USAID | DELIVER PROJECT

HEALTH COMMODITY MANAGEMENT INFORMATION SYSTEM (HCMIS) BUSINESS CASE

FOR FACILITY EDITION

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BUSINESS CASE

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1 EXECUTIVE OVERVIEW

The project management office (PMO) within the department of Information Technology has developed this business case template to assist USAID DELIVER's programs in analyzing and documenting the business justification for Health Commodity Management Information System Facility Edition (HCMIS FE) project. The purpose of this business case document is to systematically examine alternative solutions to a stated business problem, need or opportunity. The rigorous business case analysis may provide the necessary elements to support managers in selecting and prioritizing the HCMIS FE that should be approved and funded.

To this end, this document contains the business, financial and technical information required to provide a thorough justification for the project. The business case provides a comprehensive view of the proposed project and provides financial justification for that project. It provides detail information about the project in non-technical and easy-to-understand language. Moreover, the business case serves as a compelling justification for the project providing clarification in detail business need and objectives, expected benefits versus the costs, an alternatives analysis of other potential solutions and an overall risk analysis.

In addition, the business case focuses on the non-technical reason for conducting the project. While there may be a technical solution that is proposed to solve the business need or problem, the business case justifies that there is a clear business need or problem being addressed and that any technical solution proposed will result in a defined business improvement.

1.1 Business Case Highlights

The HCMIS FE is designed and developed in order to alleviate problems that are experienced at the facility level. It will be designed as an inventory management system that helps 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 user facilities ability to track consumption rates, manage re-order levels, enforce First Expiry First Out (FEFO) as well as provide many advance logistics reports that allow proper facility management rules to be enforced by the facility.

1.2 Background

The main aim of HCMIS FE is to develop a system that was as 'simple as possible' application but yet meet the Ethiopian Government's requirement for proper LMIS. This vision required the system to best fit for the type of facilities, warehouses as well as skill level of users that operate the system.

HCMIS FE is designed as an inventory management system so as to help health facilities track their commodities through the application of standard working procedures.

1.3 Problem Definition

The manual system that is implemented for different facilities suffer from lack of enforcing accepted procedures including FEFO. With all its limitations, however, the current system is being used to manage different tasks in the facilities including but not limited to inventory control. Hence, the HCMIS FE should give paramount importance to managing the receipt and issuance of pharmaceutical supplies so that the movement of items in the facilities can be best managed.

Currently, the different transactions at facility levels are being dealt with bin and/or stock cards. The bin or stock cards are expended to manage the daily records of the transactions. The major transactions are comprised of receiving and issuing stock, updating the bin or stock cards and performing inventory counts. The existing system has major problems in terms of providing readily available and accurate reports regarding stock in the facilities. The reasons for such inability are manifold and listed below:

- Properly handling the transaction of receiving and/or issuing medical supplies
- Managing the movement of items with in the facilities
- Enforcing FEFO rule is not easy
- Batch tracking is not enforced
- Controlling over stock and minimum stock levels
- Generating various reports that can help make informed decisions

1.3.1 Initiative Scope and Outcome

1.3.1.1 Scope

- The HCMIS FE is an inventory management application designed to operate at the facility level (branded as 'Facility Edition') such as Hospitals and large Health Centers

- The HCMIS software will be designed to run on standalone personal computers and this software will be implemented as enterprise application that would be running on Windows Operating System
- Includes key performance indicators and/or measures relating to the proposal or initiative indicating how performance in meeting the project objectives will be measured
- The objective and scope should be re-examined and be reaffirmed at each significant milestone throughout the project development process
- The proposal needs to be completely and accurately represented and justified in non-technical terms

1.3.1.2 Outcome

Table 1: Outcomes form HCMIS FE project

Outcome/Deliverable	Estimated Completion
Project charter	March 2007
Project Plan Review and Completion	June 2007
HCMIS FE System documentation	August 2008
HCMIS FE system	January 2008
HCMIS FE User manual guide	June 2008
Training	As per facility schedule

1.4 Organizational Linkages

The HCMIS FE project will have a tremendous impact on facilities in many ways. This section, therefore, provides a high-level explanation of how the facility, tools, processes, and hardware will be affected as a result of the HCMIS FE implementation.

Tools: the existing store structure will be changed out completely as the HCMIS FE becomes operational. This will eventually require training employees about HCMIS FE tools.

Processes: the HCMIS FE comes with standard inventory management and streamlined store administrative capability. This improved efficiency at stores will lessen the burden on managers in controlling store status and provides an opportunity to focus mainly on managing their activity.

Hardware: among other things, facilities are required to have additional personal computers and printers to accommodate the activity.

2 ASSUMPTIONS AND ALTERNATIVES

2.1 Assumptions

The assumptions below apply to the HCMIS FE. As project planning begins and more assumptions are identified, more assumptions will be added accordingly.

- Store person will be trained on how to use bin card, operating HCMIS FE, and generating various reports using HCMIS FE
- Funding is available for training
- Funding is available for purchasing hardware/software for HCMIS FE
- Facilities will provide sufficient resources and show collaboration to work with HCMIS FE
- Facilities would be interested and curious to work with HCMIS FE
- Other staffs at the facilities will collaborate with the store persons in order to facilitate their day to day activities
- The ICT infrastructure in some area would be difficult for HCMIS FE to function as expected

2.2 Alternatives

2.2.1 Do nothing (status Quo)

Facility does not use HCMIS FE and continues to perform its activities by using manual system.

2.2.2 Developing HCMIS FE system

Facility uses HCMIS FE in order to facilitate and enhance the day to day activities at the store.

2.3 Review and Detail of Potential Feasible Options

The following alternative options have been considered to address the business problem at health facilities. These alternatives were not selected for a number of reasons that are explained below.

Do nothing(status Quo)	**Reasons For Not Selecting Alternative**
Keep the facility using manual system	o Improper use of item o Insufficient handling of receiving and/or issuing medical supplies o Insufficient way of managing the movement of items o Enforcing FEFO rule is not easy o Batch tracking is not enforced o Poor stock status control o Unable to generate vital reports for decision making
Alternative option	**Reasons For Not Selecting Alternative**
Developing HCMIS FE	o High cost for implementation o Cost for training and other supporting materials o Cost for hardware and additional software o Skilled human resource

2.4 Detailed Option Analysis

2.4.1 Comparative Cost-Benefit Analysis

Table 2 captures the cost and savings actions associated with the HCMIS FE system, descriptions of these actions, and the costs or savings associated are identified.

Table 2: Cost-benefit analysis

Action	Action type	Description
HCMIS FE implementation	Cost	Cost for HMCIS FE implementation
HCMIS FE installation	Cost	Cost for HCMIS FE installation
Training	Cost	Cost for training
HCMIS FE support materials	Cost	Material cost that are necessary to support HCMIS FE
Enforce rule on items	Saving	Saving cost by enforcing rules on items
Controlling stock status	Saving	Saving cost by controlling stock status
Labor and time costs	Saving	Labor and time costs involved in HCMIS FE

Based on the cost benefit analysis, it's visible that implementing HCMIS FE at the facilities would eventually benefit the facilities to save money and other resources. All cost types listed are one-time costs that are required to implement the system.

On the contrary, all saving costs would continue every year in the future. This represents a significant improvement in our operating costs and is clear indicator of the benefit this project will have at the facilities.

2.4.2 Advantages and Disadvantages

Option	Advantage	Disadvantages
Do Nothing	• No cost for HMCIS FE development • No additional cost for materials	• Luck of proper inventory management • Failing to generate various reports • Has no opportunity to work with

	which are necessary to implement HCMIS FE • Less number of skilled human resource (i.e. who has computer skill)	and/or introducing new ICT technology • Time consuming • Need more human resource
Developing HCMIS FE	• Best inventory management system • Generates various reports for decision making • Will improve transactions at store (i.e. issue, receive etc...) • Managing proper items movement at stores • Enforcing rules on items • Enhances controlling stock status	• Costly for implementing HCMIS FE and for various materials • Cost for training • Needs human resource who has general computer skill • The need of additional way of doing things at store

2.4.3 Risk Analysis

The strategic and operational risks for HCMIS FE have been assessed identifying appropriate mitigation strategies. For details on this, see HCMIS FE Risk Management Plan Document.

2.5 Recommended option

Considering the proper inventory management system and enhanced working environment at facilities with low cost of implementation, it is highly recommended that HCMIS FE is developed in-house with local talent.

3 COST /BENEFITS ANALYSIS

3.1 Costs

The total project costs are estimated and covered by USAID | DELIVER PROJECT. The following sections identify the major direct Up-front and direct ongoing cost of implementing the project and illustrate them in a format suitable for communication to stakeholders.

3.1.1 Direct Up-Front Costs

General Direct Costs	IT Specific Direct Costs
• Equipment costs • Facility costs • Training costs • Workforce Adjustment Costs • Salaries (Full Time Equivalent - FTE) • Consulting services • Redesign business processes	• Hardware • Software • Requirements analysis • Data collection & conversion • Design & development • Modifications/ customizations • Integration & implementation • User training • Documentation • Consulting support

3.1.2 Direct ongoing Costs

General Direct Costs	IT Specific Direct Costs
• Salaries (FTE's) • On-going training • Support • Ongoing personnel cost	• Upgrades • Maintenance and patches • Computer supplies • User support

3.1.3 Indirect Costs

General Indirect Costs	IT Specific Indirect Costs
• Initial loss of productivity with any change initiative • The impact on other areas of the corporation from the initiation; e.g. Admin. and facilities, HR, business teams • Corporate support/overhead • Human resources • Internal communications	• Corporate IT support • Delays • Potential replacement or decommissioning of stand-alone or legacy systems • Ensuring compatibility between systems

3.2 Benefits

HCMIS FE is designed to ensure that a systematic record-keeping system that can help efficiently manage daily transactions of health facilities is implemented.

HCMIS FE, therefore, provides quite enormous benefits if successfully implemented and used. The following are some of the benefits:

- HCMIS FE will provide all the capabilities and benefits that facilities are looking for
- Lower maintenance cost resulting from HCMIS FE eventually minimizing the cost for materials that are being used
- HCMIS FE will reorganize the Health facility activities and increase the efficiency of business processes, saving staff time and improving health center services
- HCMIS FE enforces information security as a result of the standard security principles that are included in the application. The system, therefore, reduces on-going threats, and can play pivotal role in business continuity and disaster recovery
- Providing greater flexibility in the number, skills and availability of IT resources
- Establishing the infrastructure that will allow for additional arrangements in day to day activities

3.3 Financial Analysis

This section in the Business case document provides the financial benefits for the implementation of HCMIS FE at facilities.

- Reduces the amount of time and effort required in store at facilities
- Reduces the number of errors on keeping the amount of item at store
- Reduces the costs and time to keep item record on paper
- Reduces unnecessary cost and loss on over stock and expired items
- Improve the inventory management system
- Reduces the costs and time for item transactions error
- Improve generating various decision making reports

3.4 Performance Measures

HCMIS FE plays a great role in improving the way facility staffs conduct their daily routine. The system is designed and developed with the assumption that universally accepted standard operating procedures including item receiving/issuing, FEFO and stock management tasks are enforced.

The performance of the HCMIS FE can be measured in terms of its responsiveness, effectiveness (in terms of handling critical tasks) and efficient resource usage.

3.4.1 Key Performance Indicators

- It provides evidence of the facility's efficient management of stores
- It can be used in future business case to demonstrate that HCMIS FE is cost effective; and
- It can be used to demonstrate how HCMIS FE adds value to facilities

For detailed analysis on the performance of the system, see HCMIS FE's Performance Test Plan Document.

4 IMPLEMENTATION TIMELINE

4.1 Timeline and Work Plan

ID	Task Name	Start	Finish
1	**Start - up**	1/1/2007	8/31/2007
2	Project Start – up Communication	1/1/2007	2/28/2007
3	Project Charter	3/1/2007	4/27/2007
4	Project Work Plan	3/5/2007	5/10/2007
5	Project Team Launch and Training	4/10/2007	7/10/2007
6	**Execution**	7/13/2007	2/15/2008
7	Project Management	7/13/2007	2/15/2008
8	Analysis	7/13/2007	9/4/2007
9	Application Development	9/4/2007	1/1/2008
10	Application Testing	1/4/2008	2/4/2008
11	User Guide document	1/28/2008	2/13/2008

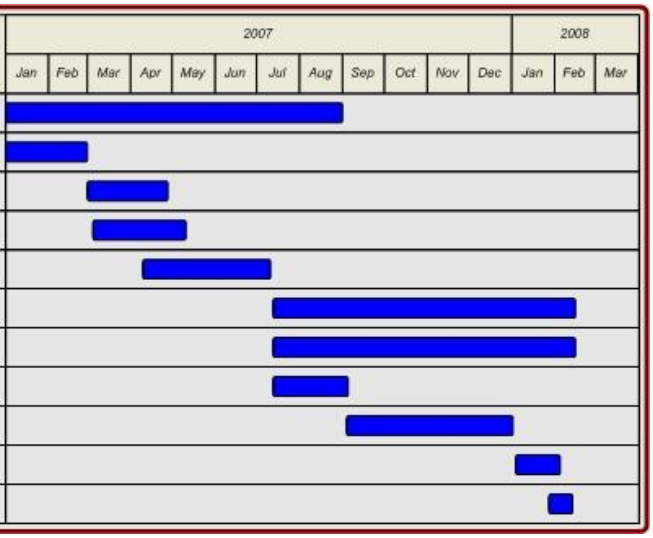

Figure 1: Timeline for HCMIS FE project

4.2 Project Governance and Organization

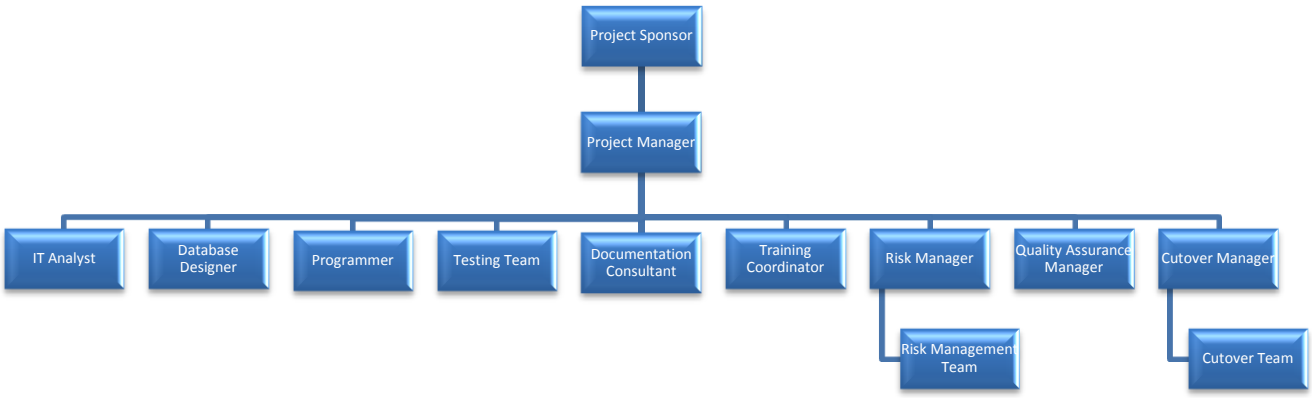

Figure 2 shows the governance structure of the HCMS HE disclosing the relationship among project sponsor, project manager, and the rest of the project team members.

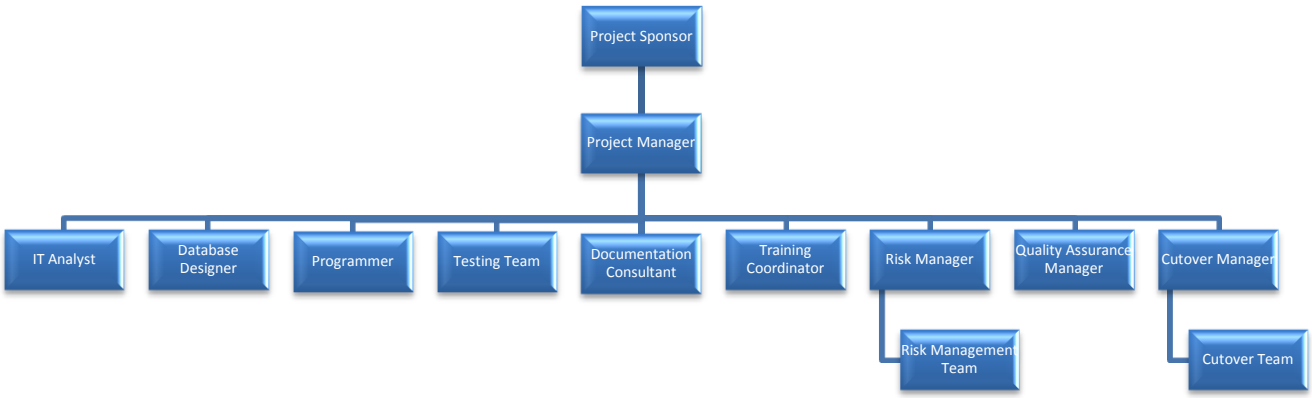

Figure 2: Organizational Structure

4.3 Communications and Change Management Plan

The communication strategy is designed to provide an overview of the new purpose, objectives and strategies for all communication activities. Additionally, the strategy provides a set of key messages consistent to all audiences that are intended to be reflected in all communication activities, including stakeholders external to the organization.

4.3.1 Goals of the Communications Strategy

- To facilitate understanding among all team members about the role of the HCMIS FE and the rational for the transformation
- To maintain productivity and health center satisfaction through the period of transition
- To communicate an underlying sense of dignity and respect to all team members
- To build confidence among all audiences about the new HCMIS HE project

4.3.2 Key Strategies

- Communications will be managed as an essential business process
- The primary channel of communications with team members is face-to-face, with various internet communications, with printed information provided as tools
- Top management of the HCMIS FE will serve as the communications leader
- Communication with all team members will build in opportunities for feedback
- Information will be communicated as soon as it is available to all project team members

5 CONCLUSION AND RECOMMENDATIONS

The business case recommends facilities towards accepting the development and implementation of HCMIS FE. The limitations of the manual system discourage facilities from putting in place universally accepted standards of operating procedures. On the other hand, the HCMIS FE proves to be a vital option to enforce these accepted operating procedures by reducing the need for additional resources and human labor, and eventually costs related to them.

To this end, the implementation plan for the recommended option will be provided to decision makers. The plan includes a timeline with key milestones so that decision makers can see what is anticipated vs. being achieved. If possible, attaching costs to the milestones will help decision makers understand where the fund for the project will be spent.

6 ADDITIONAL SECTION

6.1 Definitions and Abbreviations

- FEFO - First to Expire First Out
- FTE – Full Time Equivalent
- HCMIS FE – Health Commodity Management Information System Facility Edition
- LMIS – Logistic Management Information System

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