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# Achieving End to End Supply Chain Data Visibility through Global Standards

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# Presentation Outline

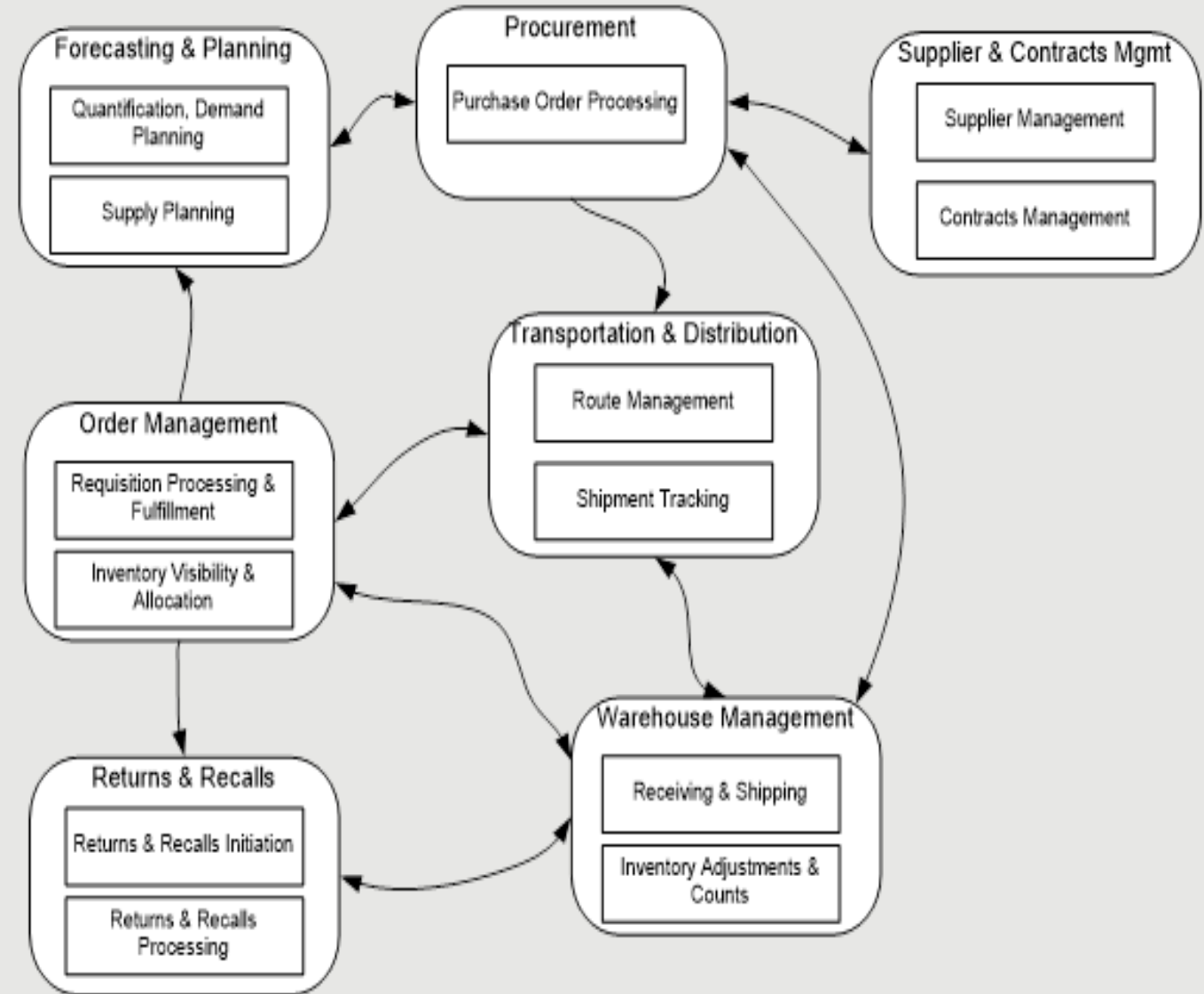
- Trends in public health supply chain information systems
- Foundation for End-to-End Data Visibility and Track & Trace
- Next step in building the foundation
  - Solving Product Master issues (GDSN)
- GDSN Adoption by USAID's GHSC-PSM
- Last mile challenges

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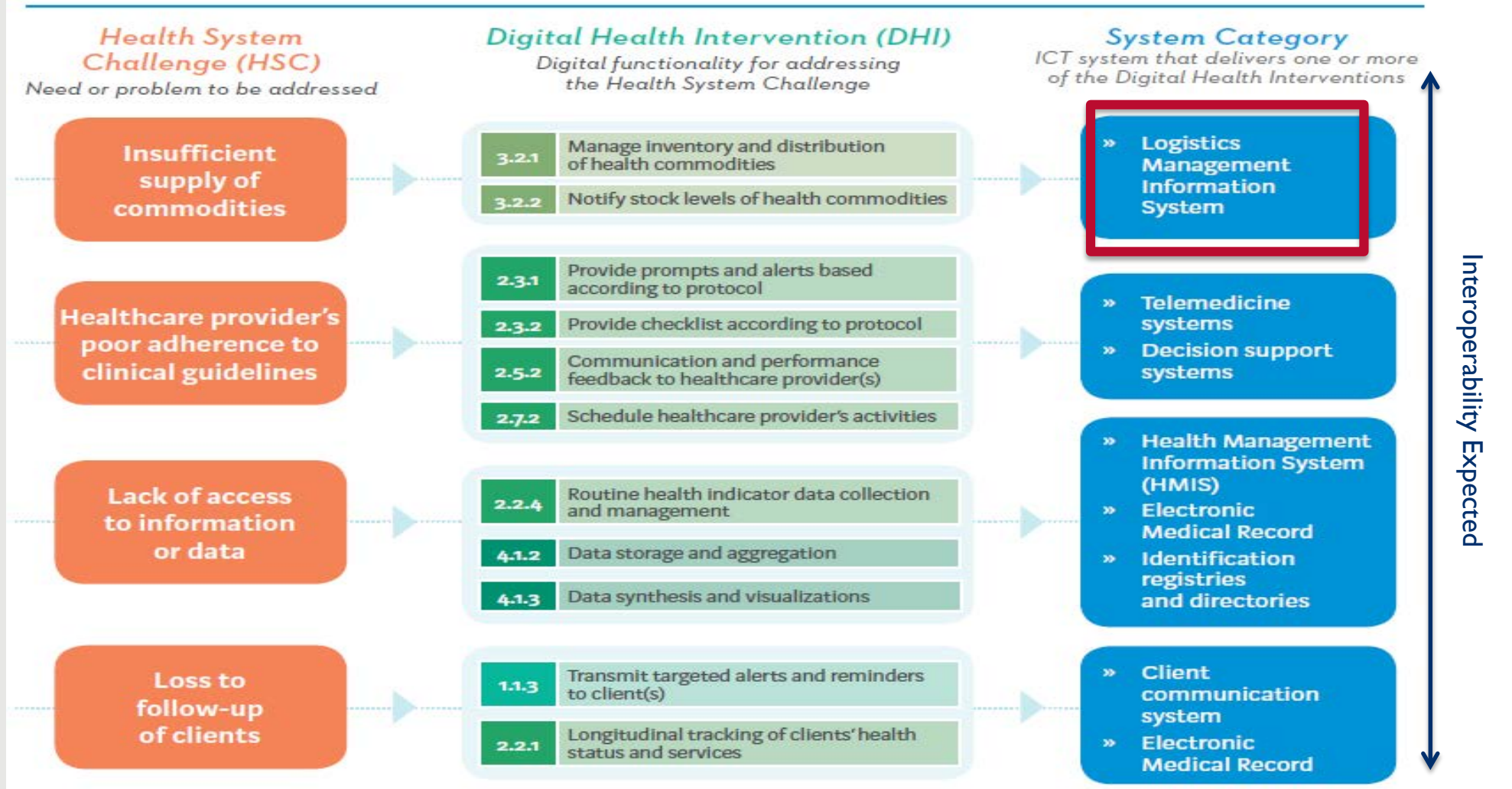
# Supply Chain Information Systems Are Increasingly Complex

- Moving from reporting to transactional.
- Expanded functionality to cover various supply chain areas (Procurement, FASP, Order Management, Contracts management and logistics)
- Transitioning from one system to multiple systems crossing multiple admin domains (CMS, MOH, NRA, custom, suppliers, donors)
- Major issues with data quality



# Supply Chain Information Systems Are A Component of Digital Health Interventions

**FIGURE 1. LINKAGES ACROSS HEALTH SYSTEM CHALLENGES, DIGITAL HEALTH INTERVENTIONS, AND SYSTEM CATEGORIES**



# Increased need for data visibility, analytics and data driven decisions – Control Tower (Visibility and Analytics Networks (VAN))

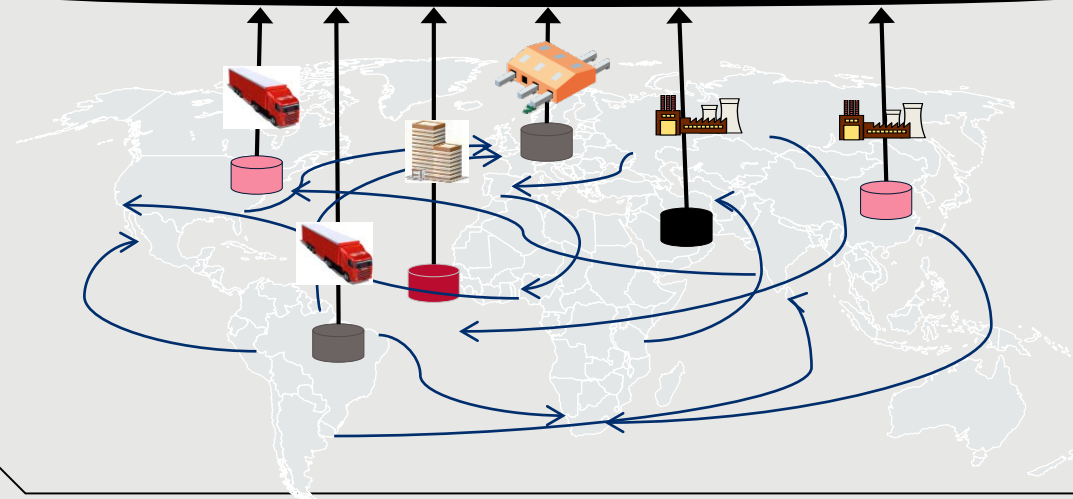
## Global Visibility & Analytics Networks



CENTRALIZED SUPPLY CHAIN DECISION-MAKING

## Analytics Engines

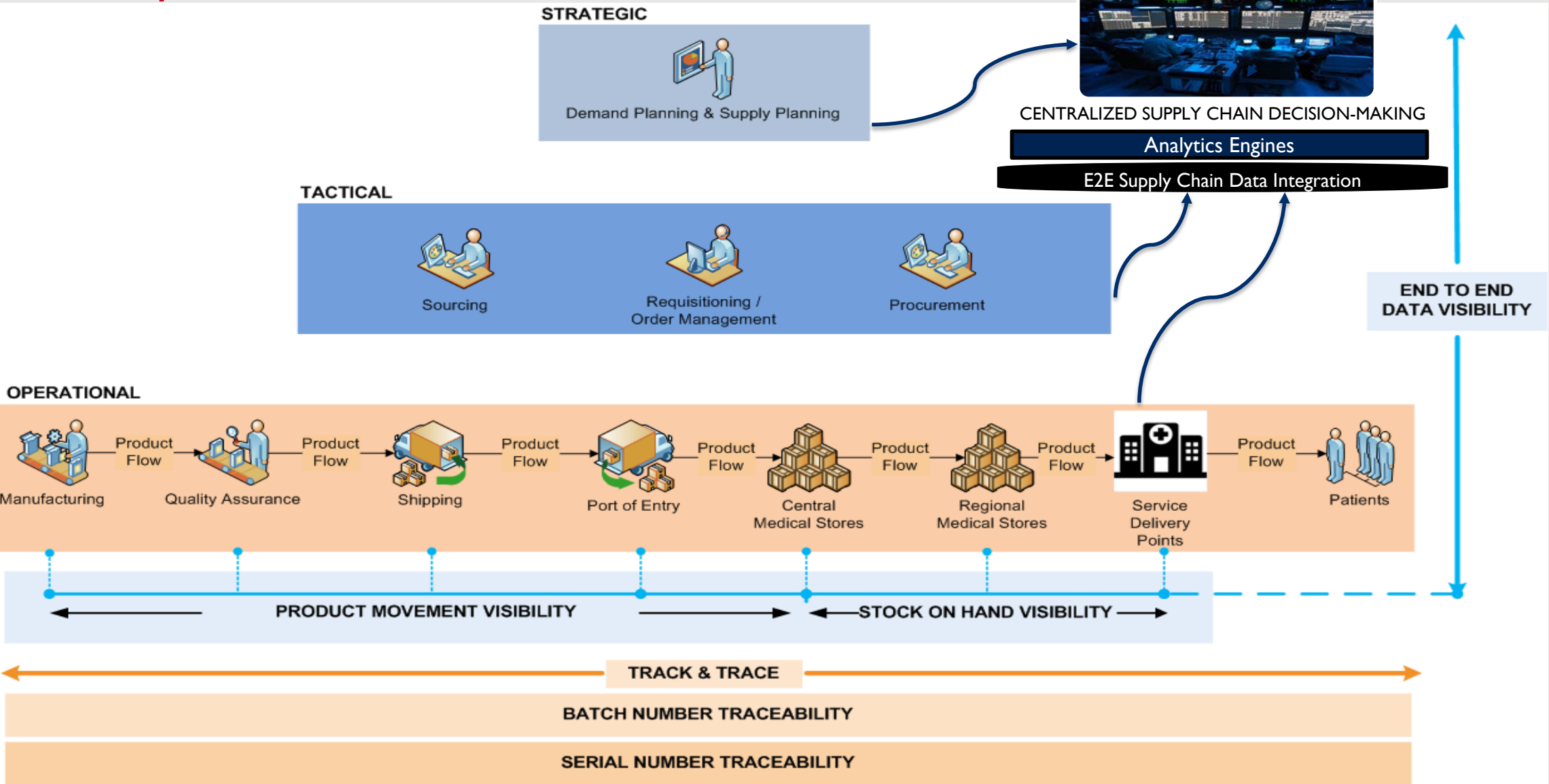
E2E Supply Chain Data Integration



# Challenges

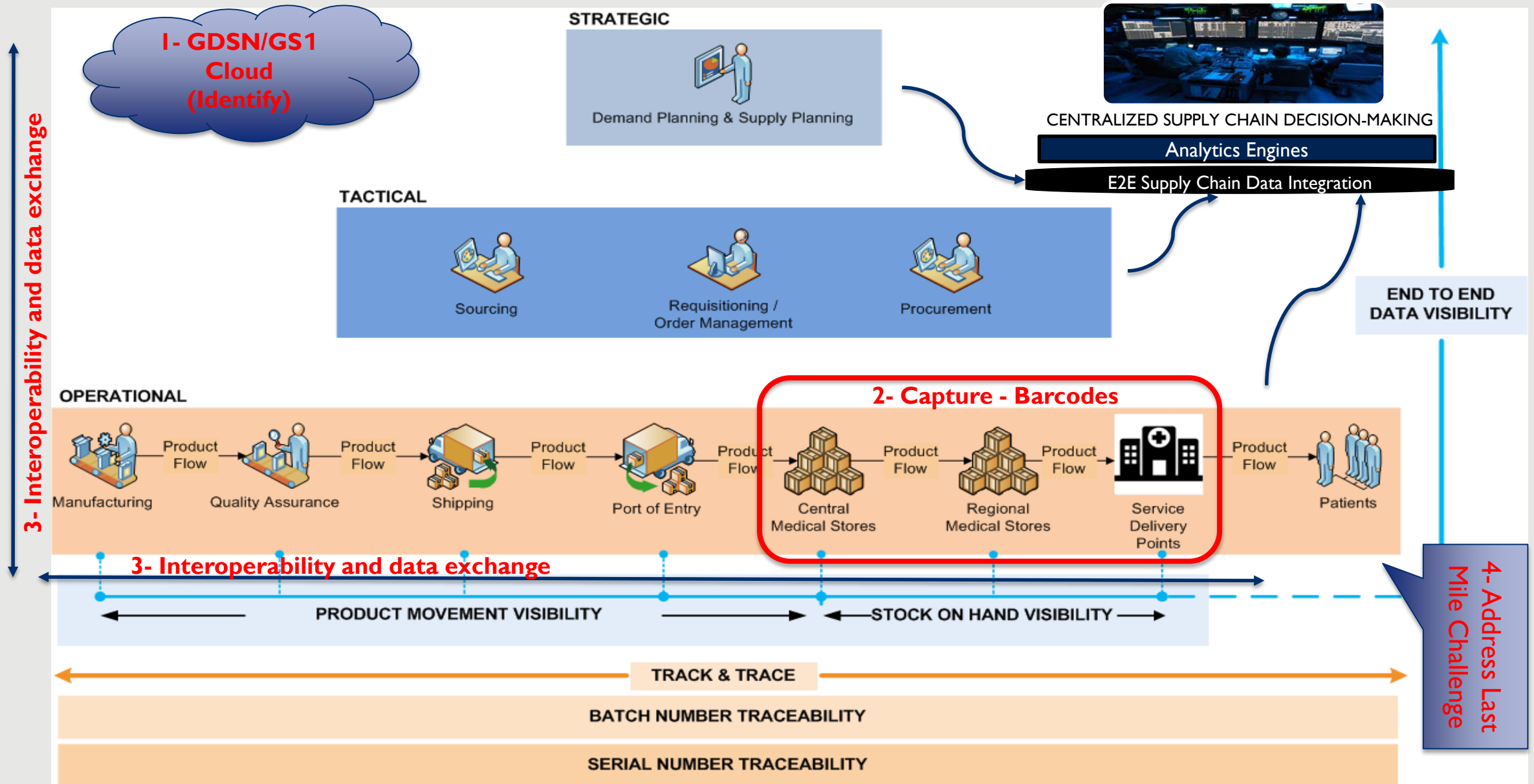
- Major challenges are facing the current country supply chain information systems implementation:
  - Master Data Management
  - Data Quality
  - Interoperability
- And there is a need for a new foundation to achieve end-to-end data visibility or track and trace.

# End-to-End Data Visibility and Track and Trace is increasingly complex and requires a new foundation





# Global Standards Need to be the foundation for E2E Visibility and Track & Trace



# GSI provides the required foundation for Identification, Capture and Data Sharing

## Identify: GS1 Standards for Identification

GLN Global Location Number    GTIN Global Trade Item Number    SSCC Serial Shipping Container Code    GRAI Global Returnable Asset Identifier    GIAI Global Individual Asset Identifier    GSRN Global Service Relation Number



## Capture: GS1 Standards for Barcodes & EPC/RFID

### GS1 Barcodes



### GS1 EPC/RFID

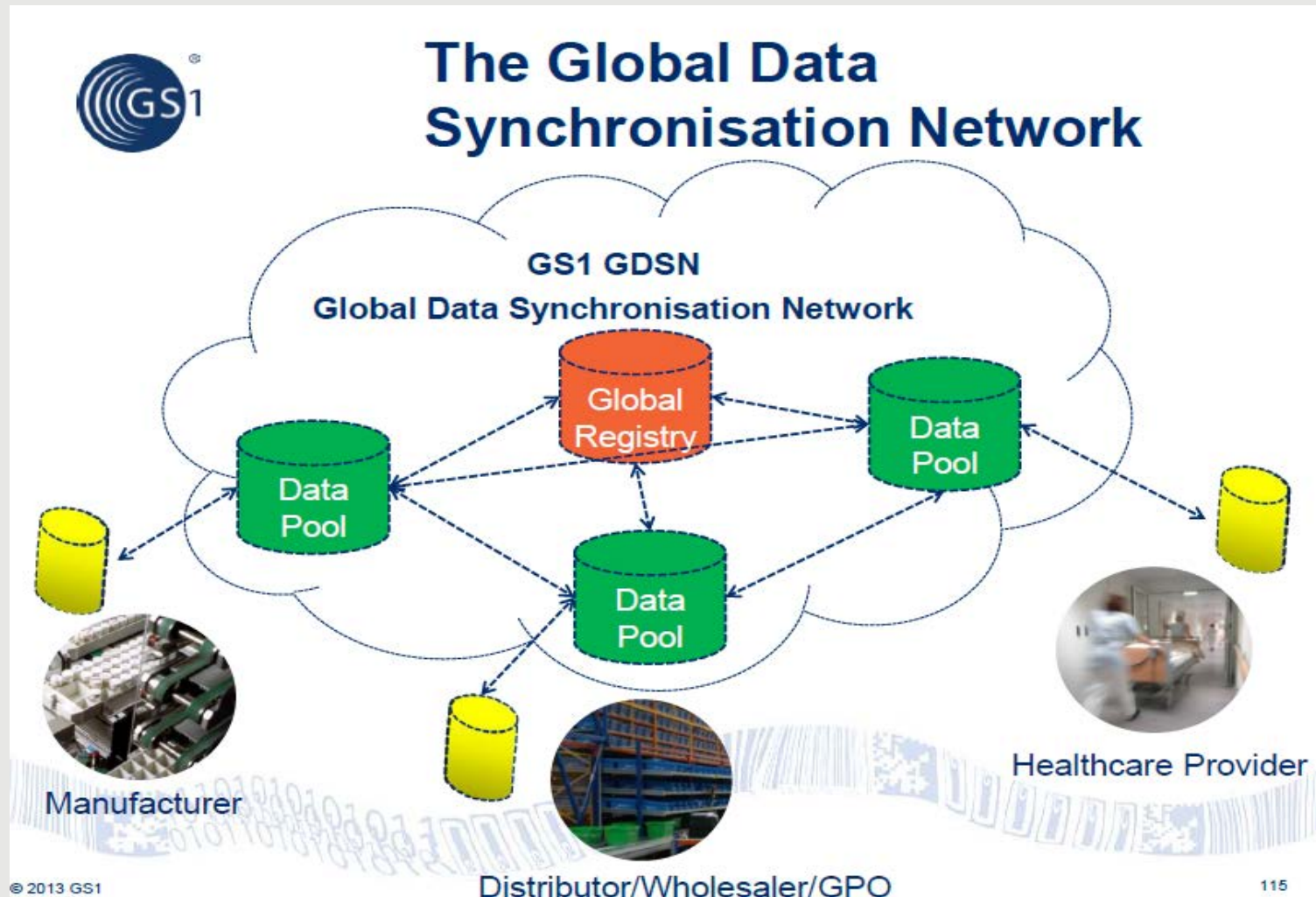


## Share: GS1 Standards for Data Exchange

**Master Data** Global Data Synchronisation Network (GDSN)    **Transactional Data** eCom (EDI)    **Event Data** EPC Information Services (EPCIS)



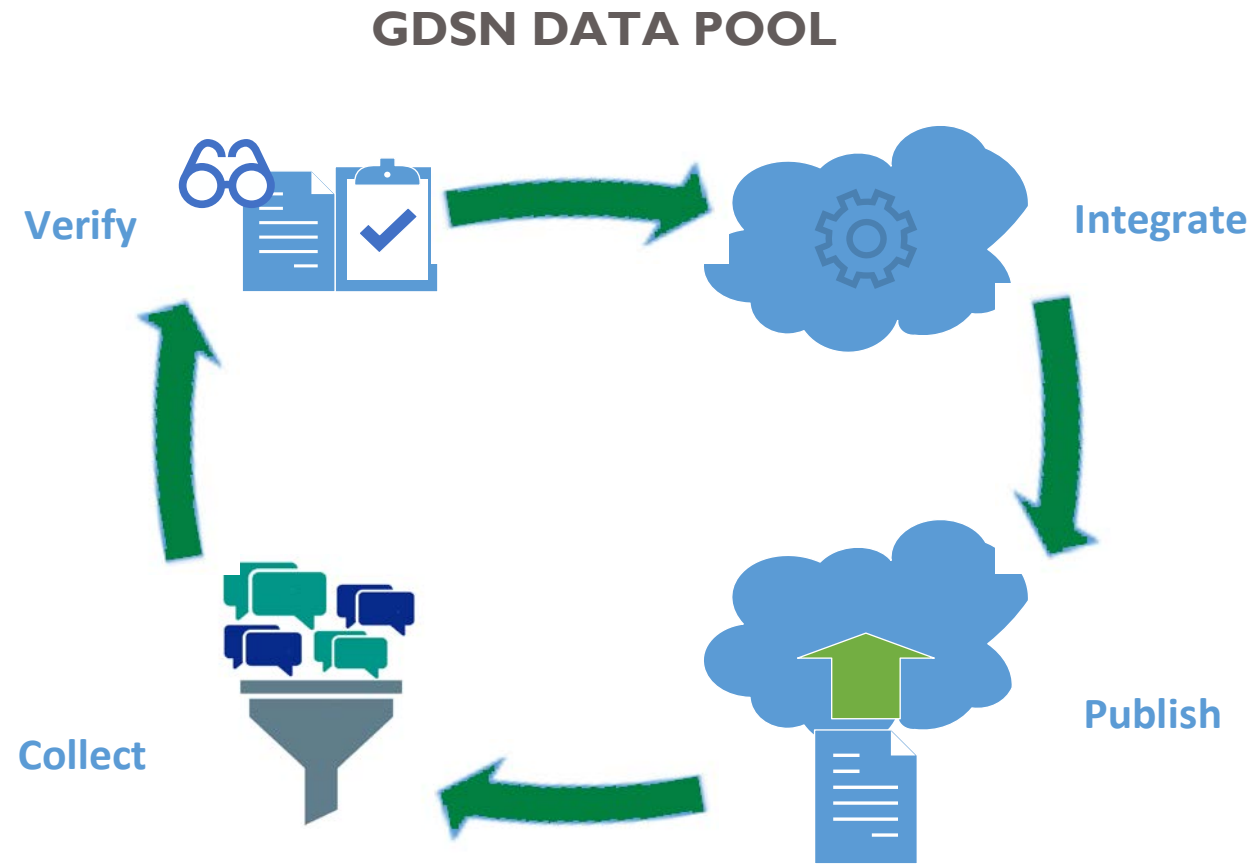
## Next Step – Building the first building block – GDSN



***There is a critical need to have an updated, maintained authoritative source for product information***

## Product Master – Data Pool

1. Supplier registers with GSI and obtains a prefix
2. Supplier assigns GTINs to its products
3. Supplier registers with a GDSN data pool provider
4. Supplier provides product attributes through their GDSN Data Pool



## Collaboration is Needed

- Need to have a sustainable GDSN for life saving commodities for LMIC countries:
  - We need to analyze a sustainable cost and operational model
  - Suppliers submit their product information once to GDSN and used by all countries and donors
  - GDSN data to be used for both drug registration and supply chain information systems
- When designing country supply chain information systems we should not ignore the last mile challenge

<https://www.youtube.com/watch?v=7CW8rjQAap4>



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