Integrating Technology Innovations Improves Access to Health Commodities in Tanzania



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JSI: Over 30 years of experience in health supply chain management (SCM)



Logistics projects in Africa, Asia, Latin America, the Caribbean, Eastern Europe, and Eurasia.

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Have won over 20 SCM projects 2015 alone. Portfolio of over 125 SCM projects in over 100 countries over three decades.



From end-to-end: Working along the supply chain from manufacturers to beneficiaries—the women, men, and children in every community who have a right to better health.



Integrated approach: Building strong relationships with the commercial sector, civil society, academia, and the donor & multilateral community.

Major clients include:

- •Bill and Melinda Gates Foundation
- •Department of Defense
- •Gavi, the Vaccine Alliance
- •Global Fund to Fight AIDS,
- Tuberculosis and Malaria
- •United States Agency for International Development
- •United Nations Children's Fund
- United Nations Population Fund
- World Health Organization
- •Other country governments,

NGO's and private companies. John Snow, Inc.





A high performing supply chain:

- Links funders and suppliers to customers – better links demand with supply
- May have many separate product streams, levels and functions but coordinated/managed as one supply chain
- 3. Better serves customers
- 4. Facilitates the six rights





Supply chain evolution



- · No formal logistics roles and processes
- Fragmented efforts across actors, who have limited understanding of the supply chain



- Standardized systems designed and implemented
- Logistics roles and processes defined and followed
- · Sufficient resources mobilized



- People, functions, levels and entities linked under an interconnected organization
- Supply chain managers are empowered, using information to manage the system and align actors

Moving from Ad Hoc to Organized:

- Conduct system assessment, using process mapping, network optimization and costing analysis
- Undertake system design for functions and products using segmentation analysis
- Roll out logistics system by conducting training on developed SOPs and supervision guidelines
- Conduct regular quantification of commodity needs

Moving from Organized to Integrated:

- Establish logistics management units and technical working groups
- · Professionalize supply chain managers
- · Optimize performance with analysis and tools
- Strengthen automated processes for data collection and sharing
- Develop performance management indicators and incentives



The role of data visibility

Organized

Data is collected and reported

Integrated

Data and high performing teams drive:

- SC agility and responsiveness
- Decision-making and data use
- Process optimization and improvement
- Collaboration with stakeholders
- Strategy development



Integrated Logistics System





Challenges with data management





System 1 – The ILSGateway



SMS available throughout every phone network provider across Tanzania

 $(((\mathbf{\Phi})))$

Health worker receives text message on their personal mobile phone requesting the amount of stock-on-hand at the facility.



Health worker sends stock-on-hand information to a toll-free short code, in either English or Swahili.

Reporting Rate of Stock-on-Hand Reporting Rate of Rate

Accessible through the Internet, the dashboard displays the latest data collected via SMS, enhancing data visibility to support logistics decisionmaking.







System 2 – Epicor 9 ERP

The need for a new ERP arose out of MSD's desire to:

- Improve visibility, traceability of stock movements
- Eliminate waste
- Handle business growth
- Improve management of third party goods
- Understand and meet customer needs





Impact of Epicor 9 ERP

- Stock management has significantly improved
- Expiries have been reduced
- Product traceability by batch has increased
- System availability at zonal stores improved
- Inventory accuracy have improved



System 3 – eLMIS

An effective and sustainable electronic logistics management information system (eLMIS) should be **user friendly** and facilitate that **adequate quality and quantities** of health commodities are always **available** at the point of service to **meet patient demand**.

The eLMIS must provide integrated access to:

Accurate, timely and routine consumption data

Real-time **logistics management capabilities** covering point of origin to point of consumption

Demand **forecasting**, **capacity planning** & **modeling** based on consumption



eLMIS Impact





Generates cost savings by eliminating books and couriers



Improves data quality and timeliness



Reduces workload for health facility staff and logisticians



Flexibility to adapt to changes in existing and future logistics systems



Simplifies data gathering, reporting, and authorization through commodity integration



Increases accountability by improving data visibility for managers



Provides access to real time and historical data for more informed decisionmaking



Developed to interface with other e-tools supporting health initiatives







Better decisions regarding stock levels

Reduced stockouts

Better health outcomes

Integrating systems to promote end to end visibility







Logistics Management Unit

The LMU is focused on **increasing visibility** of data up and down the supply chain, **coordinating** the supply chain activities among different partners, and **building capacity** in supply chain management of relevant staff.

Components of the LMU:

- Logistics Data Management
- Quantification
- Monitoring & Evaluation

- Coordination & Collaboration
- Intervention Planning
- Supervision & Capacity Building



Logistics Management Unit





Results



Timeliness of stock-on-hand reporting rate increased to 88 percent through ILSGateway, compared to 45 percent ILS reporting rate in 2009



Epicor ERP and related streamlined processes reduced the time required by MSD for annual stocktaking from 30 to 17 days



These systems have collectively increased accountability and transparency



Integrated systems **empower decision makers** with more focused data driven management



Better visibility is a key driver for improved system performance

Reduced stock outs on day of visit at SDPs indicates better ordering practices



Baseline Round 2 Preliminary



Discussion

- Increased prevalence of vertical technologies in the global health context, but most technologies do not "talk" to each other.
- Integrated systems are essential to improve whole-system visibility and analysis, to avoid redundant systems, and to reduce technology fragmentation.
- Countries must begin to look at the digital health space as a holistic ecosystem and begin designing and building a digital health enterprise architecture based on broad-based business processes.



Conclusion

Tanzania's **integrated** digital ecosystem represents a new standard of **enterpriselevel** integration for **end-to-end supply chain visibility.**

> This has enabled more sophisticated analysis of data for operational and strategic decision making and continuous improvement by the Logistics Management Unit in the MOHSW.











Global health Supply Chains. Dakar Senegal 2015