Software

Requirements

Specification

**Intra – CWC Various Facility Management System**

Software Requirements Specification

**Version -1.0**

**10/05/2018**

AKAL Information Systems Ltd.

Prepared for

**Central Water Commission**

# REVISION HISTORY

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# 1. Introduction

The introduction of the Software Requirements Specification (SRS) provides an overview of the entire SRS with purpose, scope, definitions, acronyms, abbreviations, references and overview of the SRS. The aim of this document is to gather and analyze and give an in-depth insight of the complete **Customization/Improvisation/Revamping of Intra-CWC Web Portal and Mobile Application for Various Facility Management at CWC** by defining the problem statement in detail. Nevertheless, it also concentrates on the capabilities required by stakeholders and their needs while defining high-level product features. The detailed requirements of the **Intra –CWC Various Facility Management System** are provided in this document.

## 1.1 Purpose

The purpose of the document is to collect and analyze all assorted functions that have come up to define the system, its requirements with respect to Applicant. Also, we shall predict and sort out how we hope this portal will be used to gain a better understanding of the project. Central Water Commission offers a Portal to manage the Contact Management, User Management, Stock Level Inventory Management System and Complain, Feedback management is to be done as per GIGW Guidelines and CERT-In information Security Audit Parameter at CWC.

## 1.2 Scope

Primarily, the scope pertains to Central Water Commission offers a Portal to manage Contact Management, User Management, Stock Level Inventory Management System and Complain, Feedback management is to be done as per GIGW Guidelines and CERT-In information Security Audit Parameter at CWC.

The Portal is to be revamped and subsequently integrated with the Website of Central Water Commission in accordance with GIGW Guidelines and CERT-in information Security Audit Parameters or any another information security guidelines of Ministry of Electronic and Information Technologies, Government of India.

**Intra –CWC Various Facility Management System:**

Existing Portal Shortcomings

1. No report available.
2. Searching facility is not available.
3. Stock level min Quantity check not available

Requirement

1. Change in Bill /Challan Entry Form for Stock and Entry
2. PCP (NON-IT) complaints and Assets Management System (replica of IT- Complaint with some field change and change in master data)
3. Change in work flow of Complaint for both Web and Mobile Apps the process flow is given below

Complaint Entry (by user employees/users) 🡪 Pending Complaint assignment (Complaint Manager) 🡪 Action taken & give Remarks on Complaint (by Service/Repair Personnel) 🡪 Star Rating and give remarks (by user employees/users)🡪 end

Note: SMS Notification by Mobile is required at each stage of complaint.

1. MIS Reports by different search criteria (Like Item, Date and Time, Pending Time etc.)

**Note: We need the SMTP details and SMS API from CWC Department.**

## 1.3 Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
| Acronyms, and Abbreviations | Definition / Stands For |
| Configuration | It means in Portal, which is configured / Selected from a table can be customized. |
| FAQ | Frequently Asked Questions |
| Database | A collection of data fundamental to a system. |
| CWC | Central Water Commission |
| Network | A network is a number of computers connected together to share information and hardware. |
| GUI/UI | Human computer interface using graphics, icons and menus and other visual aids to facilitate and structure user actions; often coupled with a direct manipulation  Interface |
| Application Server | Application server is software that contains software / application basically forms and reports that is given to web browser on request. We can think it acts as interface between database server(s) and clients. |
| HTTP | Hypertext Transfer Protocol. |
| SMTP | Simple Mail Transfer Protocol. |
| MOM | Minutes of meeting |
| FTP | File Transfer Protocol. |
| HTML | Hypertext Markup Language |
| CSS | Cascading Style Sheets |

## 1.4 References

The references are:

* Intra-CWC Portal (Existing System)
* Minutes of Meting
* Tender document

## 1.5 Overview

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product.  General description of the project is discussed in section 2 of this document.  Section 3 gives the functional requirements, data requirements and constraints and assumptions made while designing the Intra-CWC Portal.  It also gives the user viewpoint of product.  Section 3 also gives the specific requirements of the Portal.  Section 3 also discusses the external interface requirements and gives detailed description of functional requirements. Section 4 is for supporting information.

# 2. General Description

This document contains the problem statement that the current system is facing which is hampering the Applicant and CWC administrative to provide the best services. It further lists and briefly describes the major features and a brief description of each of the proposed system.

## 2.1 Product Perspective

It further lists and briefly describes the major features and a brief description of each of the proposed system.

## 2.2 Product Functions

The software will perform based on the Role based functionality.

1. **Admin Management:**

* Admin will able to manage the Employee Records. Able to Add/Edit/Delete and search Employee Records from Admin Panel Dashboard.
* Admin will able to manage the Master data Registration. Admin will able to manage the following actions:
  + - * Add/Edit/Delete/View and Search the Buildings
      * Add/Edit/Delete/View and search Designation
      * Add/Edit/Delete/View and Search Room No.
      * Add/Edit/Delete/View and Search Section name
      * Add/Edit/Delete/View and Search Wing Name
* Admin will able to manage the User Management.
  + - * Add/Edit/Delete/View Users
      * Search users
* Admin will able to manage the Vendor’s Employee
* Admin will able to able to register the Vendor Registration

1. **Online Stationary Management:** 
   1. Add/Edit/Delete/View and Search Requisition Form
   2. Add/Edit/View and Search Challan/Bill Entry
   3. Stock level min Quantity check.
   4. Request Approver
   5. OSR Admin Module to manage the Physical issue and Proxy Entry
   6. Reports
   7. OSR Role
2. **IT-Complaints & Assets Management System**
   1. Add New Complaint
   2. View Complaint
   3. Search Complaints based on Filters
   4. Take Action on Complaints
   5. Provide Remark after action
   6. Get Feedback about the Complaint Resolution
   7. List of Vendors
3. **Non-IT-Complaints Management System**
   1. Add New Complaint
   2. View Complaint
   3. Search Complaints based on Filters
   4. Take Action on Complaints
   5. Provide Remark after action
   6. Get Feedback about the Complaint Resolution
   7. List of Vendors
4. **Contacts Management System**
   1. Add New Contacts as Import from excel and upload to the system
   2. Edit/delete the contact as particular contact list.
   3. Mobile Number will be unique for every Employee.
   4. View Contact as per Hierarchy based on the Organization and Divisions
   5. Search Contacts based on Filters as Name
   6. Provide Remark after action
   7. Get Feedback about the Complaint Resolution
   8. List of Vendors
5. **Circular (Future Implementation only need to display option as Coming Soon.)**
6. **VIP References Monitoring Systems (Future Implementation only need to display option as Coming Soon.)**
7. **PQ-Parliament Question (Future Implementation only need to display option as Coming Soon.)**
8. **RTI matters (Future Implementation only need to display option as Coming Soon.)**
9. **Online Monthly Return System (Future Implementation only need to display option as Coming Soon.)**

## 2.3 User Characteristics

There will be 12 types of users mentioned below: -

* Administrator
* Cams-Admin
* Circular\_User
* CRU
* Employee\_User
* Min(WR)
* MOS(WR)
* OSR\_Approver
* OSR\_Requester
* Section/Desk
* Secy
* Vendor\_User

Based on the above Role following are the permission mentioned:

### 2.3.1 Administrator Role:

Role based access are given below: -

* **Managing admin module**
* **Managing online stationary Module**
* **Managing IT-Complaints & Assets Management System**
* **Managing Non-IT Complaints & Assets Management System**
* **Manage Contact**
* **Manage Online IT Items**

### 2.3.2 Employee-User Role:

Role based access are given below: -

* **Managing online stationary Module**

**1)** Add/ View and Search Requisition Form

* **Managing Non-IT Complaints & Assets Management System**

1)Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.3 OSR-Requester:

Role based access are given below: -

* **Managing online stationary Module**

**1)** Add/ View and Search Requisition Form

**2) Add/Edit/View and Search Challan/Bill Entry**

**3) OSR Admin**

**\* Search Physical Issue**

**\* Proxy Entry/Add View**

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.4 OSR-Issuer:

Role based access are given below: -

* **Managing online stationary Module**

**1)** Add/ View and Search Requisition Form

2) Approve Requisition Form

**3) Add/Edit/View and Search Challan/Bill Entry**

**4) OSR Admin**

**\* Search Physical Issue**

**\* Issue Physical Issue**

**\* Proxy Entry/Add View**

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.5 Cams-Admin:

Role based access are given below: -

* **Managing admin module**

**1) Manage Vender Employee**

**2) Manage Vender Registration**

* **Managing online stationary Module**

**1)** Add/ View and Search Requisition Form

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

4) Report Complaints

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

4) Report Complaints

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.6 Circular-User:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

4) Report Complaints

* **Managing Circular Upload**

**1) Upload New Circular**

**2) Search Circular**

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.7 CRU Role:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.8 Min (WR) Role:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.9 MOS (WR) Role:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.10 Section/Deck:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

### 2.3.11 Secy Role:

Role based access are given below: -

* **Managing Non-IT Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Managing IT-Complaints & Assets Management System**

**1)** Register New Complaint

2) Search Complaint

3) Details of Venders

* **Manage Contact**

1. View All other Contacts
2. Update his/her contact details

## 2.4 General Constraints

There is no such limitation for developers.

## 2.5 Assumptions and Dependencies

There is no such system dependency.

# 3. Specific Requirements

The specific requirements are –

Existing Portal Shortcomings

1. No report available.
2. Searching facility is not available.
3. Stock level min Quantity check not available

Requirement

1. Change in Bill /Challan Entry Form for Stock and Entry
2. PCP (NON-IT) complaints and Assets Management System (replica of IT- Complaint with some field change and change in master data)
3. Change in work flow of Complaint for both Web and Mobile Apps the process flow is given below

Complaint Entry (by user employees/users) 🡪 Pending Complaint assignment (Complaint Manager) 🡪 Action taken & give Remarks on Complaint (by Service/Repair Personnel) 🡪 Star Rating and give remarks (by user employees/users)🡪 end

Note: SMS Notification by Mobile is required at each stage of complaint.

1. MIS Reports by different search criteria (Like Item, Date and Time, Pending Time etc)

## 3.1 External Interface Requirements

### 3.1.1 User Interfaces

The user interface for the software shall be compatible to any browser such as Internet Explorer, Mozilla or Netscape Navigator by which user can access to the system.The user interface shall be implemented using any tool or software package like PHP, HTML, JavaScript,CSS3.

* The system shall provide a uniform look and feel between all the web pages.
* The system shall provide a dashboard for all types of users.
* The system shall provide use of icons and toolbars.

### 3.1.2 User Hardware Interfaces

Since the application must run over the internet, all the hardware shall require connecting internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

### 3.1.3 Server Hardware Interfaces

Since the application must run over the internet, all the hardware shall require connecting internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable. Mobile application will deploy for Android Devices in Google Play store.

### 3.1.4 Software Interface

1. Integration with main CWC website once product gets in maturity phase after the development.
2. Application will able to access through mobile and web browsers.
3. Mobile Application need to download from the Google Play stores.

### 

### 3.1.5 Communications Interfaces

The Intra-CWC Portal system shall use the HTTP protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

### 3.1.6 Developer Software Interfaces

* PHP Code Igniter to develop frontend.
* MySQL Database.
* Ionic framework for Mobile Application.
* HTML 5, CSS3, JavaScript for Web Portal.

## 3.2 Functional Requirements

This section includes the requirements that specify all the fundamental actions of the software system

### 3.2.1 Integration with Main CWC Website

3.2.1.1 To access the Intra-CWC Portal

3.2.1.2 Open the main CWC website and click on the **Intra-CWC (Beta Version)**

3.2.1.3 Click the link

3.2.1.4 Intra-CWC Portal Home Page will be opened

3.2.1.5 If any problem occurred in website it will redirect to CWC website

### 3.2.2 Admin Module

3.2.2.1 To login with Portal as Super Admin/Admin/another Admin user based on the Role

3.2.2.2 Open the main CWC website and click on the **Intra-CWC (Beta Version)**

3.2.2.3 Provide the Users Credentials as Login and Password

3.2.2.4 Dashboard will be open to perform the tasks.

* + - 1. If any problem occurred with credentials, Error Message will display with Proper details

### 3.2.3 Online Stationary Management:

3.2.3.1 Add the Inventory based on Items

3.2.3.2 Based on the Items Add the stocks for Prepopulated Items.

3.2.3.3 Fill the mandatory filed for maintain the Stock

3.2.3.4 Dashboard will be open to perform the tasks.

3.2.3.5 If any problem occurred with credentials, Error Message will display with Proper details

### 3.2.4 IT- Complaint and Non-IT Complaint:

3.2.4.1 Create/Update complaints

3.2.4.2 User/Employees will be make a complaint and submit

3.2.4.3 Complain Officer will open the complaint and take the actions

3.2.4.4 Complain Officer will submit the resolution and submit then User/Employee will provide the feedback

3.2.4.5 If any problem occurred with credentials, Error Message will display with Proper details

### 3.2.5 Contact Management:

3.2.5.1 Create/Upload Contact from Admin Console.

3.2.5.2 User/Employees will be view the contact details of All Employees and able to mange his/her own contact details.

### 3.2.6 Reports

3.2.6.1 Manage the Reports

3.2.6.2 Reports generation for Challan/Bills/Stocks/Users/Employees/Complaints

3.2.6.3 Reports generation for Challan/Bills/Stocks/Users/Employees/Complaints will be downloaded.

3.2.6.4 Report will be displayed with details and downloaded.

3.2.6.5 If any error while filling the details, Error will display at top of Form to identify the error.

### 3.2.6 Audit Logs

3.3.6 Login Logs with IP Address

## 3.3 Use Cases

## 

## 3.4 Non-Functional Requirements

Non-functional requirements may exist for the following attributes. Often these requirements must be achieved at a system-wide level rather than at a unit level. State the requirements in the following sections in measurable terms (e.g., 95% of transaction shall be processed in less than a second, system downtime may not exceed 1 minute per day, >30-day MTBF value, etc.).

### 3.4.1 Security

Security Audit of ITRA-CWC Various Management System Portal for Various Information Security Vulnerability Analysis by CERT-in Empaneled Information Security Auditing Organization.

### 3.4.2 Maintainability

TITLE: Application extendibility

DESC: The application should be easy to extend. The code should be written in a way that it favors implementation of new functions.

RAT: For future functions to be implemented easily to the application.

DEP: none

TITLE: Application testability

DESC: Test environments should be built for the application to allow testing of the applications different functions.

RAT: In order to test the application.

DEP: none

### 3.4.3 Portability

TITLE: Application portability

DESC: The application should be portable with All Supported Web Browser and Android devices above kit-kat version.

RAT: The adaptable platform for the application to run on.

DEP: non

## 3.5 Logical Database Requirements

Yes, System is using the MySql Database for Web and Mobile Application.

## 3.6 Other Requirements

No other additional requirements.