Standard Bidding Documents

For

Procurement of IT Equipment, ERP Based data software
for Right To Information Commission
Peshawar
# HARDWARE SPECIFICATION

<table>
<thead>
<tr>
<th>S.No</th>
<th>ITEM</th>
<th>DETAIL</th>
<th>QTY</th>
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<td>DELL INTEL® CORE i7, 2.0 GHz, 1 TB, 8 GB, 15.6 INCHES, WINDOW 8.1 64-BIT</td>
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<td>2</td>
<td>PRINTER</td>
<td>HP LASERJET ENTERPRISE P3015 PRINTER, 40 CPM</td>
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<tr>
<td>3</td>
<td>HAND HELD SCANNER</td>
<td>STANDARD BAR CODE SCANNER</td>
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<tr>
<td>4</td>
<td>DESKTOP SCANNER</td>
<td>HP SCANNER 2400dpi, 48 BIT COLOR, 50 PAGES AUTOMATIC DDF3</td>
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<td>5</td>
<td>SOFTWARE</td>
<td>ERP BASED SOFTWARE FOR THE TICKET / FILING MANAGEMENT SYSTEM</td>
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TICKET TRACKING SYSTEM REQUIREMENTS

Program: TTS (Ticket Tracking System)

Activity Name: Ticket Registration, Transferring & Tracking

IT project name: TTS

Date: 4.10.2016
Location: Peshawar Pakistan
Prepared by: C-GPA
Document status: Final
Document control

Revision history

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Author</th>
<th>Status /Reason for change</th>
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<tr>
<td>Version 1.0</td>
<td>April 2016</td>
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</tbody>
</table>

How to Apply and Submission date.

Send your sealed quotation to the address below:

Flat 402, Block C, City tower, University road Peshawar.

Last date of Submission:

30th April-2016
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1 INTRODUCTION

1.1 GENERAL INFORMATION

This document consists of software solution requirements document. It is intended to guide development of the TTS. It will go through several stages during the course of this project:

- **Preliminary draft**: The preliminary version is compiled when some, but not all requirements have been discovered and should be used as the basis for further discussions and gathering of missing requirements.
- **Draft**: Draft version is compiled after requirements have been discovered, recorded, classified, and prioritized.
- **Proposed**: The draft document is then proposed as a potential requirements specification for the project. The proposed document should be reviewed by several parties who will use this application and who provided the input, who may comment on any requirements and any priorities, either to agree, to disagree, or to identify missing requirements. Readers should be the beneficiary users and those stakeholders who will benefit from the use of and approve the end-product. This document may be amended and re-proposed several times before moving to the next stage.
- **Validated**: Once the various stakeholders have agreed to the requirements in the document, it is considered validated.
- **Approved**: The validated document is accepted by the beneficiary representatives as an appropriate statement of requirements for the project. The developers can then use the requirements and database design document as a guide to development and implementation as well as to check the progress of the project as it develops.

1.2 PURPOSE

The overall objective of the TTS is to assist management to monitor registered tickets and track down activities made on tickets. Furthermore, operation staff will be able to upload all related documents against ticket for rapid retrieval of information. Lastly TTS will update the status of ticket to user who registered his/her complaint.

2 TTS REQUIREMENTS

2.1 SCOPE OF THE TTS

In scope: Complaint Registration, Review of Complaints, Ticket Issuance, Ticket Assigning and Transferring, Analytical Review and Reports.

Outside of scope: Web Server Installation and Configuration, MS SQL License

2.2 OVERVIEW OF REQUIREMENTS DEVELOPMENT
In developing the requirements for the TTS it was important to consider Complainers, RTI commission Staff & Management Staff, systems and processes including interaction with current systems, platform requirements, data collection and sources, data structure, user requirements, system outputs (reporting, export), system inputs (data import, data entry), accepted standards and classifications, and organization specific requirements. The below diagram shows required inputs which have determined requirements:
2.3

GOVERNANCE ITEMS
Title
Description
Created Date
Status
Allocated To
... etc.

DOCUMENT MANAGEMENT

EMAIL NOTIFICATIONS

GROUPS NOTIFIED

GOVERNANCE ITEMS

Time....

Status

Milestone

REPORTING
Generic reporting customised to display data in database

SECURITY
Security module to manage access permissions
2.4 ASSUMPTIONS AND CONSTRAINTS

2.4.1 ASSUMPTIONS

- All required hardware will be available along with required system software.
- Application users should have enough knowledge/skill to operate application.

2.4.2 DEPENDENCIES

TTS overall has the following dependency:

- SQL Server 2014 License
- Microsoft Server 2008 R2 Operating System
- Internet Information System 7.5
- Compatible Web Browser (Firefox)

2.5 RISKS

The following risks must be taken into consideration:

- Appropriate hardware to be provided for backup.
- Standard devices to be used for network protection.
- Repository to be physically protected.
- Software policy to be enforced.

2.6 SYSTEM USERS

The users of the TTS application will include Super Administrator, Directors, Team Lead, Help Desk Officers and Complainer.

Internal users include: Super Administrator, Directors, Team Lead, Help Desk Officer

External users may include: Complainer

There is not limit of users. As many users as required can be created.

The projected concurrent number of users is 100.

The users will require different level of access depending on their responsibilities, authority and needs. Based on the application components and recognized functions, the following user groups can be identified at this time:

- Super Administrator
- Directors
- Team Lead
- Help Desk Officer
2.7 TTS HIGH LEVEL REQUIREMENTS

The identified high level initial set of requirements during the assessment phase based on the SRS (Software Requirement Specification) document are the following:

<table>
<thead>
<tr>
<th>High Level Requirements</th>
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<tbody>
<tr>
<td>1 Complaint Registration</td>
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<tr>
<td>2 Case File Preparation</td>
<td></td>
</tr>
<tr>
<td>3 Transfer Note</td>
<td></td>
</tr>
<tr>
<td>4 Summary Note</td>
<td></td>
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<tr>
<td>5 Correspondence Documents</td>
<td></td>
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</table>

Table 1 - high level requirements

Based on the above, the requirements gathering and analysis initially focused on complaint ticket automation.

2.8 SOLUTION ARCHITECTURE DIAGRAM

This is the general architecture diagram. The details on what will be employed on each layer will partly depend on technologies used by the chosen vendor for each of the tiers.

![Client Tier Diagram]

Client Tier is defined by presentation logic - the user interface (UI) which displays data to the user and accepts input from the user.
Application Tier is defined by business logic - handles data validation, business rules and task-specific behavior.

Data Tier is defined by data access logic - communicates with the database by constructing SQL queries and executing them via the relevant API.

The main advantages of the 3 Tier Architecture are:

**Flexibility**: By separating the business logic of an application from its presentation logic, a 3-Tier architecture makes the application much more flexible to changes.

**Maintainability**: Changes to the components in one layer should have no effect on any others layers. Also, if different layers require different skills (such as HTML/CSS is the presentation layer, PHP/Java in the business layer, SQL in the data access layer) then these can be managed by independent teams with skills in those specific areas.

**Reusability**: Separating the application into multiple layers makes it easier to implement re-usable components. A single component in the business layer, for example, may be accessed by multiple components in the presentation layer or even by several different presentation layers (such as desktop and the web) at the same time.

**Scalability**: A 3-Tier architecture allows distribution of application components across multiple servers thus making the system much more scalable.

Reliability - A 3-Tier architecture, if deployed on multiple servers, makes it easier to increase reliability of a system by implementing multiple levels of redundancy.

### 2.9 Functional Requirements

This section of the document lists specific requirements for this project as well as predicted and/or proposed processes (workflows). The main processes which will be described by the functional requirements are presented in the diagram below:
2.9.1 DIRECTORS REQUIREMENTS
Chronic Ticket Analysis, Ticket Monitoring, Approval

2.9.2 TEAM LEAD
Ticket Transfer, Ticket Status Update, Ticket Closing

2.9.3 HELP DESK
Ticket Registration, Ticket Assignment, Ticket Transfer, Document Uploading

2.9.4 SUPER ADMIN
Trouble Shooting, User Creation, Backups

2.9.5 USER INTERFACE REQUIREMENTS
Interface requirements describe the look and feel of the user interface, how certain functions should be displayed and messaging requirements.
The user interface should be simple, intuitive and easy to navigate web interface with complete overview of available functions on the main dashboard/screen after user logon based on user access.

2.10 OPERATIONAL REQUIREMENTS
These requirements are not related to business process but to non-functional aspects for the solution.

2.10.1 SECURITY REQUIREMENTS
Access to application and data should be in line with the proposed user groups and available roles. Non-authenticated users will have no access to application and data.

User roles will control user access to data and system functions.

2.10.2 AUDIT TRAIL
The application should at a minimum log the following activity:
- User login and status;
- Record data import transactions, operator, date and time, number of records and status;
- Record the identity of operators entering, changing, confirming or deleting data or files including date and time;
- Record user management record changes, operator, date and time, type of action;
- Record backup and restore activity, operator, date and time, number of records, file size, status

2.10.3 BACKUP
System Admin/DB admin needs to backup database and application frequently. There should be online backup, offline back and remote backup facility.

2.10.4 RELIABILITY
Reliability should be approached from aspect of prevention by following and confirming requirements, rigorous testing and error detection to avoid possibility of failure.

2.10.5 RECOVERABILITY
Recoverability is the ability to restore function and data in the event of a failure.

2.10.6 SYSTEM AVAILABILITY
System availability is the time when the application is up and available for users. Required system availability is used in determining when maintenance may be performed. There needs to be redundant servers to transfer role at the time of failure.

2.10.7 PERFORMANCE
The database structure will be designed in RDBM with updated tools. The proposed solution is efficient enough to perform well in stress environment.

Stress testing will be performed before deployment of application in real environment to ensure the performance.

2.10.8 CAPACITY

As per SRS Document, the database size will grow 20 MB per month, but however the file system will grow as per the number of documents uploading against a ticket.

It is recommended to have a space for 8 TB with redundant feature.

2.10.9 DATA RETENTION

The system is designed to retain 10 years data and completely upgradable as per user new requirements.