

A Product by Any Other Name: How Data Standards Can Improve Our Supply Chains





A Product by Any Other Name: How Data Standards Can Improve Our Supply Chains

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We've talked about it for years...

- Wouldn't it be great if we could exchange data between our LMIS and WMS?
- What if we could validate our HMIS reports with logistics data?
- Imagine the greater visibility a country supply chain would have with system interoperability



The Challenge

- Poor data visibility
 - Systems not interoperable
- Lack of standardization in processes and operations
 - Inconsistent packaging labels
 - No master data (product master or facility master)
- Lack of data governance processes or master data management

**...WHICH RESULTS IN RISK TO SUPPLY CHAIN
SECURITY!**



What is GHSC trying to achieve?

Vision

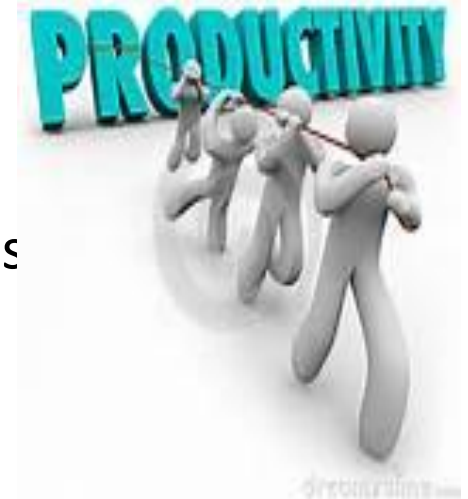
To enable identification of every item procured at every point in the supply chain, through administration to the patient

Goal

To enable a secure and efficient supply chain from source through to service delivery

Objectives

- To enable end-to-end data visibility
- To identify and implement supply chain efficiencies
- To ensure supply chain security
- To increase patient safety



No standards? No Governance? What does that look like?

- Country X Example ---- Product Master Alignment:
 - Two systems in-country that were aligned during deployment but went out of alignment over the course of use
 - System 1 – 11,323 item records in product catalog
 - System 2 – 1,327 item records in product catalog
 - Duplication of data
 - 1,768 products are duplicated multiple times in the system resulting in 5,579 records in the product master (roughly 50% of total records)
 - Required two full time staff to correct order requisitions every month.
- Country Y Example - Product Master Alignment:
 - Harmonization challenges
 - Same product/item but different pack sizes
 - System owners don't want to give up ownership of the master list
 - DONORs send commodities that are not on the approved master list
 - Limited resources for sustaining the harmonized lists (it's going to happen again)





Why are global standards relevant?

Global Standards

- Published documents that establish specifications and procedures designed to ensure the reliability of the materials, products, methods, and/or services people use every day. (IEEE)
- Address a range of issues, including but not limited to a common nomenclature and protocols across various entities in support of interoperability.

GS1 Standards

- Develop and maintain global standards for business communications
- Provide a common language to identify, capture, and share supply chain data
- Specific focus on applicability of standards for healthcare supply chain

Supply Chain Data Visibility

- Enabled through common nomenclature, processes, and data sharing interoperability across all stakeholders in the global health supply chain

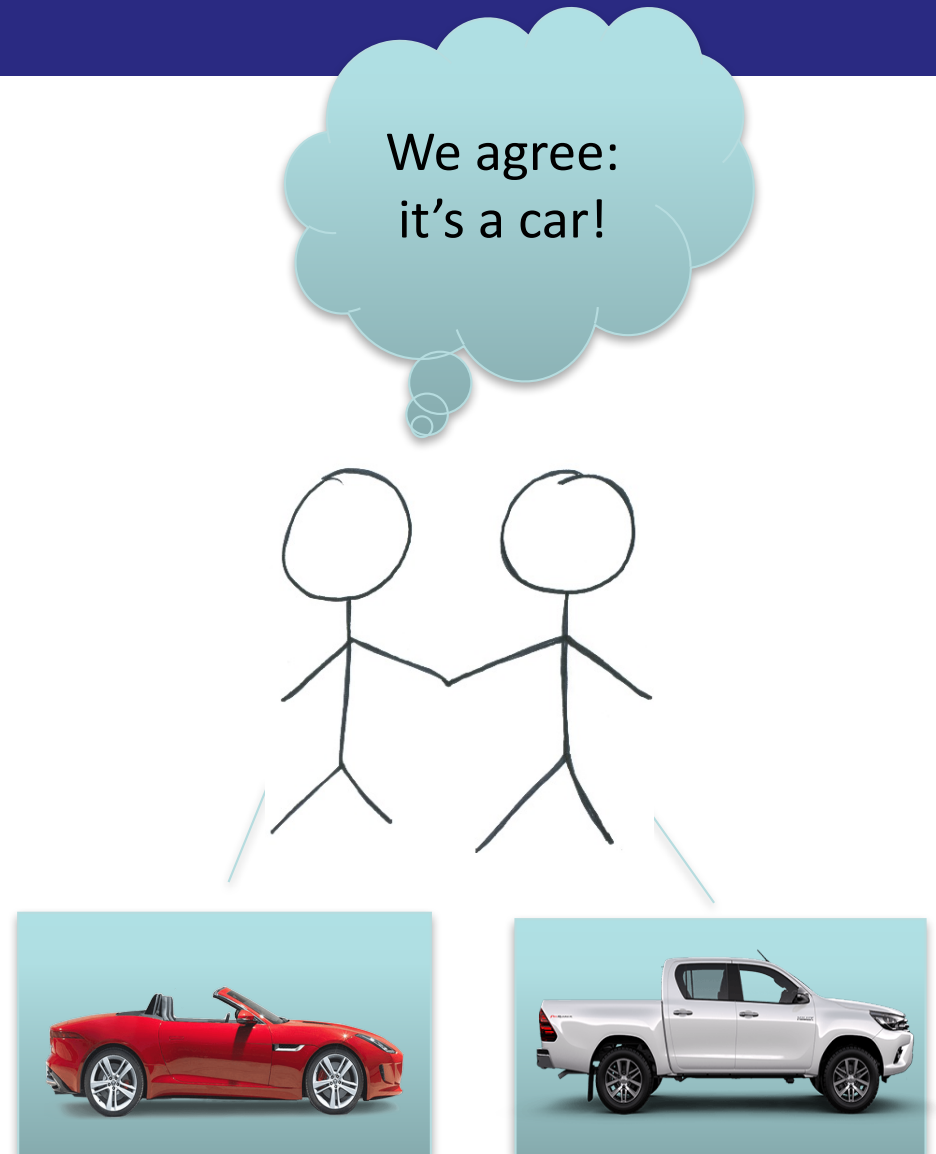


So what are we doing about it?

- Leveraging pooled procurement efforts to push manufacturers to comply with global standards
- Collaborate with other global donors on product masters
- Creating and publishing guidelines for easier adoption of standards by our country colleagues
- Acknowledging right now that this is likely a 10 year effort that we are launching, so working with all stakeholders to move along in adoption at a steady pace.

What is Product Master Data?

- Conforms to rules we have agreed to with our partners
 - Naming conventions
 - Standard classifications
- Maintained and updated in a controlled process
 - A data governance committee reviews proposed changes
 - Anyone can submit a change, only the data governance committee can approve it
 - After they are approved, changes are communicated to all partners





How does the product classification hierarchy look?

Level 1 = Drugs and Pharmaceutical Products



Level 2 = Amebicides and trichomonacides and antiprotozoals



Level 3 = Antiprotozoals



Level 4 = Artemether



Level 5 = Artemether 20 mg/mL Ampoule



Trade Item = Aremether 20mg/mL Ampoule, 30 Ampoules



Real-life questions you can answer quickly with a hierarchy

- What is the the amount spent on vehicles in the past year in Program X versus Program Y?

Information Provider(Group)	USAID Product Classification Level 2	PO Line Item Value
Program X	Motor vehicles	\$1,209,085.00
Program Y	Motor vehicles	\$642.00

- How many different formulations of Abacavir/Lamivudine are we procuring?

USAID Product Classification Level 4	USAID Product Classification Level 5
Abacavir/lamivudine	Abacavir/Lamivudine 120/60 mg Tablet
	Abacavir/Lamivudine 60/30 mg Dispersible Tablet
	Abacavir/Lamivudine 60/30 mg Tablet
	Abacavir/Lamivudine 600/300 mg Scored Tablet
	Abacavir/Lamivudine 600/300 mg Tablet

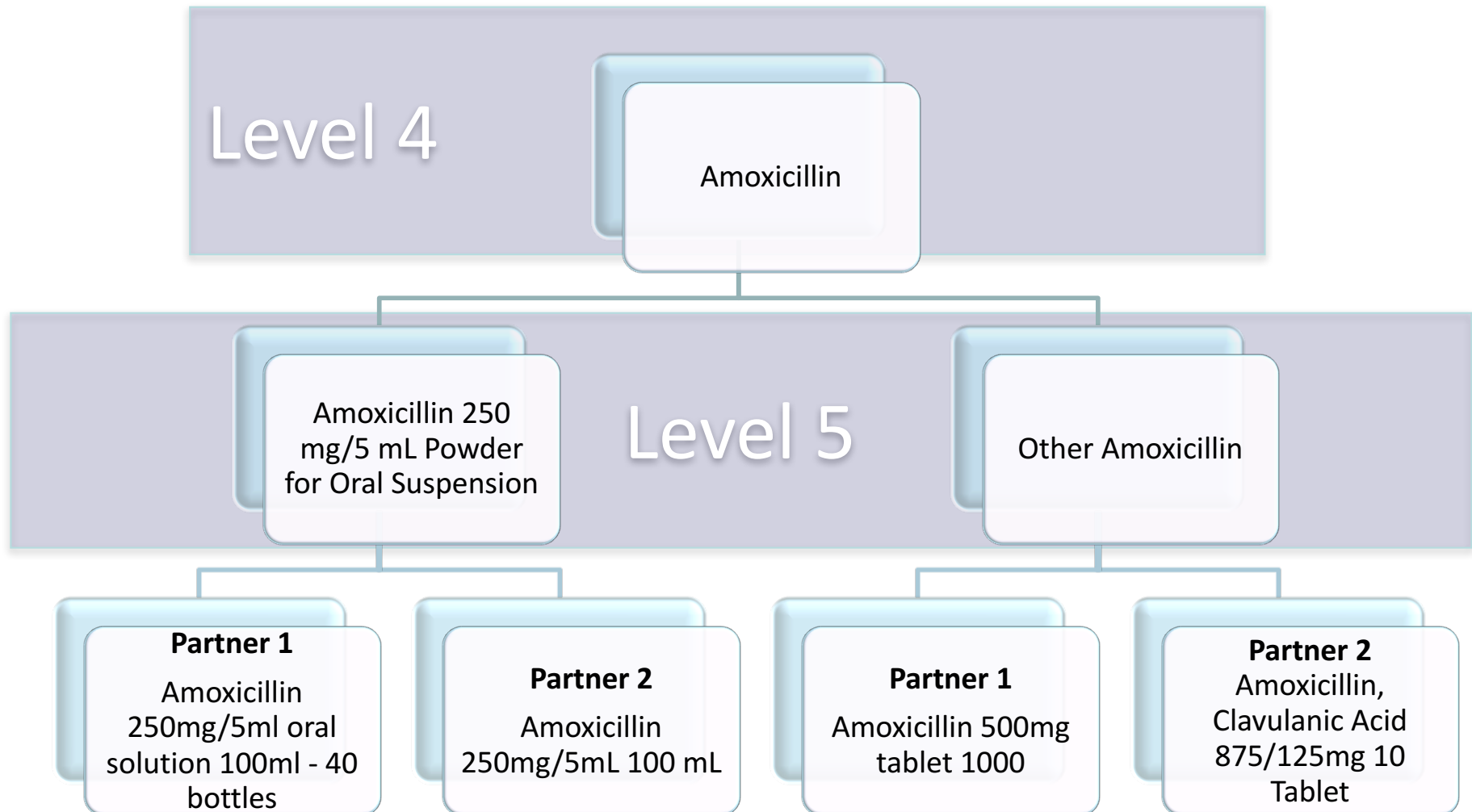


Real-life questions you can answer quickly, continued...

- What did we buy last year from Manufacturers A, B, and C?

Manufacturer(Group)	PO Created Year	2016
	USAID Product Classification Level 5	PO Line Item Qty
Manufacturer A	Bupivacaine 0.5% (20 mL) Vial	1,929
	Lidocaine 1% (20 mL) Vial	250
	Lidocaine 2% (20 mL) Vial	498
Manufacturer B	Lidocaine 2% (20 mL) Vial	498
Manufacturer C	Bupivacaine 0.5% (20 mL) Vial	1,929

Mapping trade items from new partners





Flexibility: more than just pharmaceuticals

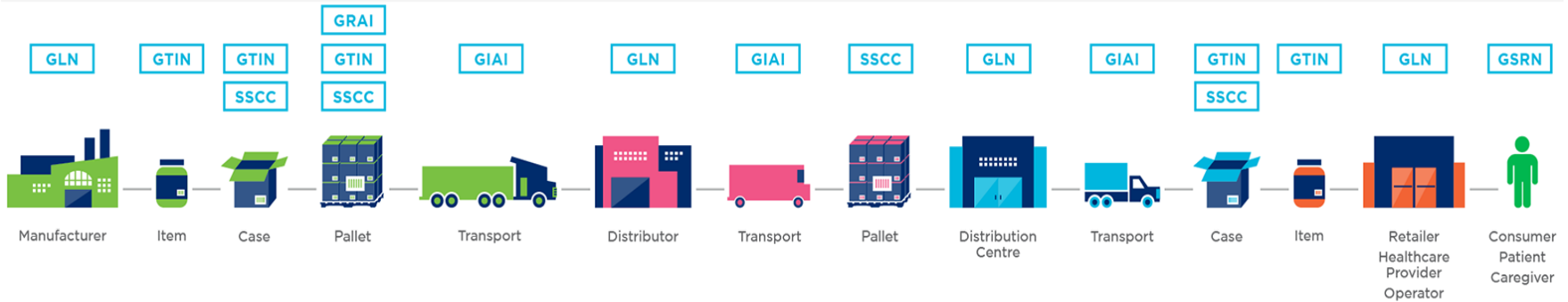




GS1: a global system of standards

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

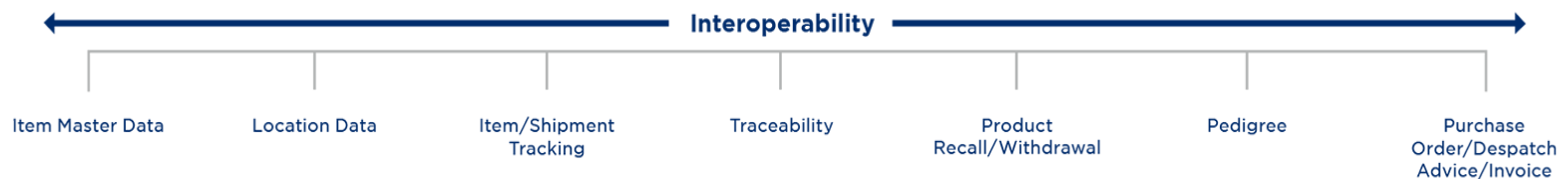
GS1 Barcodes

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)



GS1 standards across the entire supply chain



- More accurate and efficient supply chain management
- Enabling traceability and authentication (counterfeiting, product recalls, etc.)
- Enabling regulatory compliance
- **Improving patient safety and supply chain efficiency!**



Reproductive Health Global Traceability Advisory Group (RH GTAG)

IDENTIFICATION RECOMMENDATIONS FOR REPRODUCTIVE HEALTH PHARMACEUTICAL PRODUCTS

REPRODUCTIVE HEALTH GLOBAL TRACEABILITY ADVISORY GROUP

Version 1.1, April 2017

A forum for subject matter experts from industry and the public sector to discuss and provide recommendations for the adoption and implementation of global standards for RH product identification, data capture, and data exchange in the supply chain.

Industry Advisors



Facilitators



[Identification Recommendations for Reproductive Health Pharmaceutical Products](#)



GHSC-PSM Announcement of Contract Requirements

GHSC-PSM developed a two year work plan and strategic vision (FY17 – FY18) to drive implementation across the organization.

In May 2017, GHSC-PSM issued an announcement of our requirement to suppliers stating the new requirement and implementation timeline.

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
PROCUREMENT AND SUPPLY MANAGEMENT

Announcement of Intention to Implement Global Standards for Product Identification, Labeling, and Data Exchange

MAY 15, 2017



[Announcement of Intention to Implement Global Standards for Product Identification, Labeling, and Data Exchange](#)



General Principles

- Adopt global standards to promote efficiency, reliability, and effectiveness
- Clearly identify vision, goals, and objectives to motivate requirements
- Requirements should capture what is necessary to secure the supply chain
- Requirements should be phased in over time to allow for transition
- Leverage successful practices and systems from other markets
- Harmonize with other key stakeholders in the community to:
 - ✓ Minimize the risk and investment required by suppliers
 - ✓ Maximize benefits to country supply chains and patients
- Establish benchmark metrics and KPIs to ensure accountability and measure progress



There are four elements to our strategy



IDENTIFY

Assignment of numbers to items and locations



CAPTURE

Marking of application identifiers on packaging and labeling



SHARE

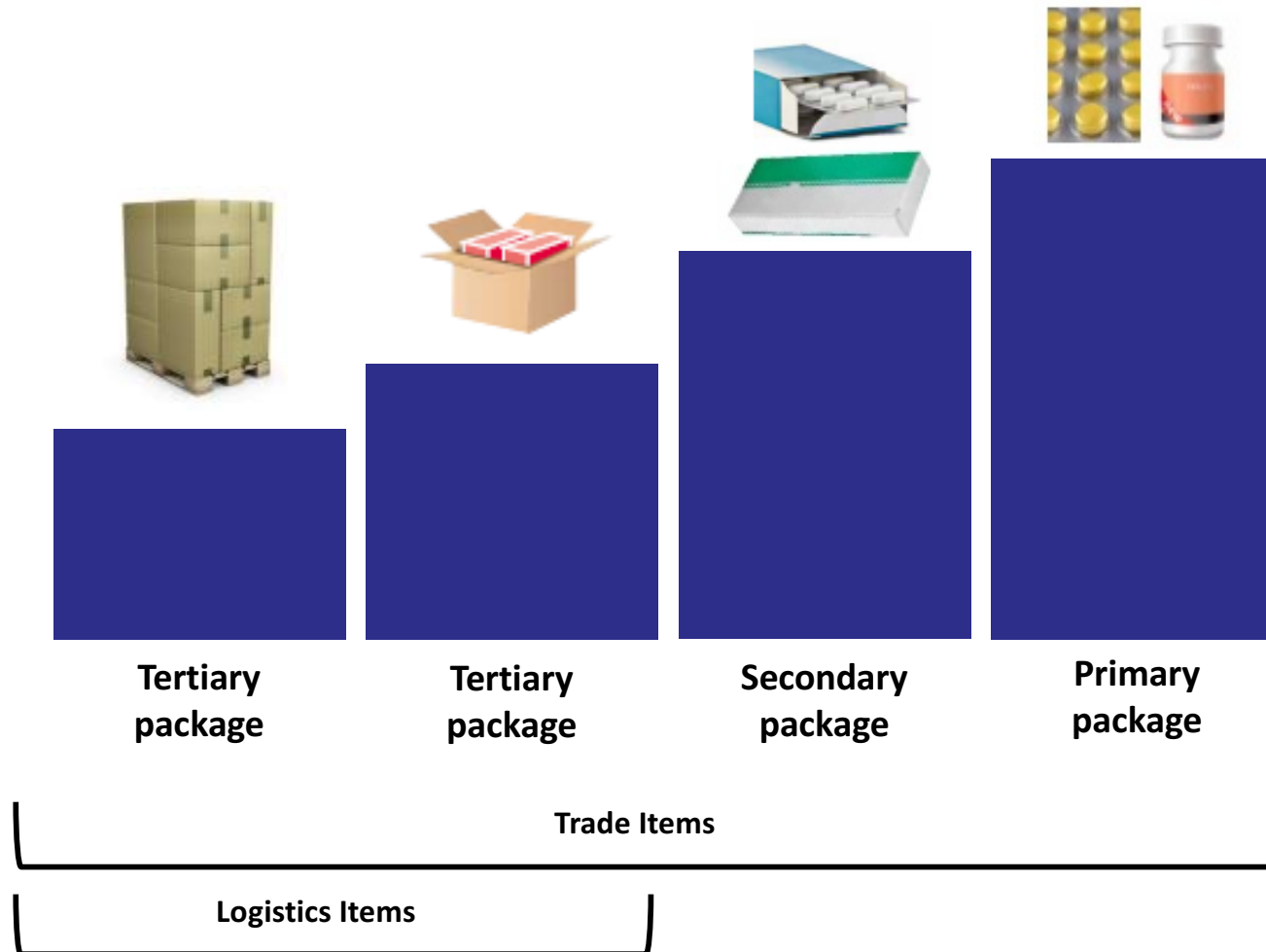
Exchange of master and transactional data



USE

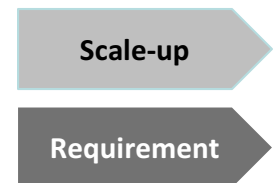
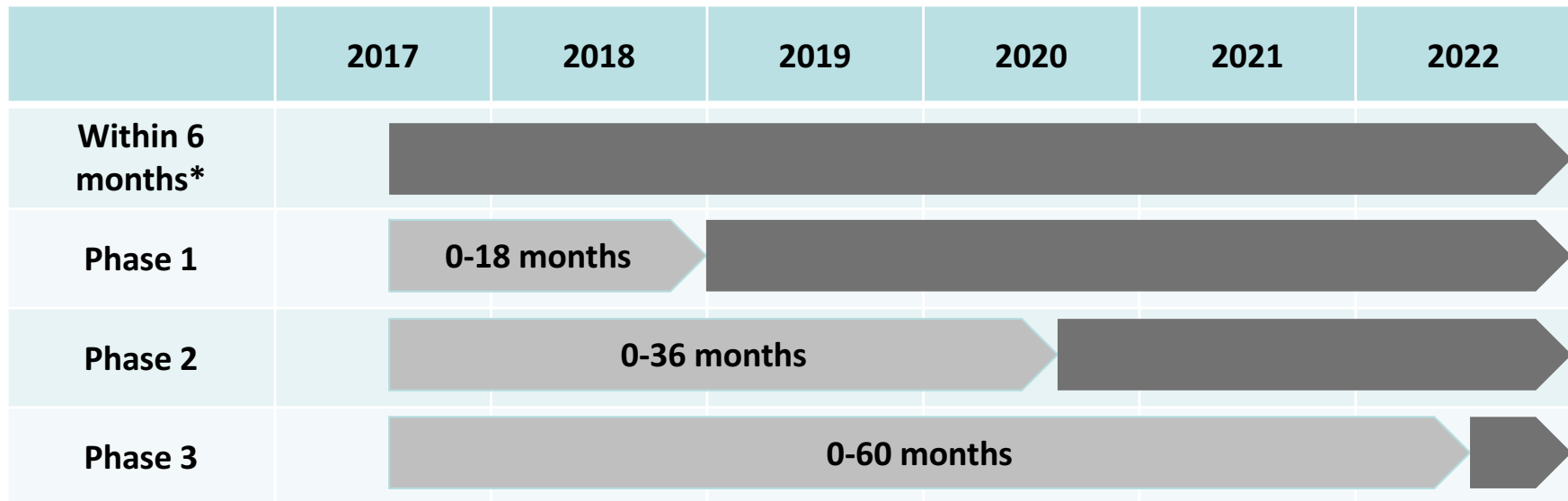
Data management; streamline processes; track and trace

What does it apply to?





Implementation will roll out in four phases



*Within 6 months of initial contract being signed



IDENTIFY

To identify, organizations need to register with GS1 to obtain a GS1 Company Prefix and assign numbers to items and locations.

	Within 6 months	Dec 2018
Secondary Packaging Multipack and/or Single Pack Carton (Trade Item)	<ul style="list-style-type: none"> ✓ (01) Global Trade Item Number (GTIN) ✓ Other attributes as requested 	
Tertiary Packaging Case/Carton (Trade Item)	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ Other attributes as requested 	
Tertiary Packaging Pallet (Trade Item)	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ Other attributes as requested 	
Location		<ul style="list-style-type: none"> ✓ Global Location Number (GLN) Sold-from ✓ GLN Ship-from








CAPTURE

GTIN: (01) 07046261398572
Batch: (10) TEST5632
Expiry: (17) 130331
S/N: (21) 19067811811



To capture, organizations need to apply relevant automatic identifier and data capture (AIDC) technology to packaging that includes required application identifiers and human readable interpretation (HRI)

	AIDC	Dec 2018	Jun 2020	Jun 2022
Secondary Packaging Multipack/Single Pack Carton (Trade Item)			<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (10) Batch / Lot ✓ (17) Expiry 	<ul style="list-style-type: none"> ✓ +(21) Serial Number (pharma only)
Tertiary Packaging Case/Carton (Trade Item)		<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (10) Batch / Lot ✓ (17) Expiry 		<ul style="list-style-type: none"> ✓ +(21) Serial Number (pharma only)
Tertiary Packaging Pallet (Trade Item)		<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (10) Batch / Lot ✓ (17) Expiry 		<ul style="list-style-type: none"> ✓ +(21) Serial Number (pharma only)
Tertiary Packaging Case/Carton (Logistics Item)				<ul style="list-style-type: none"> ✓ (00) Serial Shipping Container Code (SSCC)
Tertiary Packaging Pallet (Logistics Item)				<ul style="list-style-type: none"> ✓ (00) SSCC



To share, organizations need to register with GHSC-PSM's Supplier Portal for transactional data and the Global Data Synchronization Network (GSDN) for master data.

	Within 6 months	Dec 2018	Jun 2022
Master Data Products	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ Additional attributes 		
Master Data Location		<ul style="list-style-type: none"> ✓ GLN Sold-From ✓ GLN Ship-From 	
Transactional Data Purchase Order (PO)	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (37) Quantity 	<ul style="list-style-type: none"> ✓ +GLN Sold-from ✓ +GLN Ship-from ✓ +GLN Bill-to / Sold-to 	<ul style="list-style-type: none"> ✓ +GLN Ship-to
Transactional Data Advanced Shipping Notice (ASN)	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (10) Batch / Lot ✓ (17) Expiry ✓ (37) Quantity 	<ul style="list-style-type: none"> ✓ +GLN Sold-from ✓ +GLN Ship-from ✓ +GLN Bill-to / Sold-to 	<ul style="list-style-type: none"> ✓ +SSCC ✓ +GLN Ship-to
Transactional Data Packing Slip	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (37) Quantity 	<ul style="list-style-type: none"> ✓ +GLN Sold-from ✓ +GLN Ship-from ✓ +GLN Bill-to / Sold-to 	<ul style="list-style-type: none"> ✓ +GLN Ship-to
Transactional Data Invoice	<ul style="list-style-type: none"> ✓ (01) GTIN ✓ (37) Quantity 	<ul style="list-style-type: none"> ✓ +GLN Sold-from ✓ +GLN Ship-from ✓ +GLN Bill-to / Sold-to 	<ul style="list-style-type: none"> ✓ +GLN Ship-to



What to take away from our presentation?

- Implementation of **GS1 Standards** is a long term goal (5 - 10 years)
- Harmonize and manage **Product Master**
- Global Donors are pushing to set the building blocks in place now
- We are all learning as we go and expect to share successes, failures and lessons learned along the way
- **Start the conversation** around GS1 Standards and Master Data alignment and governance **NOW**
- It's in our best interest to **help each other be successful!**



GS1 Member Organizations in sub-Saharan Africa

Country	Website
Cote d'Ivoire	www.gs1ci.org
Ghana	http://www.gs1gh.org/
Kenya	www.gs1kenya.org
Nigeria	www.gs1-nigeria.org
Senegal	www.gs1senegal.org
South Africa	www.gs1za.org
Tanzania	www.gs1tz.org/

For information about the 112 GS1 Member Organizations throughout the world, please visit <https://www.gs1.org/contact/overview>



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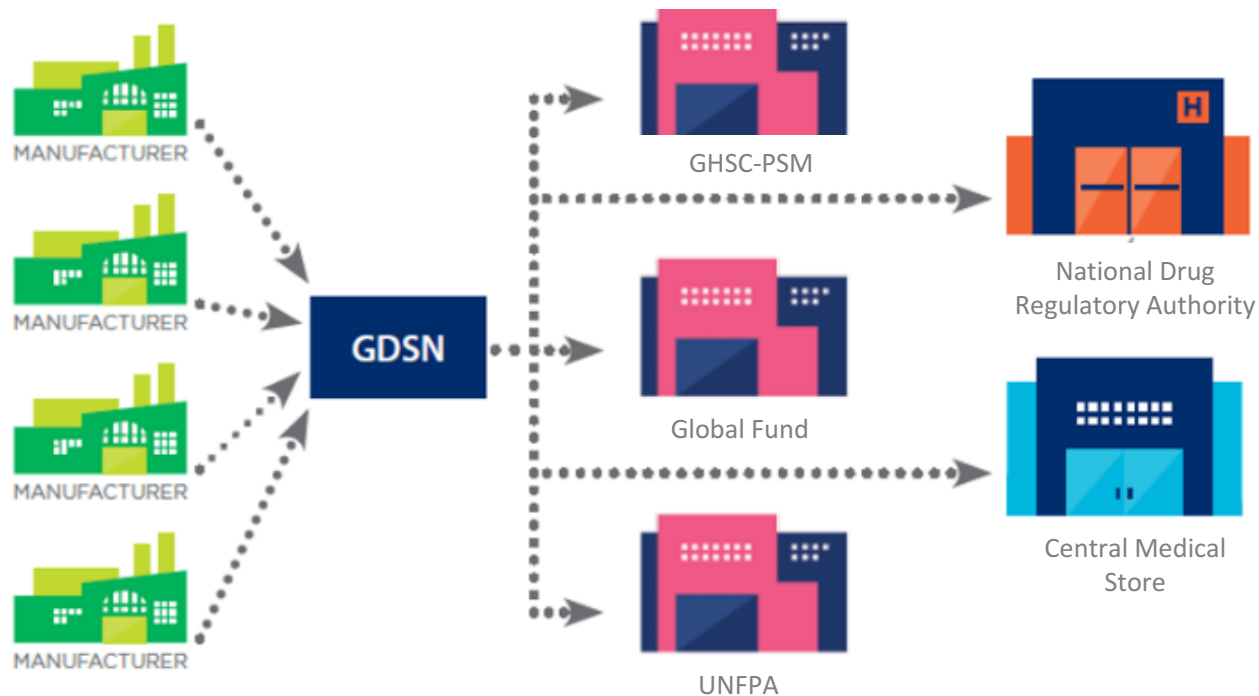
Additional Information



The GDSN opportunity for global health

EXAMPLE ONLY

GS1 Global Data Synchronisation Network™ (GDSN®)



Manufacturers are able to provide data to all kind of databases and all kinds of customers (hospitals, distributors, wholesalers, GPOs) simultaneously, with a single connection.



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