USAID | DELIVER PROJECT

HEALTH COMMODITY MANAGEMENT INFORMATION SYSTEM (HCMIS)

BUSINESS CASE PLAN

FOR HUB EDITION

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USAID | DELIVER PROJECT, Task Order 4 The USAID | DELIVER PROJECT, Task Order 4, is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-00007-00, order number AID-OAA-TO-10-00064, beginning September 30, 2010. Task Order 4 is implemented by John Snow, Inc., in collaboration with Asociación Benéfica PRISMA; Cargo Management Logistics; Crown Agents USA, Inc.; Eastern and Southern African Management Institute; FHI 360; Futures Institute for Development, LLC; LLamasoft, Inc; The Manoff Group, Inc.; OPS MEND, LLC; PATH; PHD International (a division of the RTT Group); and VillageReach. The project improves essential health commodity supply chains by strengthening logistics management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operation, and enhancing forecasting and procurement planning. The project encourages policymakers and donors to support logistics as a critical factor in the overall success of their healthcare mandates.

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USAID | DELIVER PROJECT

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1 EXECUTIVE OVERVIEW

The Business Case document outlines how Health Commodity Management Information System Hub Edition (HCMIS HE) addresses current business concerns at Hub/warehouse, the benefits of the project, and recommendations and justification of the system. The business case also discussed detailed project goals, performance measures, assumptions, constraints, and alternative options.

1.1 Business Case Highlights and Background

Health Commodity Management Information System (HCMIS) is a warehouse management system developed by USAID | DELIVER PROJECT for use in the Ethiopian Ministry of Health and the Pharmaceutical Fund & Supply Agency (PFSA) implemented to support the country's pharmaceutical logistic management system. The USAID | DELIVER PROJECT added a warehouse module to extend the features initially implemented by Supply Chain Management System (SCMS).

HCMIS HE will be designed in such a way that a systematic record keeping system that can help efficiently manage daily transactions at warehouses can be efficiently implemented. Moreover, HCMIS HE provides a mechanism by which essential and standard working procedures can be enforced in these pharmaceutical settings. Some of the standards that are better supported by the system includes First to Expire, First out (FEFO), batch, and expiry tracking.

HCMIS HE also helps managers at warehouses to generate appropriate and timely stock reports that help them make sound decisions.

1.2 Problem Definition

Currently at the hubs/warehouses, a manual system is being using to facilitate the day-to-day activities. With all its limitations, the current manual system is used to manage different tasks that include inventory control in the warehouse. Hence, huge importance is given to inventory management activities mainly handling item receive/issue and managing the movement of items looking for a specific item from different store locations in the warehouse.

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 stocks in the warehouse. The reasons for such inability are manifold and listed below:

- Properly locating items in the hub warehouse
- 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

1.2.1 Initiative Scope and Outcome

1.2.1.1 Scope

- HCMIS HE is an inventory management application designed to operate at the hub level (branded as 'Hub Edition')
- HCMIS HE will be designed for standalone personal computers and this software will be implemented as enterprise application that would be running on Windows operating system
- Throughout the HCMIS HE development process, the objective and the scope should be re-examined and be reaffirmed at each significant milestone
- Including the key performance indicators and/or measures relating to the proposal or initiative indicating how performance in meeting the project objectives will be measured
- The proposal needs to be completely and accurately represented and justified in non-technical terms

1.2.1.2 Outcome

Moving the warehouse manual system to HCMIS HE will enable employees at warehouse to manage items and handle the activities in a seamless and consolidated manner. This technology migration will reduce overhead costs associated with the large workforce currently required to manage these tasks.

Employees at warehouse will have more autonomy to manage their day to day activities. The hubs will also benefit from various more timely and accurate stock status reports to let managers assess and make informed decisions. This automated system reduces errors, improve cycle time, and is readily available to any authorized user.

1.3 Organizational Linkages

The impact of HCMIS HE on the warehouse is very significant in many ways. This section in the document provides a comprehensive explanation of how the facility, tools, processes, and hardware will be affected as a result of the HCMIS HE implementation.

Tools: the existing warehouse item location and shelf location will be changed out totally as the HCMIS HE becomes operational. This at the end will require providing training to employees about HCMIS HE tools.

Processes: HCMIS HE includes standard warehouse management functionality and streamlined store administrative capability. This improved efficiency at warehouse will minimize the burden on managers in controlling store status and provides an opportunity to focus mainly on managing their activity.

Hardware: in addition to the above changes in the warehouse, it also required to have additional personal computers and printers in order to get full functionality.

2 ASSUMPTION AND ALTERNATIVES

2.1 Assumptions

The following assumptions listed apply to the HCMIS HE. As the project planning begins and more assumptions are identified, they will be added accordingly.

- A store person at hub/warehouse will be trained how to operate HCMIS HE, generating various report, and using bin card
- Funding is available for training and purchasing hardware/software
- The hub administration will provide sufficient resource and shows collaboration to implement and use the HCMIS HE system
- Employees at the hubs have a general knowledge on how to use computer
- The current ICT infrastructure at hub/warehouse will allow HCMIS HE to be fully be functional

2.2 Alternatives

2.2.1 Do nothing (status Quo)

Hub/warehouse does not use HCMIS HE and continues to perform its activities by using manual system.

2.2.2 Developing HCMIS HE System

Hub/warehouse uses HCMIS HE in order to facilitate and enhance the day to day activities at the store.

2.3 Review and Detail of Potential Feasible Options

Do nothing (Status Quo) and Developing HCMIS HE system options have been considered to address the current warehouse problem. The Do nothing (Status Quo) alternative was not selected for a number of reasons which are explained below.

Table 1: Review of alternative option

Do nothing(status Quo)	**Reasons For Not Selecting Alternative**
Keep the warehouse using the current system	o Improper use of items o Insufficient handling of receive and/or issue of 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 HE system	o Skilled human resource (i.e. who has general computer skill)

2.4 Detailed Option Analysis

2.4.1 Comparative Cost-Benefit Analysis

The Business Case document will capture the cost and savings that are associated with the HMCIS HE. The following table provides a description of these actions, and the costs and savings.

Table 2: Cost-benefit analysis

Action	**Action type**	**Description**
HCMIS HE implementation	Cost	Cost on implementation of HMCIS HE
HCMIS HE installation	Cost	Cost for installation of HCMIS HE
Training	Cost	Cost for training
HCMIS HE support materials	Cost	Material costs necessary to support HCMIS HE
Impose rules on items	Saving	Saving cost by enforcing rules on items
Proper stock status	Saving	Saving cost by properly controlling stock status
Human resource and time cost	Saving	Due to the presence of HCMIS HE, large amount of human resource and time costs are reduced

Table 2 shows the cost benefit analysis and the implementation of HCMIS HE at warehouse with greater benefit to saving money and others resources. All costs listed are one-time costs that are required to implement HCMIS HE. On the other hand, all cost types listed are incurred in every year in the future. This represents a significant saving at the hubs/warehouses.

2.4.2 Advantages and Disadvantages

Table 3: The advantages and disadvantages of HCMIS HE project

Option	Advantage	Disadvantages
Do Nothing	• No cost for HMCIS HE development • No additional cost for materials which are necessary to implement HCMIS HE • Less number of skilled human resource (i.e. who has computer skill)	• Improper inventory management • Insufficient use of store location and item • Unable to use various reports • Has no opportunity to work with and/or introducing with new ICT technology • Time consuming • Need more human resource • Difficult to enforce rules on items • Difficult to control stock status • Improper way of locating items
Developing HCMIS HE system	• Proper way of locating item • Best inventory management system • Various report for decision making process • Will improve transactions at the warehouse (i.e. issue, receive etc...) • Managing proper item movement at the warehouse • Enforcing rules on items • Enhance controlling stock status	• Needs human resource who has general computer skill • The need of additional way of doing things at the warehouse

2.4.3 Risk Analysis

The strategic and operational risks were assessed for the project and appropriate mitigation strategies were identified. See Risk Management Plan Document for Hub Edition.

2.5 Recommended Option

In order to have an automated inventory management and better working environment at the hubs/ warehouses with low cost of operation, it is highly recommended that HCMIS HE is designed and developed in-house with a local talent.

3 COST/BENEFITS ANALYSIS

3.1 Costs

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

3.1.1 Direct Up-Front Costs

Table 4 provides a detailed list of direct costs that are necessary to implement HCMIS HE.

Table 4: Direct Up-Front cost list

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

3.1.2 Direct Ongoing Costs

This section of the Business case document outlines the direct continuing costs required to operate HMCIS HE.

Table 5: Direct Ongoing Costs list

General Direct Costs	IT Specific Direct Costs
• Salaries (FTE's) • On-going training • Reviews and audits • Ongoing personnel cost (workstations, computers, etc.)	• Upgrades • Maintenance and patches • Computer supplies • User support

3.1.3 Indirect Costs

Like any other automated system, HCMIS HE has indirect costs while it performs the day-to-day activity at hub/warehouse.

Table 6: Indirect cost list

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 • 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 HE will be developed in a way that a systematic record-keeping system that can efficiently manage the daily transactions of hubs/warehouses can be enforced. Therefore, HCMIS HE provides quite enormous benefits if properly implemented and used. The benefits of HCMIS HE within hubs/warehouses include:

- Items cost reduction with the ability to track and control stock statuses
- HCMIS HE will provide all the functionalities and capabilities
- HCMIS HE will reorganize the warehouse activities and increase the efficiency of business processes, saving staff time and improving hub/warehouse services
- The system enforces information security as a result of the standard security principles that are included in the application. HCMIS HE, therefore, reduce on-going threats, and can play major role in business continuity and disaster recovery
- Providing greater flexibility in the number, skills and availability of IT resource
- Warehouses will have flexible infrastructure that will allow additional arrangements in day-to-day activities
- Improving employee's moral and work ethics through automating routine tasks such as keeping tracks of stock out items and managing item location

3.3 Financial Analysis

In this section of the document, the general financial benefits of implementing HCMIS HE are discussed. The core points listed below indicate the financial benefits for the implementation of HCMIS HE at hubs/warehouses.

- Reduces the amount of time and effort required in locating items at warehouses
- Reduces the costs and losses due to expired items and over stock
- Proper usage of various warehouse management reports
- Reduces the costs and time for missed items
- Improves overall warehouse inventory management system
- Reduces the cost and time during inventory
- Reduces the cost that are being used for the manual system

3.4 Performance Measures

HCMIS HE plays a great role in improving the way the hub/warehouse personnel conduct their routine activities. The system is designed and developed with the assumption that universally accepted standard operating procedures including item receiving/issuing, FEFO, locate item, and stock management tasks are enforced. The performance of the HCMIS HE 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

- The system provides evidence of efficient hub management system
- It can be used in future business cases to demonstrate that HCMIS HE is cost effective, and
- It can be used to demonstrate how HCMIS HE adds value to hub/warehouse.

4 IMPLEMENTATION TIMELINE

4.1 Timeline and Work Plan

DATE MISSING

4.2 Project Governance and Organization

Figure 1 describes the organizational structure that would be employed throughout the HCMIS HE life cycle.

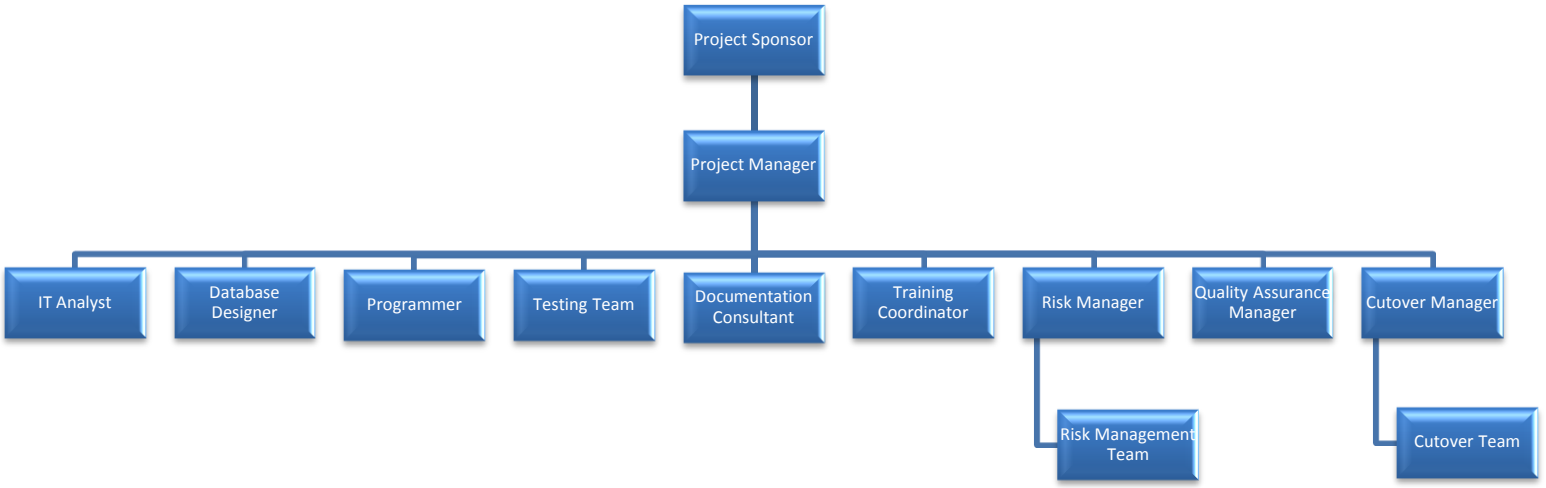

Figure 1: Organizational structure

4.3 Communications and Changes Management Plan

The Project Manager will take a proactive role in ensuring effective communications on the project.

The following section describes the media, goal of communication strategy, and key strategies.

4.3.1 Media

Different media forms will be used on the HCMIS HE for conveying information, and for maintaining communication between project team members and project stakeholders. Face to face communication is the most effective, but is not always feasible, due to stakeholders being separated geographically.

The various media to be employed by the HCMIS HE project, includes:

E-mail: - E-mail will be used for normal day-to-day communication and dissemination of information. E-mail will be the media of choice for distributing document among team members as well as stakeholders. It will also be used to schedule meeting and for maintaining project calendars.

Telephone: - Conference calls will be utilized to conduct meetings as needed

Hardcopy: - Project documents will be prepared using the Microsoft Office suits. This includes status reports, training manuals, presentations, project plans, and project documents as may be required

Meetings: - With the exception of informal meetings, agendas should be prepared and followed for all status, board and program review meetings.

4.3.2 Goals of the Communications Strategy

- To create a better understanding among all team members as well as stakeholders about the role of the HCMIS HE
- To maintain productivity and smooth working environment
- To build confidence among all audiences about the new HCMIS HE
- To communicate an underlying sense of dignity and respect to all team members

4.3.3 Key Strategies

- All the listed media will be utilized on regular basis
- Communications will be properly managed as an essential business process throughout the HCMIS HE life cycle
- Top management of HCMIS HE will serve as the communications leader
- Communication with all team members will create an opportunities for feedback
- Information will be communicated as soon as it is available to all project team members

5 CONCLUSION AND RECOMMENDATIONS

Various options and alternatives were analyzed to determine the best way to leverage technology to improve the business processes and reduce the overhead costs within hub/warehouse. The approach described herein allows us to meet our corporate objectives for continuously improving efficiency, reducing costs, and capitalizing on technology.

The recommended HCMIS HE system methodically migrate the data and functions of the current system in order to preserve data integrity and allow adequate time to train personnel.

HCMIS HE is compatible with all other current IT systems and will improve the efficiency and accuracy of generating timely reports throughout the hubs/warehouses. Some of the mechanisms by which HCMIS HE will achieve its desired results are through:

- Saving extremely high costs
- low risk of implementing the new system (i.e. HCMIS HE)
- speeding up the current operations at the warehouses
- generating various vital reports that are essential for decision making processes

6 ADDITIONAL SECTION

6.1 Definitions and abbreviation

- FEFO - First to Expire First Out
- FTE – Full Time Equivalent
- HCMIS HE – Health Commodity Management Information System Hub Edition
- PFSA – Pharmaceutical Fund & Supply Agency

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