

Strengthening Ghana's Public Health Supply Chain: Distribution Optimization, Procurement Efficiency and End-to-End Logistics Management System Design



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Agenda

- Historical Background and the Role of The Global Fund (GF) in Ghana Supply Chain Reforms
- Ghana Supply Chain Reforms
- Critical Success Factors
- Impacts of Supply Chain Reforms on Procurement, Logistics Management, and Distribution
- Questions



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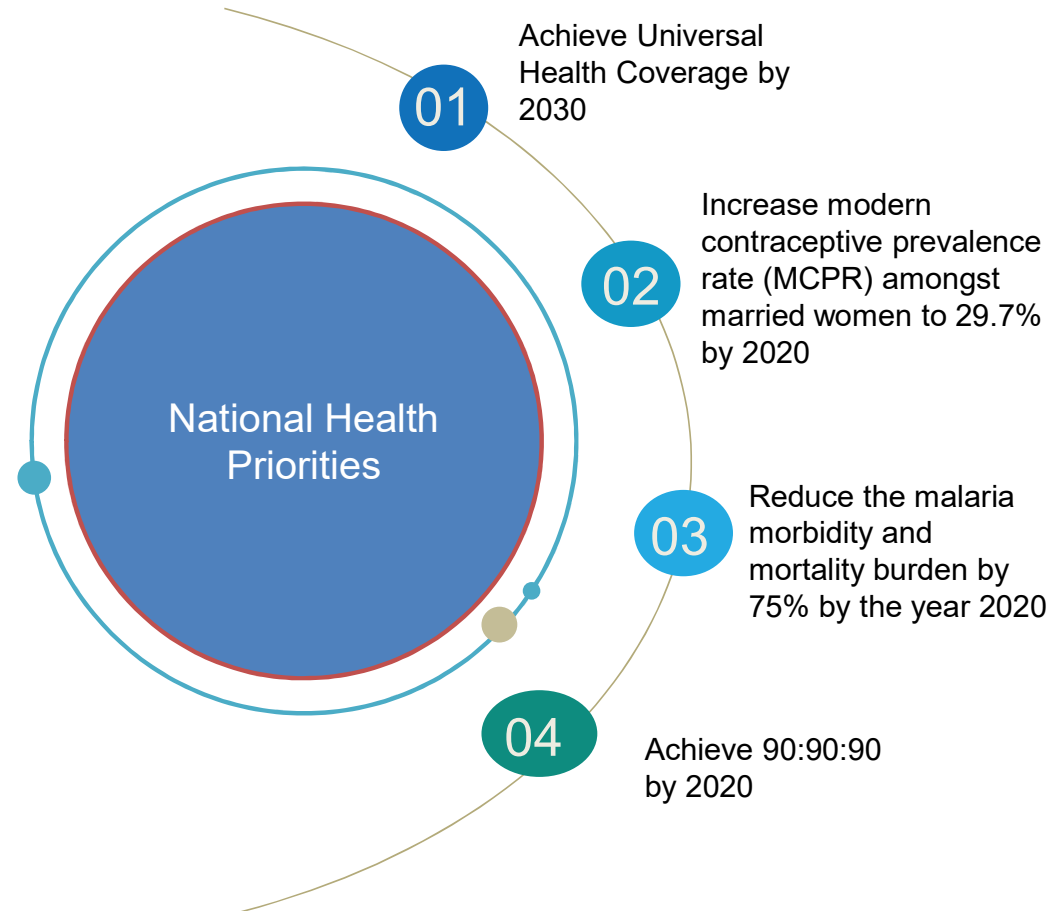
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Ghana Supply Chain Context

Supply Chain Master Plan (SCMP) 2015-2020

The strategic objective of the SCMP is to ensure that good-quality health commodities are available, accessible, and affordable to all people living in Ghana. The Master Plan covered seven thematic areas:

- Organization and coordination, human resources and supervision
- Financing, resources mobilization, and commodity pricing
- Procurement
- Distribution – storage, inventory management, transport, and waste management
- Information systems and processes
- Quantification and product selection
- Policy, legal, and regulatory environment



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Global Fund Support Background

- Ghana SCMP developed in 2012 with implementation challenges
- 13th January 2015, Fire at Central Medical Stores (CMS)
- 2015: National Security investigation (February 2016 – Report)
- GF estimated value of GF-financed health products: \$27.4M (February 2016)
- 2015: Ghana Supply Chain Master (SCMP) revised to address implementation challenges and the impact of the CMS Fire
- Take this opportunity to drive SCMP implementation focusing on high-impact supply chain interventions: “CMS fire agreement”
- Proposed SCMP focus areas and milestones (April/May 2016)
- Negotiations with Ministry of Health (MoH) and Ghana Health Service (GHS) (June 2016)
- Implementation started in Quarter 3 2016



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Global Fund Milestones

Focus Area	Phases	Milestone/Deliverable
Last-Mile Distribution (LMD)	Milestone 1	50% of health facilities (HFs) at Service Delivery + Plan for extension of LMD to lower level (Achieved)
	Milestone 2	75% of HFs at sub-district + Plan for extension of LMD to lower level (Achieved)
	Milestone 3	100% of HFs at sub-district + Plan for extension of LMD to lower level (Achieved)
Logistics Management Information System (LMIS)	Milestone 1	Interim LMIS solution to report HIV consumption data (Achieved)
	Milestone 2	Definition of user data requirements and system design (Achieved)
	Milestone 3	Develop LMIS RFP, select a vendor, and award a contract (Achieved)
	Milestone 4	Provision of Ghanaian government funding for LMIS training and equipment (Delayed)
	Milestone 5	LMIS rollout to Regional Medical Stores (RMS)/zonal WHs, THs, regional and DHs (On schedule)
Warehousing & IHS Transition	Milestone 1	Take a decision on the most efficient, effective, safety and security warehouse and distribution strategy (Achieved)
	Milestone 2	Improve warehousing infrastructure in the RMSs basing on recommendations of the FDA report, to meet FDA requirement (*Achieved)
	Milestone 3	Implementation of the warehousing and distribution strategy (On schedule)
Framework Agreements	Milestone 1	Signature of long-term framework agreements (FA) for essential medicines (Achieved)
	Milestone 2	Evidence of use of FAs by all regions (Achieved)



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Performance: Supply Chain Reform Milestones (Debt Waiver)

Category	Description and Targets	Current Status	Value Waived
LMD	LMD to health facility and place to reach GHS Community-Based Health Planning and Services (CHPS)	Targets for 2017 and 2018 fully achieved	\$9.5M
LMIS	LMIS system design and rollout	Partially achieved; two milestones achieved and the remaining two rescheduled for Q4 2019	\$5.0M
Warehousing	Deliver Warehousing optimization strategy and rehabilitation of RMS	Partially achieved; strategy developed but rehabilitation still ongoing	\$1.4M
Procurement	Put framework contracts (FWCs) in place and demonstrate utilization of FWCs	Achieved	\$4.0M
Total Amount waived by GF			\$19.9M

Total target amount is \$27.4, therefore, a balance of \$7.5 targeted to be achieved by end of 2019.



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Priority Supply Chain Reform Areas

Priority Supply Chain Reform Areas

01

Last Mile Distribution

Scheduled distribution to gradually cover 100% of all health facilities up to subdistrict level with a plan for expansion to lower level (Clinics and CHPS)

02

Warehouse Optimization

Develop and implement a warehousing strategy for optimization of commodity management and distribution.

03

Framework Contracting

Implement and monitor framework contracting for a selected range of health commodities.

04

Logistics Management Information System

Define requirements; procure and implement an integrated logistics management information system that can capture, report, and analyze supply chain data.

05

Governance

Mechanism at central, regional, and health facility level for setting supply chain targets, monitoring performance and demanding accountability, in addition to resource mobilization and addressing challenges as they arise.



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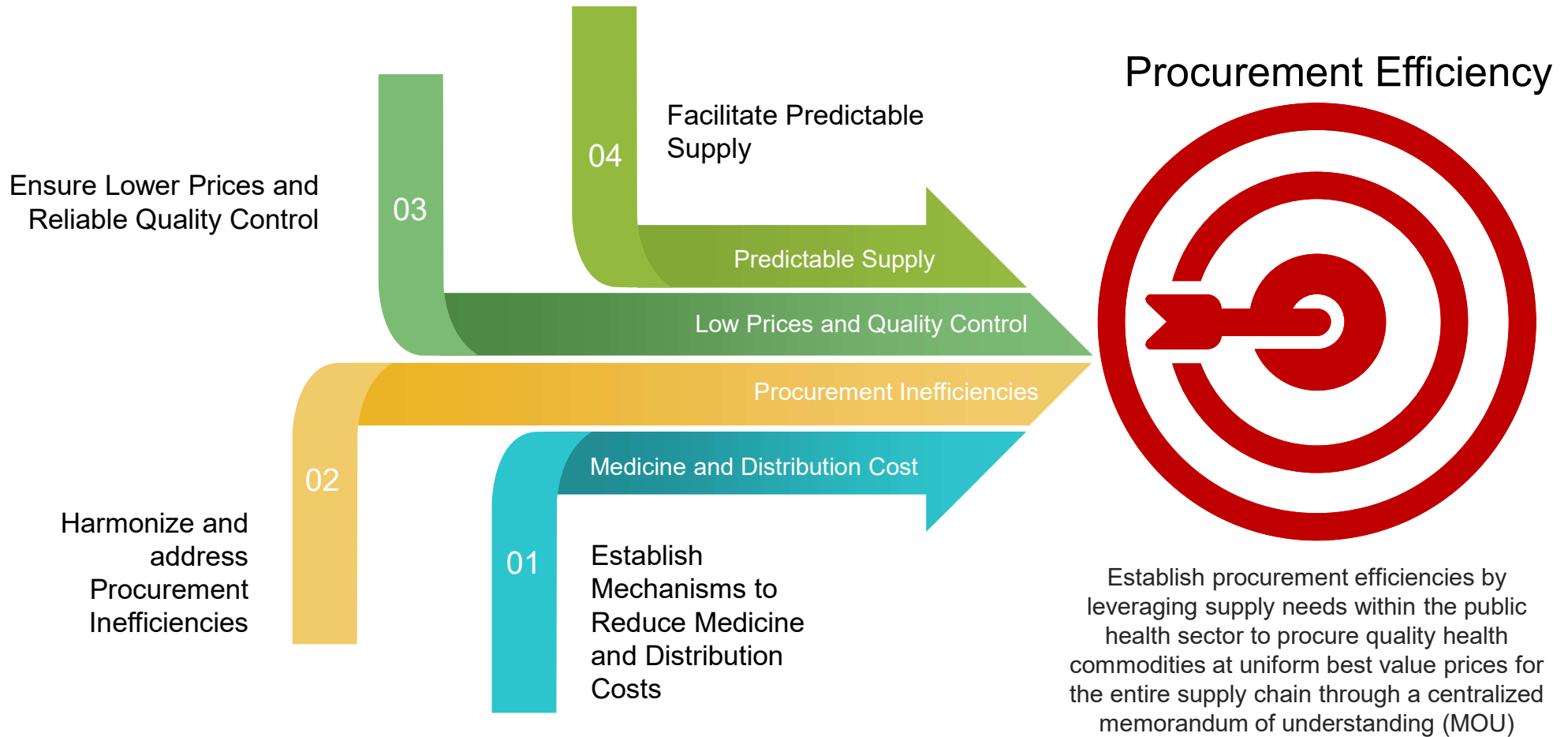


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Procurement Efficiency - Objective



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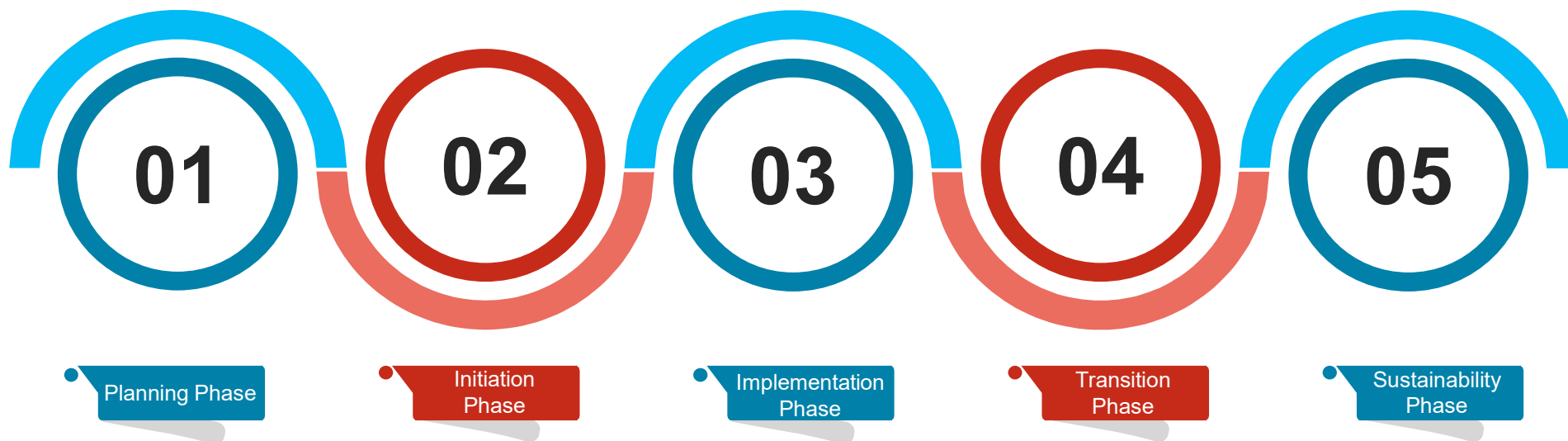
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Procurement Efficiency Implementation Approach – Framework Contract



- High-level stakeholder engagement to obtain process buy-in, determine product scope and quantities, procurement process/method, Standard Procurement/Tender Document, implementation plan and timeline, risk identification and mitigation strategy

- Launch of tender
- Pre-bid conference to engage with stakeholders including potential suppliers

- Tender submission
- Empaneling of tender evaluation team
- Public opening of bids
- Evaluation procedure
- Contracting to include signing of MOU at the national level

- Respective sites sign contracts with recommended suppliers for each of the lots
- Draw down by respective sites
- Monitoring and evaluation for performance

- Review of past performance
- Preparation for next contracting period



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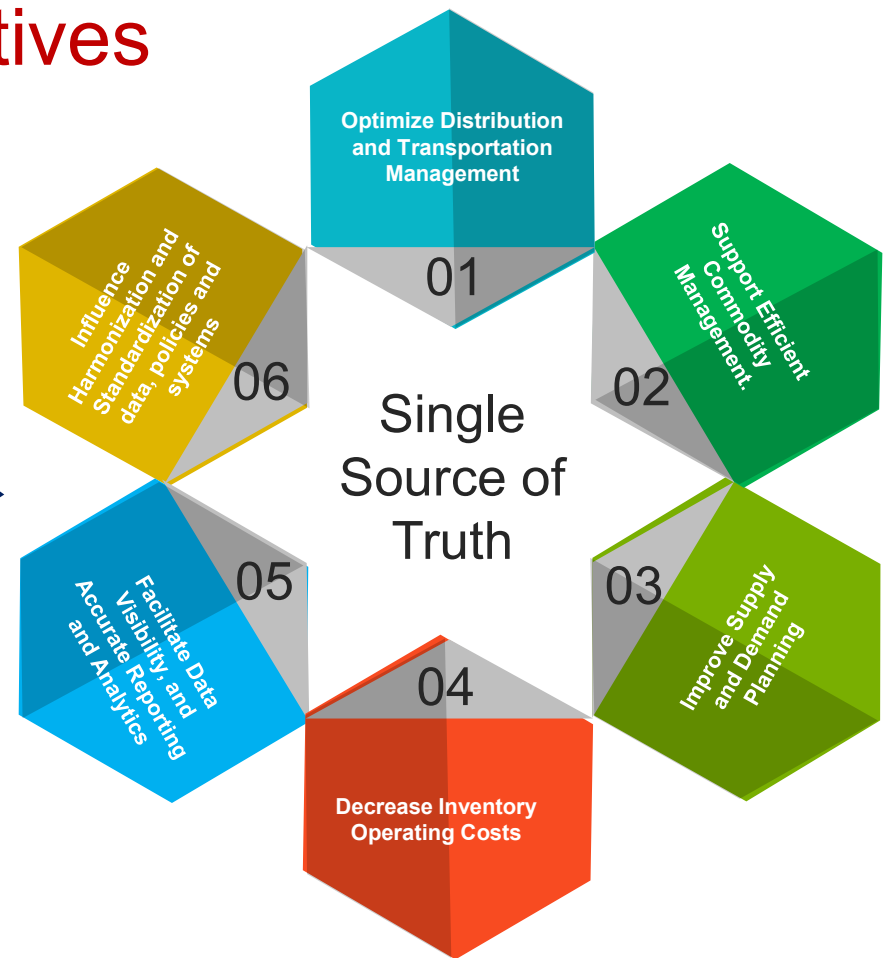
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End-to-End Logistics Management System – Goal and Objectives

Overarching Mission

Design, build, and implement a computerized Logistics Management Information System that collects, records, and reports logistics data, providing decision-makers throughout the supply chain with data that is accurate, timely, and appropriate data and ensures the rights of a supply system by delivering the right products the right quantities, in right time, in the right condition, for the right cost and to the right place



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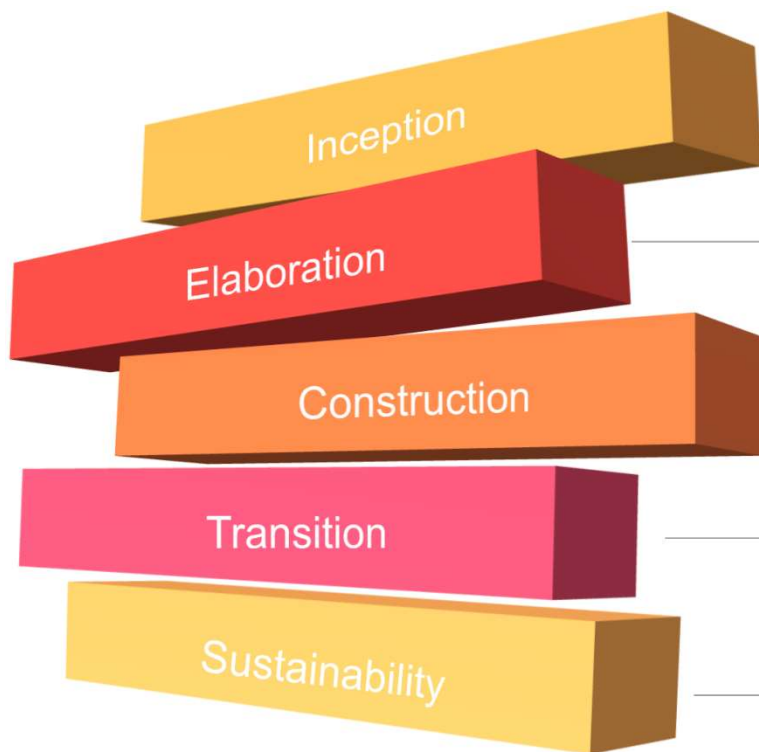


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End-to-End LMIS Implementation Approach



Inception Phase. The inception phase formed the foundation of the entire GhiLMIS project. It included establishment of the project team, the set-up of the development and implementation environment and the clarification of the project scope.

Elaboration Phase. The elaboration phase included analysis of the GhiLMIS domain, establishment of a sound architectural foundation, development of the detailed project plan, change management plan, and elimination the highest risk elements of the LMIS project.

Construction Phase. The construction phase, integrated all the remaining components and application features into the GhiLMIS. All features that loaded in the GhiLMIS will be thoroughly tested.

Transition Phase. The transition phase initiated the transition of the GhiLMIS solution to the users. The transition phase was entered when the system baseline went through all the necessary testing and validated to be operational at the user level.

Sustainability Phase. This phase will focus on ensuring that the GhiLMIS is as productive as required and that the MoH/GHS have the capability to sustain the solution.



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End-to-End Logistics Management System Functionality

Contracts Management

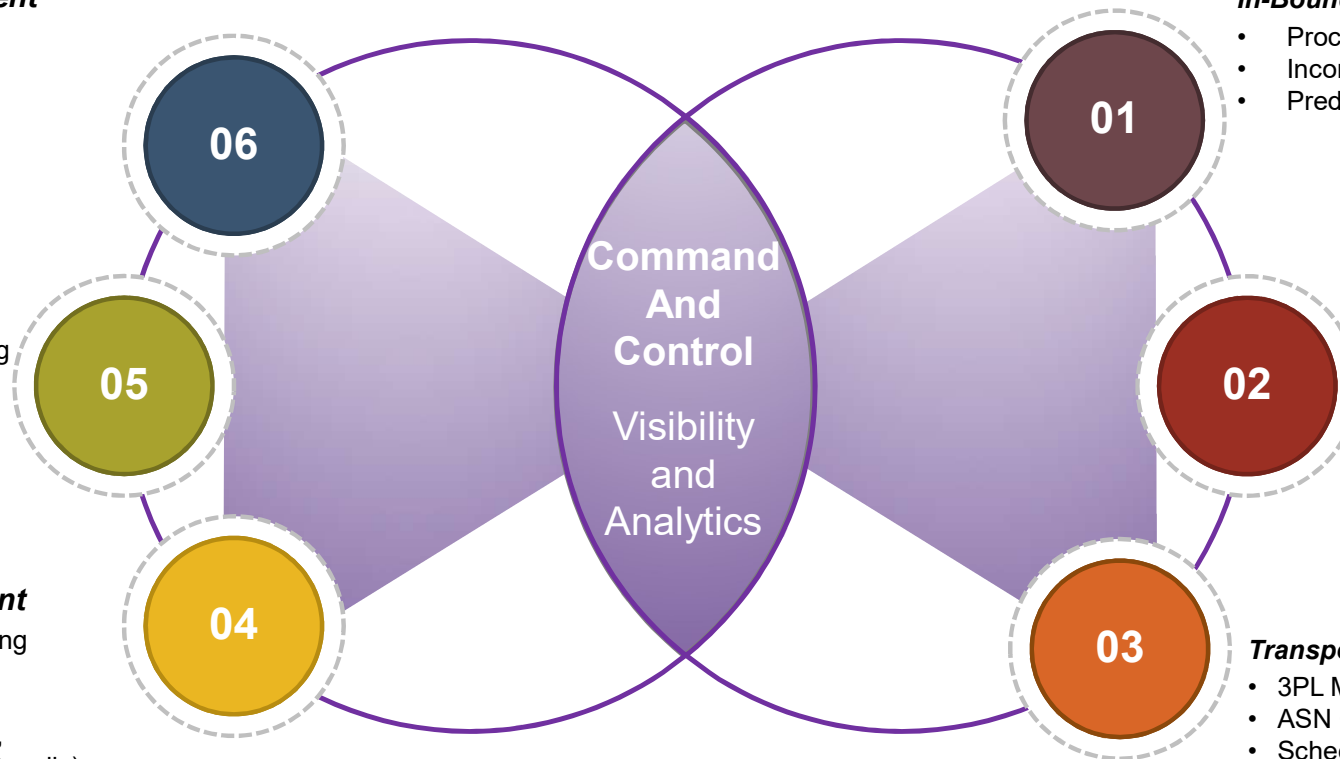
- Carrier Contracts
- Fleet Management
- Invoicing Policies
- Rate Determination

Order Management

- Replenishment Planning
- Order Creation
- Order Collaboration
- Order Fulfillment

Inventory Management

- Lot Management/Tracking
- Issues and Adjustments
- Inventory Transactions (Consumption, Transfer, Wastage, Quarantine, Recalls)



In-Bound Insights

- Procurement Plans
- Incoming Shipments
- Predictive Analytics

Warehouse Management

- Logical warehouse setup including management policies like Activity Based Costing (ABC)
- Capacity Management
- Receipt and Put Away
- Pick and Pack
- Pick List Generation
- Stock Taking

Transportation Management

- 3PL Management
- ASN Generation
- Scheduling and Route Optimization
- Movement/Load Consolidation



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End-to-End Logistics Management System Benefits

End-to-End Visibility

- Simplifies processes and reduces lead times and increases visibility
- Real-time inventory and order visibility (daily vs. monthly)

Accurate Quantification and Demand Planning

- Captures all critical elements of demand and supply planning
- Predictive and historic analytics



Data Integrity

- Elimination of redundant data entry and quality data integrity
- Harmonized data and centralized data management
- Compliant with GS1 data standards

Low Inventory Operation Costs

- Reduction in cycle time, LOE, expiries, and stockouts
- Optimized transportation management
- Enterprise-wide batch inventory control and expiry management

Increased Management Efficiencies

- Single system capable of efficiently managing multiple supply, demand, and logistics transactions
- Improved agility level - flexible and responsive to meet the changing supply chain requirements
- Proactive alerting and notification of important supply chain events



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Distribution Optimization – Goal and Objectives



Address MoH Vision for Commodity Distribution

Develop a distribution system that reflects the MOH’s vision for the supply chain, providing efficient and reliable commodity support to public sector health facilities.

Effective Distribution System

Ensure that the distribution system is predictable, reliable, and responsive, with quantity decisions being made from user data.

Warehouse Management Optimization

Optimize warehouse management processes and inventory holding operations

Product Integrity

Ensure product integrity and safety of health commodities during transit

Operational Efficiencies

Utilize effective distribution strategy to increase operational efficiencies and effective utilization of available resources



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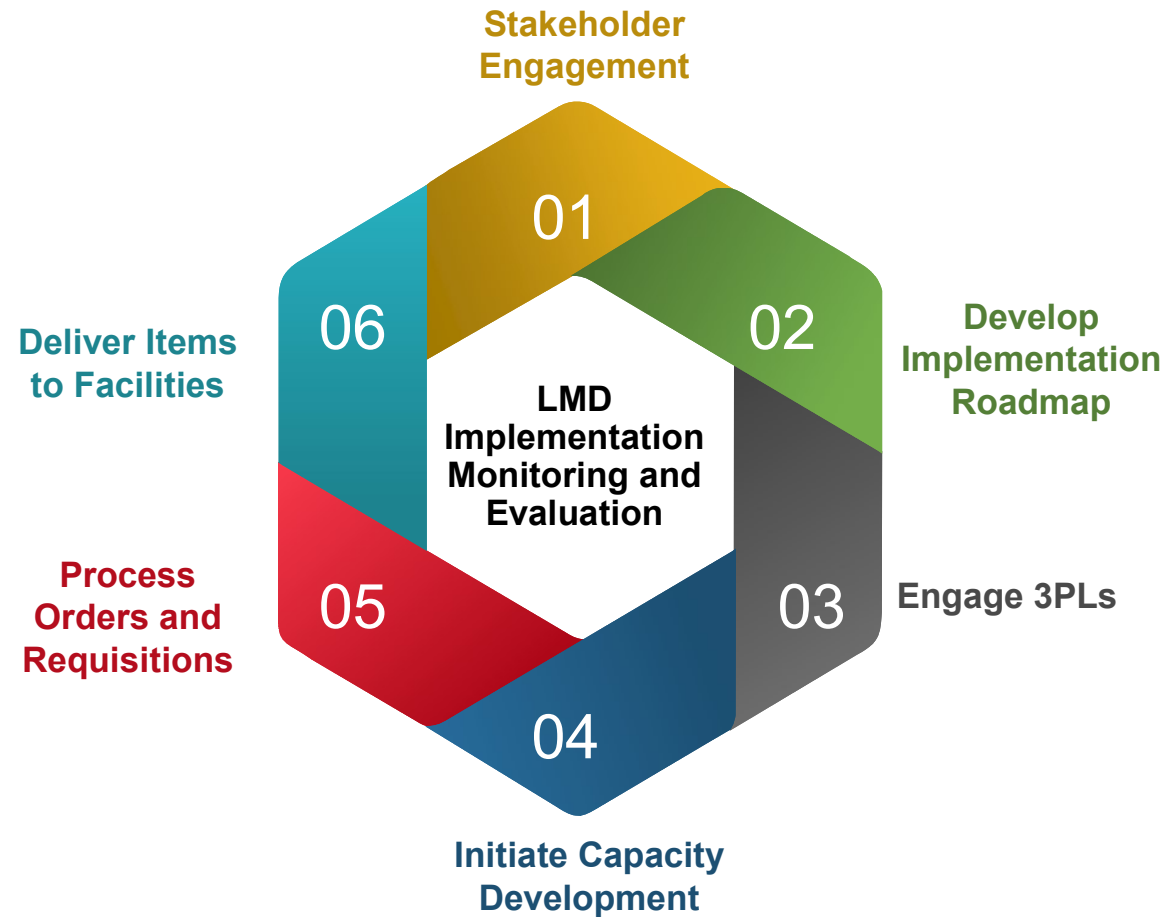
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Distribution Optimization (LMD) – Implementation Approach



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Ghana SC Reforms – Critical Success Factors

- Existence of Supply Chain Master Plan (SCMP - developed in 2012 and revised in 2015)
- Partnership, collaboration and alignment among partners
- CMS fire agreement
- Highly and skilled and competent staff
- Implementation approach
- Strong private sector in country (LMD)



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Collaboration and Synergies Among Stakeholders



Coalition of Stakeholders in Service Delivery

- Key development and implementing partners have been identified
- Embraced Public Private Partnerships in interventions like LMD and LMIS
- Ensured that all key stakeholders contribute to the design of all interventions and implementation strategies
- Leverage and inclusion, and constructive engagement approach to achieve a broad common purpose
- Collaborative approach and resource leverage between USAID and the Global Fund

Find Balance Among Stakeholders

- Leveraged each key stakeholder strength to develop a balanced implementation synergy
- Stakeholders roles are clearly defined from consultation, decision making to shared and transferred responsibility

Realization Strategy

- Evaluation of stakeholder contributions
- Design process for collaboration
- Development of a shared agenda, like LMD implementation regional segmentation
- Constituency Building



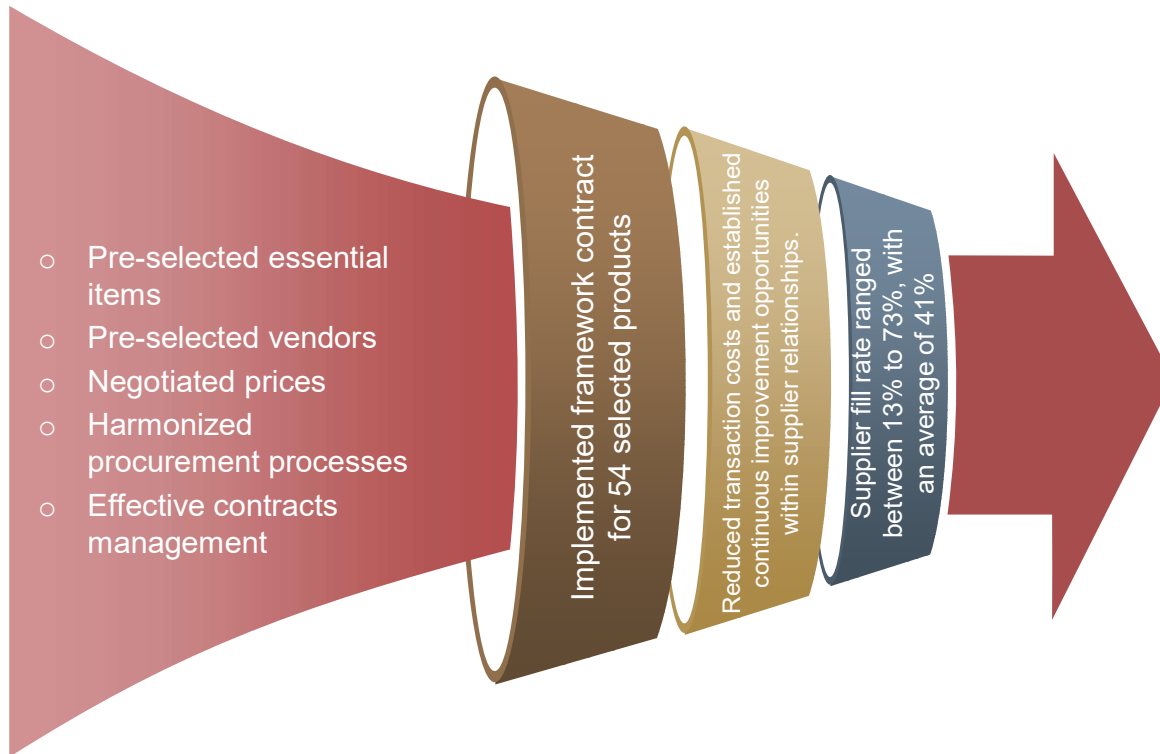
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Procurement Efficiency (Framework Contracting) - Impacts



- Pre-competed route to the local market providing essential medicines to centralize procurement spend
- Shared procurement expertise, resource, risk, and contract management
- Reduced administrative burden
- Achieved economies of scale through the pooling of resources
- Leveraged framework contracting to procure commodities at reduced prices
- Reduction in the level of effort expended for procurement function at the RMSs and the teaching hospitals
- Security of supply



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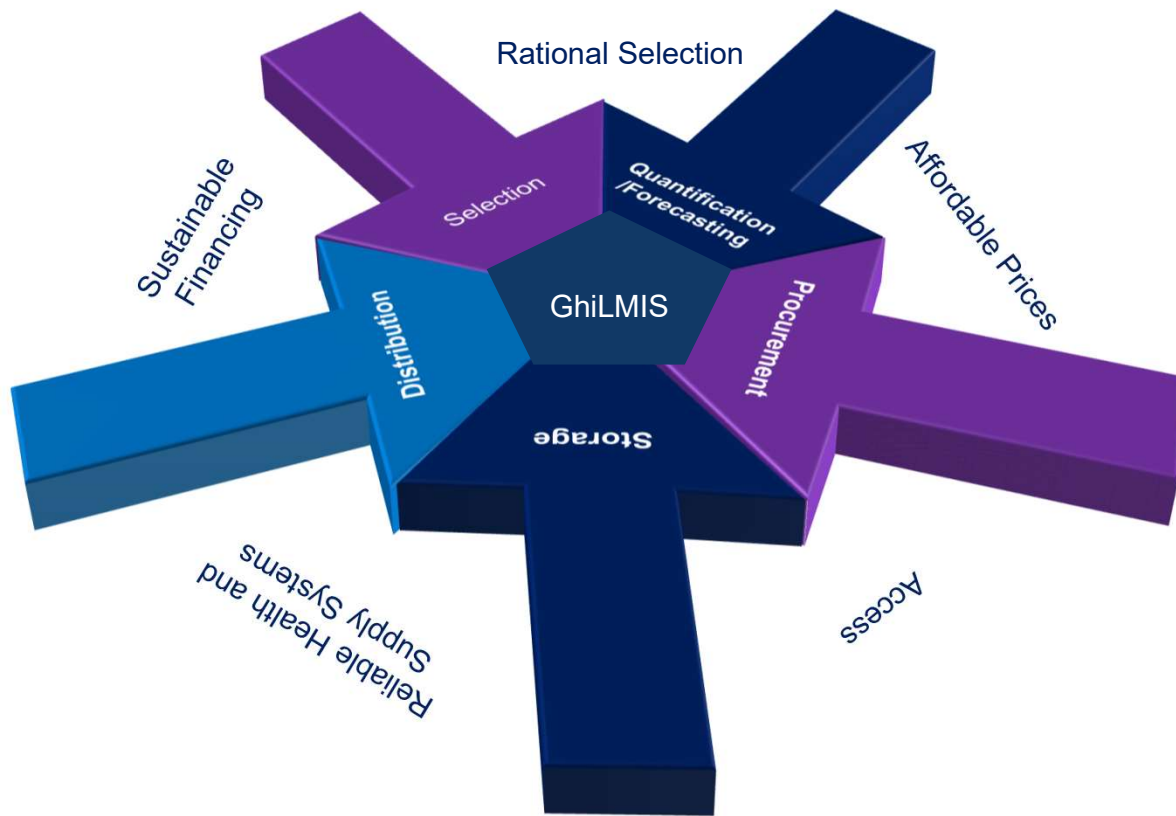
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End-to-End Logistics Management System Impacts

Impacts of GhiLMIS will include:

- Providing digital eHealth solution to optimize in-country supply chain, supporting rational selection of medicines, and providing quality data leading to better-informed decisions
- Enhancing visibility leading to proactive actions and efficiencies in Ghana value chain, resulting in minimization of stockouts, expiries, and reduction in cost of health products
- Synchronization of Ghana supply chain processes through the tracking of flows of goods and information
- Management of these interrelations will significantly reduce inventory operating costs, ensuring effective allocation and utilization of resources, and increasing easy accessibility to medicines



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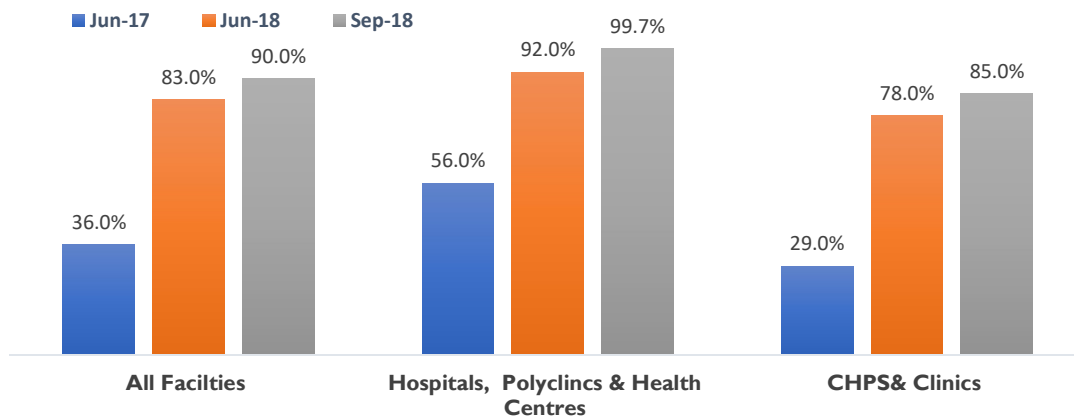
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Distribution Optimization (LMD) Impacts

% Facilities reached through LMD at least once 2017 & 2018



Benefits

- Accountability
- Optimized distribution routes
- Leveraging private sector capacity
- Improved order process management
- Enhanced service delivery
- Streamlined planning for commodity management
- Insurance cover for commodities in-transit
- Improved product availability at service delivery point

- Implementation in all 10 regions of the country (USAID-4, GF-4, RMS Own Resource-2)
- Validation of LMD conducted November 2018 revealed 99.7% of hospitals, polyclinics, and health centers had been reached at least once
- 85% of CHPS and clinics have been reached at least once since the implementation of LMD



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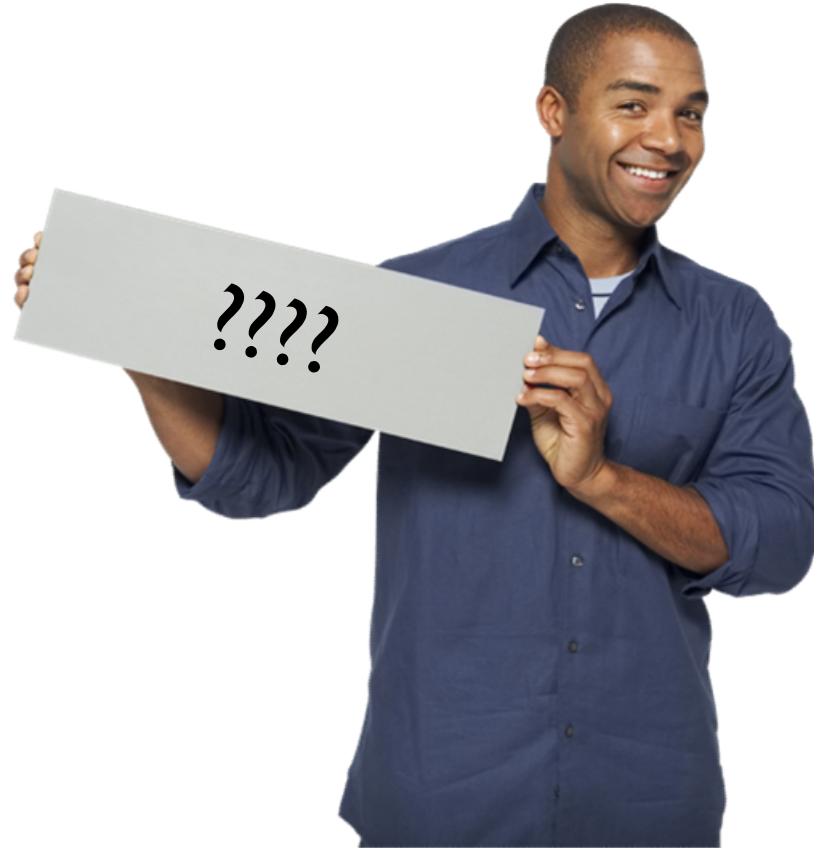
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Questions



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