
GLOBAL
HEALTH
SUPPLY CHAIN SUMMIT

Strong systems save lives

JSI improves health logistics in Africa, Asia, Latin America, the Caribbean, Eastern Europe, and Eurasia.

We strengthen supply chains end-to-end by building systems that connect manufacturers, funders, IT experts, health ministries, pharmacies and communities.

JSI creates sustainable systems that draw on >30 years of strong relationships with country governments, commercial sector, civil society, academia, and the donor & multilateral communities.

We are leading the way on more than **30 current SCM projects**, with $3B+ of health procurement experience on 125 SCM projects implemented in >100 countries.

We are passionate about using our public health and supply chain expertise to help our partners eradicate malaria, increase access to contraceptives, improve routine immunization

Early lessons in adapting *Visibility and Analytics Networks* (VAN) to improve health supply chain performance

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John Snow, Inc.

Overview

- Understanding of an Integrated Supply Chain
- What is a VAN?
- Definition of a Control Tower
- The problem we are trying to solve
- Lessons learned from VAN early adopter countries

Integrated supply chains demonstrate six key attributes:

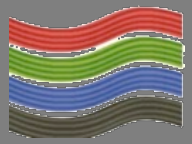
- Clarity of roles and responsibilities (people)
- Streamlined processes
- Visibility of logistics information (technology)
- Agility
- Trust and collaboration
- Alignment of objectives

Why Data Visibility is So Critical for Supply Chain Evolution

AD HOC

LOGISTICS DATA ARE NOT AVAILABLE OR SHARED

ORGANIZED



ESSENTIAL LOGISTICS DATA ARE COLLECTED AND REPORTED

INTEGRATED

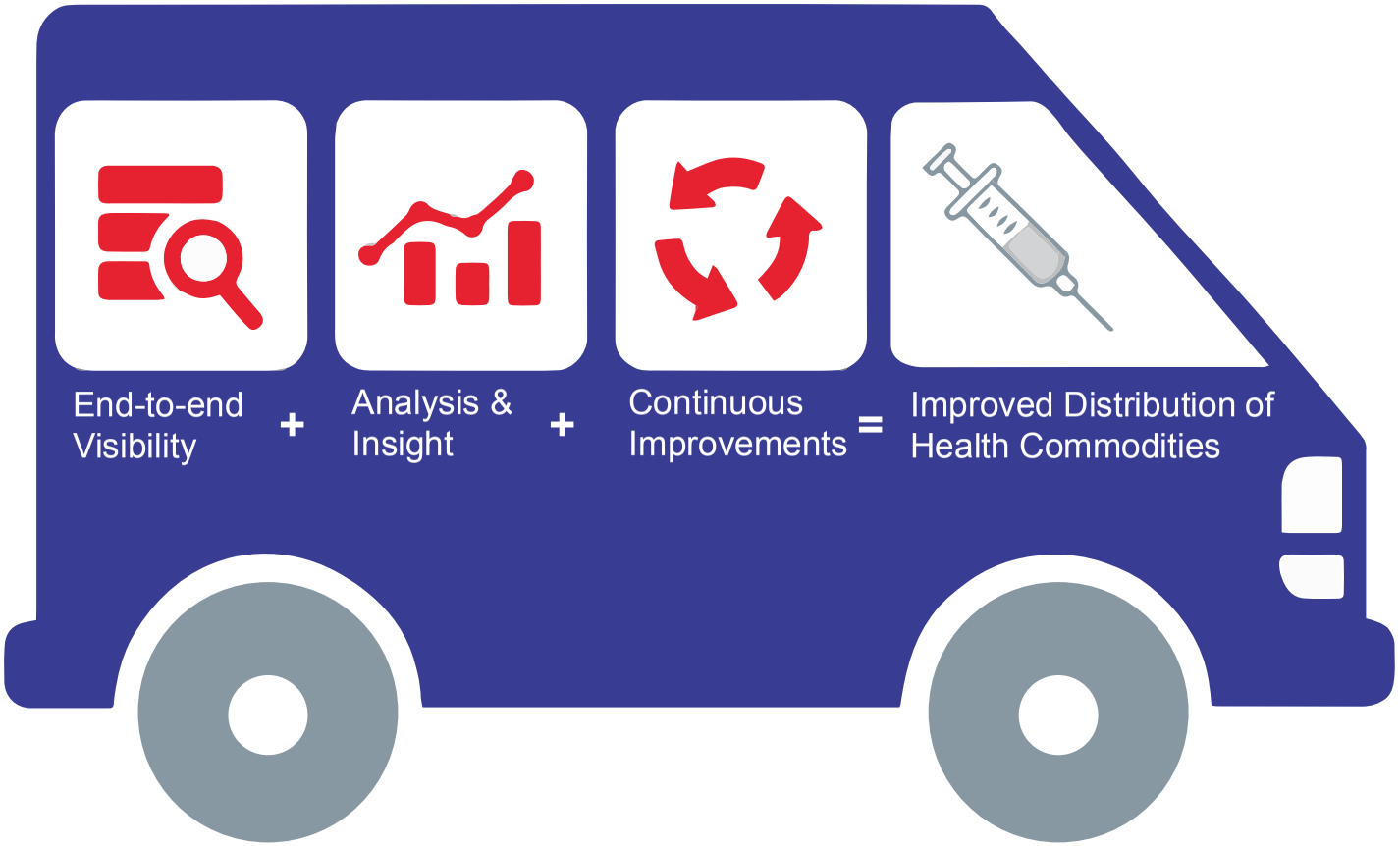
SUPPLY AND DEMAND INFORMATION ARE VISIBLE THROUGHOUT THE SUPPLY CHAIN AND USED TO MAKE DECISIONS

- Data drives supply chain agility and responsiveness to changes in the environment, marketplace, and customer needs
- High performing teams and empowered supply chain managers use data
- Data informs process optimization and continuous improvement
- Data visibility enables effective collaboration and engenders trust among supply chain partners
- Data provides evidence to guide comprehensive supply chain strategies and to measure results

Implementing a VAN approach can help catapult the health supply chain to higher levels of performance and closer to an integrated state

What is a VAN?

A visibility & analytics network is a commercial sector approach adapted for public health.



End-to-end Visiblity

What is happening now?

Data Aggregation from multiple sources bringing end-to-end, real-time visibility

+

Analysis & Insight

Why is this Happening? What could happen next? How can we improve?

Visualization, Business Intelligence and predictive modeling

+

Continuous Improvement

Let's make it happen.

Alerting, conditional actions, workflows out to internal and external recipients.

The Control Tower is a concept built on people, processes, and technology for improved visibility that improves supply chain across silos and enables coordinated decision-making.

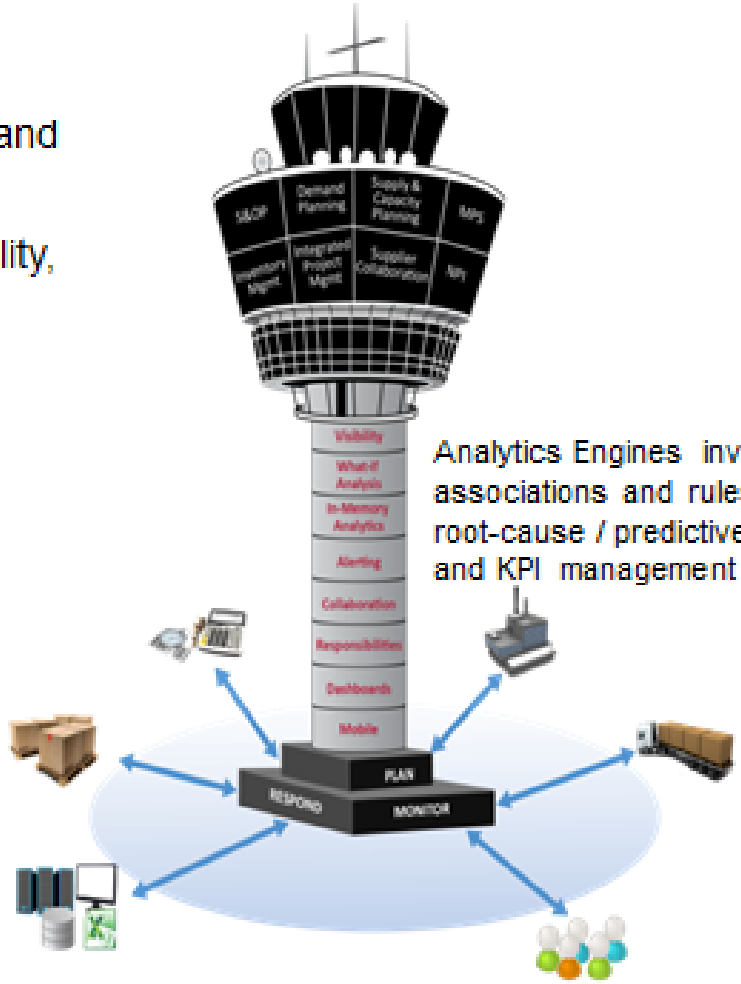
Control Tower Definition

A Control Tower is…

- …a set of **supply chain capabilities** built on people, process, and technology
- …Organized as a **centralized shared service** to improve visibility, enable analysis, and focus on functional improvements
- …**agnostic to the systems** used to manage data
- …comprised of two key technology components: **Integration Platforms and Analytics Engines**

A Control Tower can help public sector by…

- …being the **first point of integration** in improving visibility across silos without physically integrating supply chains
- …driving **collaboration and integration** across programs
- …providing MoH with oversight and ownership of the supply chain without being involved in the day-to-day operations
- …being an enabler for a **data-driven culture** focused on continuous improvement
- …identifying and **improving data gaps and quality** issues
- …being a source of **cost savings / revenue for the government**



Analytics Engines involve data associations and rules for quick root-cause / predictive analysis and KPI management

Integration platforms harmonize data across disparate data management systems (ERP, LMIS, HMIS, etc.) and organizations (Suppliers, 3PL, Mfg., etc)

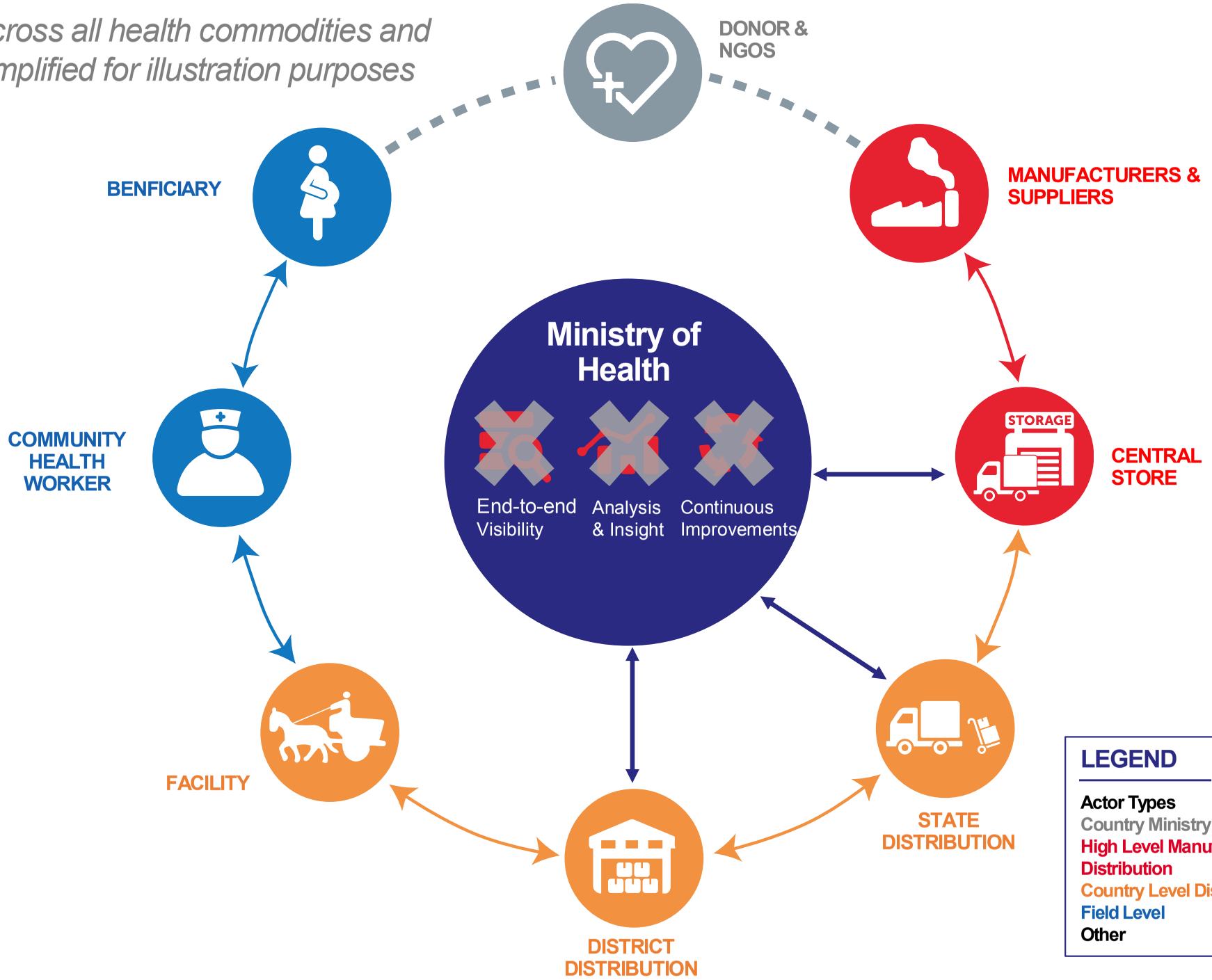
The Problem

Too much data, poorly organized

Too little definition of what we need to know and do

The CURRENT State of Product Data Flow

Across all health commodities and simplified for illustration purposes

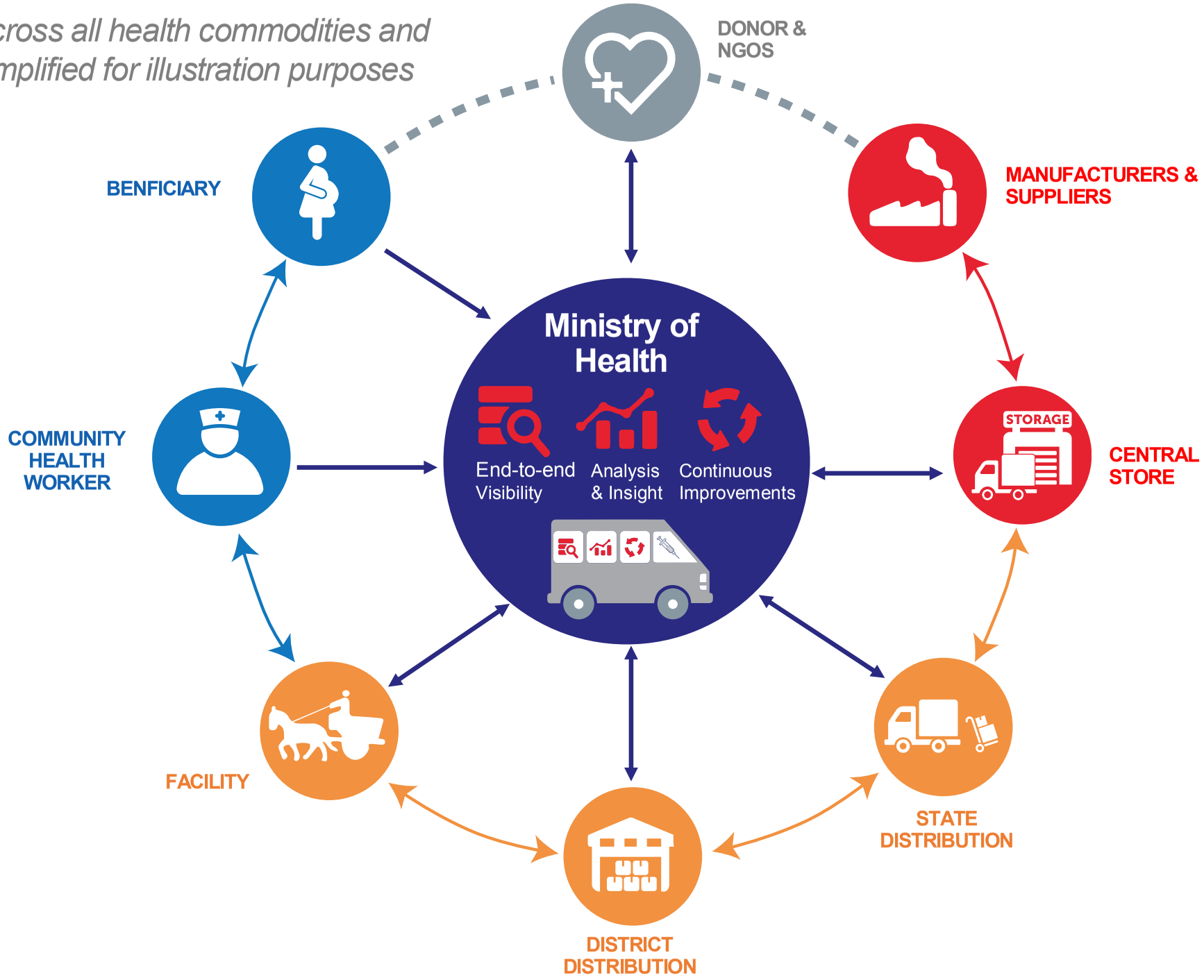


LEGEND

Actor Types
Country Ministry of Health
High Level Manufacturing & Distribution
Country Level Distribution
Field Level
Other

The FUTURE State of Product Data Flow

Across all health commodities and simplified for illustration purposes



People of a VAN

What is done? → What Decisions? → When/How Often? → When does it?

Operations Team

CT Ops Lead
- KPI reporting
- Team coordination
- Day to day SC orchestration

Warehousing
- Daily stocks monitoring
- Risks assessment
- Stock policy mgt.
- KPIs monitoring

Demand Planner
- Forecasting
- Coordination with programs for demand
- KPI monitoring

Data Mgt. Lead
- Data gaps/follow ups
- Data policy mgt.
- Master Data mgt.
- KPIs monitoring

Distribution Planner
- Scheduling
- Supplier coordination
- Track and trace
- KPIs monitoring

Analytics and Improvement Team

Analytics & C.I. Lead
- C.I. business case development
- Team coordination
- Value mgt.

Special Projects
- Project mgt.
- Coordination with SC Ops, programs, and other stakeholders

SC Perf. Analyst
- Root Cause/What if
- Support CT Ops team
- Improvement opportunities

Distribution Planner
- Scheduling
- Supplier coordination
- Track and trace
- KPIs monitoring

Early Adopters, Early Lessons

COUNTRY VAN EXPERIENCE

TANZANIA & ZAMBIA

LMUs and eLMIS form the backbone

Overview

- LMUs established within MSD (TZ) / MSL (ZM)
- Use data from eLMIS for operational decisions
  - Replenishment to SDP
  - Positioning stock at facilities
  - Upstream supply planning
- Monitor KPIs of routine performance using the eLMIS:
  - Reporting rates
  - Stock status
  - Expiry risk, etc.

Lessons Learned

- Clear focus on operational decisions, demand planning, supply planning, and performance
- Need for clarity on routine processes that promote a culture of data use:
  - KPI review meetings
  - KPI ownership & accountability
  - Root case analysis, and intervention, and monitoring intervention outcomes.

ETHIOPIA

eLMIS forms the backbone

Overview

- HCMIS system (eLMIS) is implemented across GOE (PFSA) warehouse network (center plus 17 regional hubs)
- Live transactional data accessible through dashboards & being used for both strategic (e.g. forecasting) and operational (e.g. replenishment) decision-making
- Upstream supplier data being integrated; plans to test capture of downstream facility data using their version of HCMIS (600 of the largest health facilities)

Lessons Learned

- People and underlying business processes are far more important than “technology”
- More data requires shift in business culture – takes time
- More data in many cases makes people jobs more difficult, in all cases makes their jobs different

KENYA

VAN Light: Setting up County IMPACT Teams

Overview

- **Technology**: DHIS2 serves as MOH's eLMIS for FP, vaccines. No ready to use dashboards with data for decision making.
- **Analytics**: Extract, analyze, visualize 5-7 indicators for use on a monthly cycle by counties
- **Processes**: Use a structured process for teams to analyze, use data for action
- **People**: Teach key county leaders, managers how to use processes for continuous improvement in the FP, vaccine supply chains

Lessons Learned

- Implementing a full VAN will require addressing coordination between levels (devolution)
- Because data is visualized in a usable, actionable way, teams are excited and motivated by the idea of performance monitoring
- Structured processes are a key success factor in teaching teams how to routinely review data and use for root cause analysis, action planning

PAKISTAN

Linking the VAN "Control Tower" with IMPACT Teams and Actionable Data

Overview

- Building a VAN at provincial level (Sindh), with links to IMPACT Teams in three pilot districts
- Vaccine focus to prove the concept
- Uses web-based vLMIS and dashboard

Lessons Learned

- Supply chain knowledge gaps at both levels; all staff need capacity building
- Existing vLMIS dashboards are not user-centered and need to be configured to provide data in actionable format
- VAN and IMPACT Teams need support to interpret the data and identifying root causes

Summary of Initial Findings

- Critical gaps in staff capacity to understand what logistics data is telling them, which limits their ability to use the data for root cause analysis.

- First generation dashboards present a lot of data, but not always the right data in the right format to facilitate analysis and action

- Inadequate understanding of supply chain management is a key issue among the VAN teams.

  – Extensive capacity must be built to ground the teams in relevant supply chain competencies and thereby enable them to see beyond an immediate problem (e.g. resolving a stock out at a health facility) to address underlying system weaknesses (e.g. long lead times or ill-defined resupply processes).

Food for Thought

Consider implementing VANs that go beyond logistics data, to ensure participation of program managers who care about health outcomes and can advocate for logistics investments as a way to achieve those.

Adopting a user centered approach to dashboard design will facilitate consumption of data for analysis and action.

Consider specialized analysts as part of a VAN team that generate data-driven insight to complement dashboard KPIs.

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