HEALTH COMMODITY MANAGEMENT INFORMATION SYSTEM (HCMIS)

DETAILED FUNCTIONAL REQUIREMENTS

FOR FACILITY EDITION

HEALTH COMMODITY MANAGEMENT INFORMATION SYSTEM (HCMIS)

DETAILED FUNCTIONAL REQUIREMENTS

FOR FACILITY EDITION

Recommended Citation

USAID | DELIVER PROJECT, Task Order 1. 2010. Health Commodity Management Information System (HCMIS) Detailed Functional Requirements for Facility Edition. Arlington, Va.: USAID | DELIVER   PROJECT, Task Order 1

For more information, please visit deliver.jsi.com.

CONTENTS

1 **INTRODUCTION**

This document is the Detailed Functional Requirements Document. It addresses the user and functional requirements required for designing and implementing the HCMIS FE system.

The HCMIS FE system is designed and developed in order to alleviate problems that are experienced at the facility level. HCMIS FE is designed as an inventory management system to help health facilities track their commodities. However, the application is more than just an inventory tracking system. It includes major components of the logistics Management Information System (LMIS) in which it provides the user the possibility to track consumption rates, manage re-order levels, enforce FEFO as well as provide many advance logistics reports that allow proper facility management rules to be enforced by the facility.

1.1 Purpose

The purpose of defining the HCMIS FE Functional Requirements Document is to lay down a base for writing accurate and complete Technical Requirements for the HCMIS FE system, and later on HCMIS FE statement of work which will be based on these requirements.

This document, therefore, establishes the functional and non-functional (operational, performance, security, etc) requirements for the HCMS FE system to provide the needed direction for the design and development. As specific releases are developed, applicable and more precise requirements will be defined in the lower level specifications.

1.2 Approach

An analysis of the Functional Requirements Document (FRD) was accomplished in two phases: the determination of the functional requirements for HCMIS FE and subject matter expert interviews,. This approach is developed in order to optimize and facilitate IT Analyst's ability to collect document the HCMIS FE requirements.

1.2.1 Project Initiation

Development of Project Scope and Project Plan

The first phase of the analysis was initiated by a meeting with USAID | DELIVER PROJECT staff to discuss the deliverables. From this meeting, a project scope and project plan was developed. These documents were presented and approved by holding a discussion regarding the system description, project goals, methodology, project schedule, and deliverables.

1.2.2 Subject Matter Expert Interviews and discussions

In-depth Interviews with Subject Matter Experts (SMEs)

In-depth interview and discussions with subject matter experts were completed. These interviews and discussions were essential for gaining an understanding of the HCMIS FE requirements from routine facilities' activities. Besides, facilities' personnel were part of the discussion sessions enabling the possibility of gathering several requirements that can be used as a foundation for the final requirements.

1.3 Document Organization

This Detail Functional Requirement Document is divided in to four chapters. Chapter one deals with the introduction with details on the purpose, document organization, and intended audience. In chapter two functional area requirements will be discussed. Under chapter three the next area on which this document will be dealing with is briefly discussed. Chapter four addresses the additional sections including the definitions and abbreviations that are used in the document.

1.4 Intended Audience

The target audience for this Detailed Functional Requirement document consists of the following groups:

- Development team
- Project Manager (PM)
- Quality Assurance
- Stakeholders

2 FUNCTIONAL AREA REQUIREMENTS

The proposed system should support the effective management of the facilities. The system to be implemented at the facility level should carry on the inventory control. Taking this fact into account, the basic functionalities that apply to the facility edition of HCMIS are listed in the table below.

Func Req #	Requirement Description	References
FE-FR-01	Managing user accounts	HCMIS FE Software Document
FE-FR-02	Managing system settings	HCMIS FE Software Document
FE-FR-03	Editing pipeline information	HCMIS FE Software Document
FE-FR-04	Adding/editing/deleting supplies list	HCMIS FE Software Document
FE-FR-05	Adding/editing/deleting drug's information	HCMIS FE Software Document
FE-FR-06	Managing hub information	HCMIS FE Software Document
FE-FR-07	Customizing drug list	HCMIS FE Software Document
FE-FR-08	Maintain separate logical stores for different programs in the same warehouse	HCMIS FE Software Document
FE-FR-09	Generating pick list including the location, item name, batch number and expiry date of items to be issued	HCMIS FE Software Document
FE-FR-10	Handling loss/adjustment	HCMIS FE Software Document
FE-FR-11	Managing Pick Face replenishment	HCMIS FE Software Document
FE-FR-12	Handling inventory control	HCMIS FE Software Document
FE-FR-13	Controlling receive transaction activity log	HCMIS FE Software Document
FE-FR-14	Controlling issue transaction activity log	HCMIS FE Software Document
FE-FR-15	Controlling loss/adjustment log	HCMIS FE Software Document
FE-FR-16	Controlling inventory log information	HCMIS FE Software Document
FE-FR-17	Handling database backup and restore	HCMIS FE Software Document

Func Req #	Requirement Description	References
FE-FR-18	Exporting data to PFSA in PDA, Server and Excel formats	HCMIS FE Software Document
FE-FR-19	Generating reports regarding the stock status, over stock items, stock out items, issues by receiving unit, expired products, near expiry products, and storage status	HCMIS FE Software Document
FE-FR-20	Generating summary reports that include summary chart, stock expiry status and cost summary	HCMIS FE Software Document

3 NEXT AREA

Among other things, the HCMIS FE System is designed by considering functionality, reliability, cost, ease of use, and time parameters. Better than what off-the-shelf systems could possibly provide, the HCMIS FE System (designed as custom system) gives careful consideration to the Ethiopian specific practices by discarding the cluttered and zillion of inventory practices that are not suitable for the Ethiopian context. In line with this, the system is designed considering the fact that it can be easily installed and maintained by the very limited number of relatively non-expert and non-IT personnel with low maintenance cost.

Moreover, the system conforms to the donor's assisted programs with multi-faceted interventions and commodities managed and accounted for specific health intervention programs. In addition to this, once the HCMIS FE System is ready for use, it is free to install in as many sites as needed. However, commercial applications will require per site/per user license and licensed database for each site that makes a country-wide deployment virtually out of question because of potentially millions of dollar of budget requirement.

This section, therefore, elaborates the other areas of functional requirements that are given due attention in the design and implementation of the system.

3.1 User Interface (UI)

The HCMIS FE shall be designed flexible and user friendly. Besides, it shall be designed as a graphical user interface that is easy to understand and use. The system shall also enable users to perform their business in effective and efficient way.

3.2 Hardware Considerations

As far as the existing hardware infrastructure is concerned, except a functional computer with printer and Uninterrupted Power Supply (UPS), there is no need of acquiring a special purpose hardware device to run the Facility Edition of HCMIS (FE). This makes the HCMIS FE affordable and less costly. Hence, the new system shall be designed to support single machine installation at the facilities.

3.3 Backup and Recovery

The HCMIS FE shall support data backup and recovery. Moreover, the backup shall be taken from the warehouse and facilities on regular basis. Taking backups on regular basis will help restore/recover the HCMIS FE at times of system failure.

3.4 Extensibility

The new system shall be designed in such a way that it supports the addition of new features and customizations at next major version upgrade.

3.5 Error Handling and Extreme Conditions

The HCMIS FE shall have an automatic error handling mechanism which shall leave users informed about the errors that they have committed so that they can rectify the problems later.

3.6 Platform Compatibility

The system shall be designed to run on Windows XP and/or later operating systems that integrate the .Net 4 runtime framework.

3.7 Reliability

One of the pertinent non-functional requirements of the system is reliability. Hence, the HCMIS FE shall be designed and developed in such a way that it produces accurate and timely outputs (such as reports).

3.8 Security Issues

The HCMIS FE system shall require user name and password of users to grant them access to the system in general and to create, modify and delete information in particular. Moreover, the HCMIS FE shall require administrator ID and password from system administrators in order for them to undertake necessary system administration tasks. The HCMIS FE shall also be developed and maintained in compliance with internationally established guidelines and standards for protecting computer systems, networks and information.

3.9 Usability by Target User Community

User's acceptance of the system is one of the many significant things that the new system shall fulfill. Hence, the HCMIS FE shall be acceptable by the target user community. To this end, the system shall be designed and developed in such a way that it envisions all the requirements of users.

4 ADDITIONAL SECTIONS

This document may contain terms, acronyms, and abbreviations that are unfamiliar to the reader. A dictionary of these terms, acronyms, and abbreviations can be found in the next sections.

4.1 Abbreviation

FEFO - First to Expire First Out

HCMIS FE – Health Commodity Management Information System Facility Edition

LMIS – Logistic Management Information System

PFSA - Pharmaceutical Fund & Supply Agency

PDA - Personal Digital Assistant

PM – Project Manager