM 1	➢ Land Records – Survey ID, Tenure Type, Area, Revenue tax ➢ Re-survey after almost 30 years
2	FORM 2	➢ Land Records - Gramtal, Non-Agriculture, Govt. Land Tenure > 5 yrs
3	FORM 3	➢ Awarded Land Records history & revenue details
4	FORM 4	➢ Land Records – Penalty details, Revenue details for land tenure < 5 years ➢ Every year activity
5	FORM 5	➢ Balance sheet – Land & Land Revenue accounts ➢ Transaction details of all types of land transactions
6	FORM 6	➢ VF 6 ➢ Details of Title transaction
7	FORM 7	➢ Reference – Form 1 & Form 6 ➢ Mutation Entry Number – History of Titles
8	FORM 8A	➢ Reflect Single account of single person for his land parcels in a district

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

S No	FORM Number	Description
		➢ Khata Detail
9	FORM 8B	➢ Land Records – Tax Collection, Payment details of citizen, Revenue Recovery Account
10	FORM 8C	➢ Education Cess Collection ➢ Reference Form 8B
11	FORM 8D	➢ Local Cess Collection ➢ Reference Form 8B
12	FORM 9	➢ Receipt of tax paid by citizen
13	FORM 10	➢ Revenue transfer to Treasury
14	FORM 11	➢ Khata No. – Area information, Revenue Information
15	FORM 12	➢ Land use pattern – land cropping, irrigation method
16	FORM 13	➢ Analytical Detail ➢ Auto Generated MIS from Form 12

REVENUE DEPARTMENT
GOVERNMENT OF GUJARAT

Revenue Department Hierarchy