**Software Requirements Specification
&
Functional Requirement Specification**

Project:

"Design, Development, Implementation and O&M of E-Governance Applications for ULBs of Jharkhand".

Client:

Jharkhand Urban Infrastructure Development Company Limited

Country: India

Prepared and submitted by:

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Submitted on: 17.09.2022

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1 Introduction

1.1 Background

The Urban Development and Housing Department plans to develop a World Bank-financed integrated e-governance application. The idea behind this ambitious project is to streamline the working of all the ULBs in Jharkhand. It is expected that this project will provide a tool to monitor various municipal services and generate incomes in the form of taxes, rentals, auctions, etc. Additionally, JUIDCO sought to create a sense of good governance among the masses through direct citizen participation. It is also expected that the revenue loss due to inefficient governance can be controlled to make Urban Local bodies profitable.

In Jharkhand, several e-government activities have been planned and implemented under ongoing projects. Several IT firms are working on several projects in the state for the implementation & maintenance of e-Governance initiatives/modules for ULBs and state departments. Due to the fact that these e-Governance initiatives are controlled by different entities and maintained in fragmented fashion, ULBs are forced to depend on different vendors for different services portals, which is time-consuming, and at the same time difficult to account for payments received from different services from different portals/vendors. Integration of all the applications would save processing time for both the back-end management in the ULBs and the front-end consumer experience.

Revenue collection is one of the key functions of urban governance. Through improved revenue collection in ULBs, citizen services and other infrastructure can be developed. This enables improved service delivery, maintenance, operations, and management of various public services. Thus, information about the quantum of revenue being collected and accounted for must be readily available, and such information must be available in real-time.

The Tax Collection Agencies are appointed by the Urban Development & Housing Department (UD&HD) through the State Urban Development Agency (SUDA), and their tasks and targets are regularly evaluated and monitored by the Project Management Unit. In the Revenue Management System (RMS), citizens can pay taxes and fees in real time with a real-time receipt, ensuring tight internal control over collection. Citizens' assessment forms are cross verified for any Revenue reform. Property tax reform is technology intensive. Jharkhand State has adopted the latest technologies in various stages of reform to take advantage of the reform opportunity. ULBs are preparing their accounts on Tally, which is not updated in real time. No system exists at present whereby centralized Financial Information is not available at State in real time. Thus, in the present assignment, RMS and Tally need to be integrated in a common platform as part of an Integrated Financial Management system. This will enable State to establish a web-based accounting system and identify municipal assets including commercial properties owned by ULBs. In

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addition, cross mapping of various data bases like Property Tax to Solid waste user charge to Water Connection to Trade Licensing to Building Permissions and other such services.

The municipal corporations are the leading institutions that provide local and citizen-centric services to the public living in cities. Their activities are regulated by urban planning, building construction, transportation, infrastructure, and mapping. To carry out these duties effectively, municipal governing authorities must be able to use spatial information effectively.

Since organizations and citizens make wide use of opportunities offered through digital platforms, it has become one of the priorities of governments all over. This is because they are using the internet in various fields. Due to the fact that providing services to citizens is one of the most significant responsibilities of municipal corporations, which involves extensive information exchange, it easily fits in the profile of the main target fields of e-government.

1.2 Purpose

This document describes the idea and implementation approach of integration and streamlining the business processes of all the ULBs in Jharkhand. This document discusses the problems and a typical approach to automation. The sections will begin with an explanation of the problem, then move on to discuss the solution and overall approach to solving it using technologies currently available. This solution is described with the help of different diagrams, which illustrate use case scenarios. The initial set of requirements indicates the complexity of the final system in terms of business logic and capacity building maneuvers. Owing to the lack of manpower in the ULBs, it will be necessary to design the system so that users can assume multiple roles for execution of work.

This document will act as a common understanding point between users of the system and the developers of the system. User requirements have been mentioned as use cases, whereas the developer's point of view is given in the non-functional requirements part of the document.

The Software Requirements Specification (SRS) document also serves to outline the technical requirements needed by the developers working on creating the system for automating the collection of automotive paint defect analysis. A detailed explanation of the proposed system to resolve the client's problem is provided in this document along with requirements, constraints, and detailed explanations. The intended audience for this document is stakeholders and the developers working on creating the system for the client. Developers and technology experts ensure that the system is technically and economically feasible.

The purpose of this document is to outline requirements for automation of all the ULBs in Jharkhand to be addressed at a functional level. This document defines a boundary around which the proposed system is

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designed to be fabricated. The use cases defined in this document have been drafted in a way that describes the user requirements completely. We have added necessary description wherever extra detail is required. It also describes nonfunctional requirements and other factors necessary to provide a complete and comprehensive description of the requirements for the software.

1.3 Scope

There are 50 urban local bodies consisting of 9 Municipal Corporations, 20 Nagar Parishads, 20 Nagar Panchayats and 1 Notified Area Committee (NAC), responsible for implementation of the Urban Development activities in their respective areas in the State of Jharkhand. There is a need to develop software to automate the processes in ULBS.

The scope of this SRS is to define functional requirements for e-Governance application with detailed study of the following automation modules:

- Property Tax Management System
- Water User Charge Management System
- Municipal Trade License Fee Management System
- Building Plan Approval Management System
- HRMS & Payroll
- Birth & Death Management System
- Accrual based Double Entry Accounting System
- Project and Fund Management System
- Procurement Management System
- Land & Asset Management System
- Asset Tracking and Monitoring System
- Marriage Registration Management System
- Pet Animal Registration System
- Legal Management System
- Solid Waste Management System
- Public Transport Management System
- Parking Management System
- Document Management System
- Grievance Management and Redressal System

Nonfunctional requirements like Performance, Reliability and Security are also covered in this document.

It also defines the plan and action about data integration and migration policy.

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1.4 Existing System

Jharkhand is not an exception to introducing software technology to urban local bodies. There are a number of activities planned and implemented under several project initiatives. Currently, Property Tax, Water User Charge and Trade License modules are up and running in the state. These modules are serving the ULBs very well, both in terms of revenue and ease of use. Many agencies have been given the duty of collecting revenue for the government. Now that the process has streamlined to some extent, there is a need to integrate solutions maintained by different vendors into a common platform.

Apart from the above mentioned solutions, ULBs are using automation tools at local level. Various tools are used to deal with a variety of situations, such as Excel, Word, and Tally. It is also observed that a large share of day-to-day work at ULBs is still manual and requires more technology to make it more accessible and efficiently run.

A major concern with the existing system is the scattered nature of information. There is no central dashboard where everything can be mapped and monitored. Another concern is that revenue collection at different departments is not mapped for accounting purposes.

Following problems are being faced:

- ULBs are for citizens and citizens have no direct access to the system.
- There is no single point information available to the citizens.
- Lack of standardized processes at State level
- There is no clarity on roles and responsibilities of the users of the system
- Most departments are using manual method of record maintenance
- Lack of trained manpower
- No central reporting system.

A need is being felt about a central dashboard at the state level for monitoring and managing government information and services. A citizen's dashboard where all information regarding ULB interactions and services is available should also be created.

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1.5 e-Governance Application Software Model

An e-Governance application is a custom-made web application that automates the entire process of different clusters of ULB services. On the one hand, it provides local citizens online access to the various services provided by the municipal corporation, on the other hand, it provides a computerized solution to official proceedings at the municipal corporation. By utilizing various online services under the modules of the e-municipal clusters, the application also aids in bridging the gap between citizens and municipal authorities.
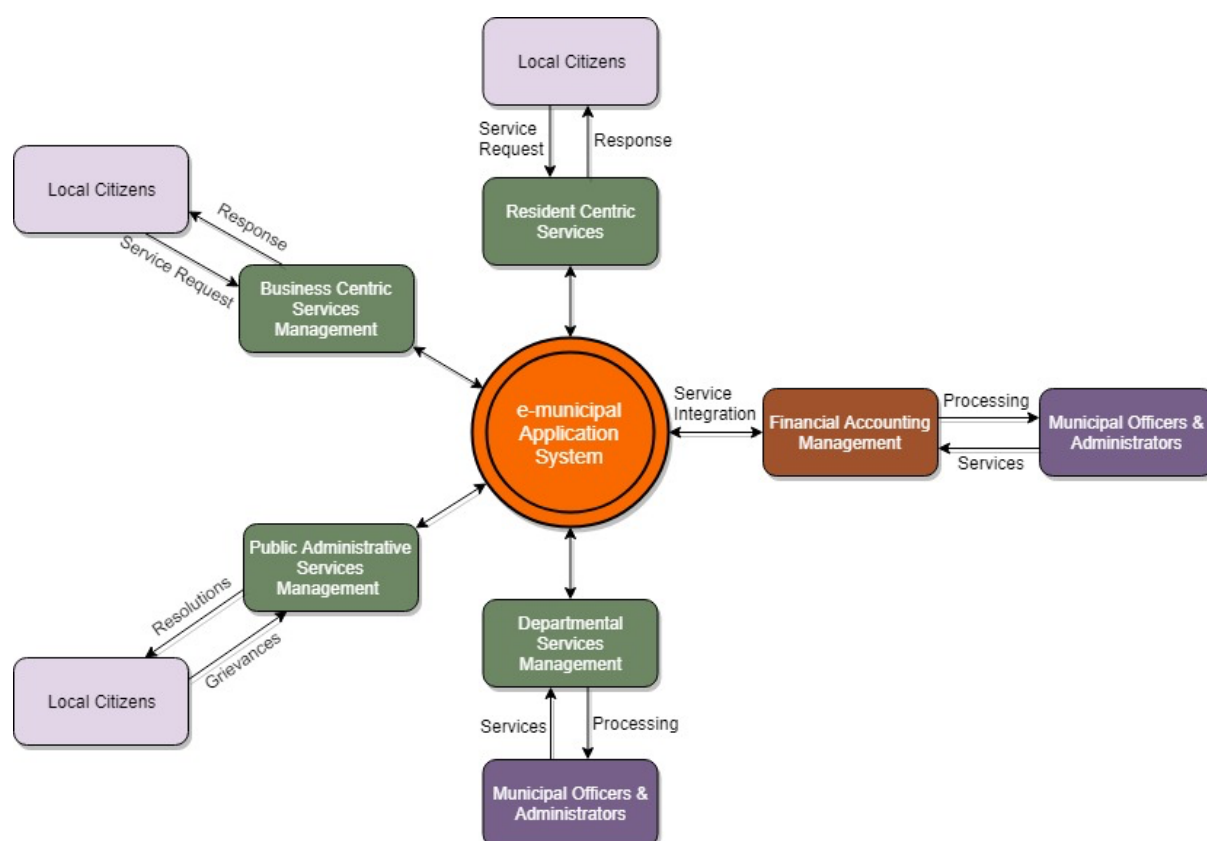
Figure 1: e-municipal application system model

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- To assess ULBs users or working force capability to use the e-Governance applications
- To prepare Functional Requirement Specification (FRS) of the all the new applications
- To discuss FRS of new applications with the entire stakeholder before development for suggestions and improvement.
- To prepare AS-IS Study report of all the existing process and status report of all the existing e-Governance Initiatives in ULBs.
- Integration of existing applications
- To support interactions G2C, G2B and G2G
- To build platform for Government departments to present information and services.
- To minimize gap between Service providers and service consumers.
- To provide secure, anytime, anywhere information.

E-GOVERNANCE FRAMEWORK

1.7 Overview

Despite all efforts, public administration still faces challenges due to a lack of timely information. Governments have always tried to combat the problem by constantly changing processes and methodologies. Unfortunately this move did not help change the system as expected. Governments all across the globe are now paying attention to the use of technology to create a common platform for both citizens and government. This will avoid any communication gap and delay in delivery of service.

The municipal corporations are the leading institutions that provide local and citizen-centric services to the public living in cities. Their activities are regulated by regulations in urban planning, building construction, transportation, infrastructure, and mapping. To carry out these duties effectively, municipal governing authorities must be able to use spatial information effectively.

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Since organizations and citizens make wide use of opportunities offered through digital platforms, it has become one of the priorities of governments all over to make use of the internet in various fields. The provision of services to citizens is one of the most significant responsibilities of municipal corporations, which involves interaction with citizens. Therefore, it easily fits the profile of the main target areas of e-governance.
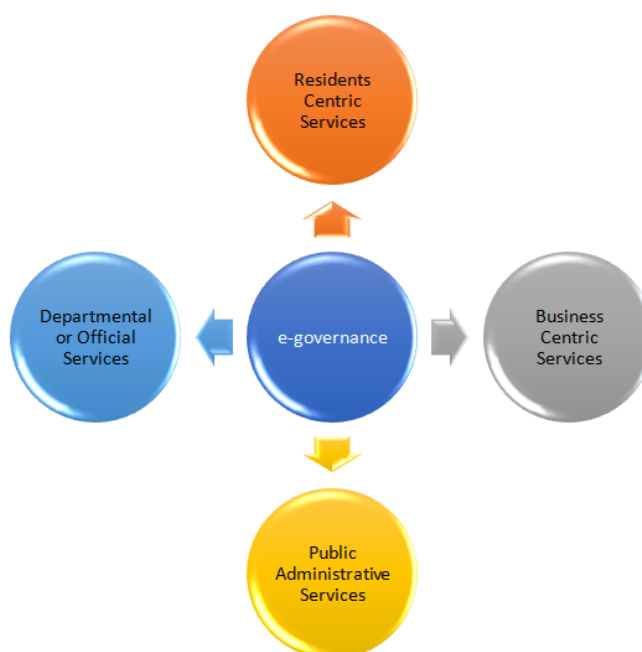

Figure 2: clusters of e-governance

The very goal of the system is to encourage participation of citizens in local governance and thereby eliminate middleman and make the system transparent and prompt. As detailed in the above picture all the components of the system has to actively interface with the system in order to achieve greater goal, It is very necessary to develop a system which is citizen facing.

1.7 Salient Features of the e-Governance Portal

- Single Window Access
- Use of icons/pictures/images and graphical interface
- Alternative lighter Home Page
- Consistent and Easy to Use interface
- Easy to navigate, search and browse
- Personalization/ Customization of the content

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