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Introduction to the GHSC-PSM Global Data Synchronization Network (GDSN) Initiative

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

USAID FROM THE AMERICAN PEOPLE

PEPFAR U.S. President's Emergency Plan for AIDS Relief

USAID FROM THE AMERICAN PEOPLE CDC U.S. President's Malaria Initiative

WORLD SYNC

The following training is based on materials developed by 1WorldSync and are used with their permission.

1WorldSync is a GS1 Global Data Synchronization Network™ data pool provider.

For more information, please visit www.1worldsync.com

Today's Presenters

Carol Miklusak
Implementation Consultant
1WorldSync

Payal Patel
Senior Project Manager
1WorldSync

Kaitlyn Roche
Manager for Global Standards
GHSC-PSM

Todd Simons
Healthcare Manager
1WorldSync

Today's Attendees

- Brand Owners
- Manufacturers & Suppliers
- GHSC-PSM
- USAID
- UNFPA
- Global Fund
- 1WorldSync

Meeting Objectives

- Kick-off the GHSC-PSM GDSN Initiative
- Awareness and education
  - GHSC's adoption of global standards
  - GS1 standards
  - Master data & the GDSN
  - Actions & timeline
- Available resources

GHSC & Global Standards

Current Challenge

- No standardized product and location master data which results in poor data visibility because items and products are identified in non-standard ways
  - Proprietary identification numbers that are reassigned at various points in the supply chain
  - Identification inconsistent across procurement agencies and supply chain stakeholders through to the end user
- Lack of standardization in processes and operations because of inconsistent packaging labels
  - Multiple barcodes
  - Different types of barcodes
  - No barcodes

…WHICH RESULTS IN RISK TO SUPPLY CHAIN SECURITY

No standardized product identification

Different products, same number

Projects previously used proprietary identification numbers that resulted in duplicity across health areas

- **Product ID 102033**
  - Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 190(W) x 170(H) cm), Rectangular, Light Blue
  - Lopinavir/Ritonavir 200/50mg [Aluvia], tablets, 120 Tabs
- **Product ID 102043**
  - Condom, Male, 49mm lubricated, non-colored, non-scented [Top], latex, piece
  - Stavudine 20mg [Zerit], capsules, 60 capsules
- **Product ID 102062**
  - Test, Rapid Diagnostic Malaria, Ag HRP2/pLDH Single Pack POCT [First Response Malaria] kit, 30 tests
  - Amoxicillin 250mg, capsules, 1000 Caps

No standardized legal entity or location identification

Multiple ways to list a manufacturer

Manually logged entity information is prone to errors and results in duplicity, making it difficult to discern which entity is the correct trading partner

- Abbott
- Abbott GmbH + Co.KG
- Abbott Laboratories
- Abbott Molecular
- Abbott,
- ABBVIE
- AbbVie Deutschland GmbH + Co KG
- F. Hoffmann
- Hoffmann - La Roche
- ROCHE
- Roche
- Roche Diagnostics
- Roche Diagnostics international Ltd
- Roche Molecular Systems Inc.-US
- Roche Molecular Systems Inc, US
- Roche Products (Pty) Ltd-Diagnostics Division
- Fischer Scientific
- Fischer Technical
- Fisher BioReagents
- Fisher Healthcare
- Fisher Scientific
- Fisherbrand
- Fisherbrand HistoPrep Chemicals
- Thermo Fisher Scientific
- Thermo Scientific
- ThermoFisher
- ThermoFisher Scientific
- VWR
- VWR Brand
- VWR Chemicals
- VWR Chemicals France
- VWR INTERN
- VWR International
- VWR INTERNATIONAL LLC

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

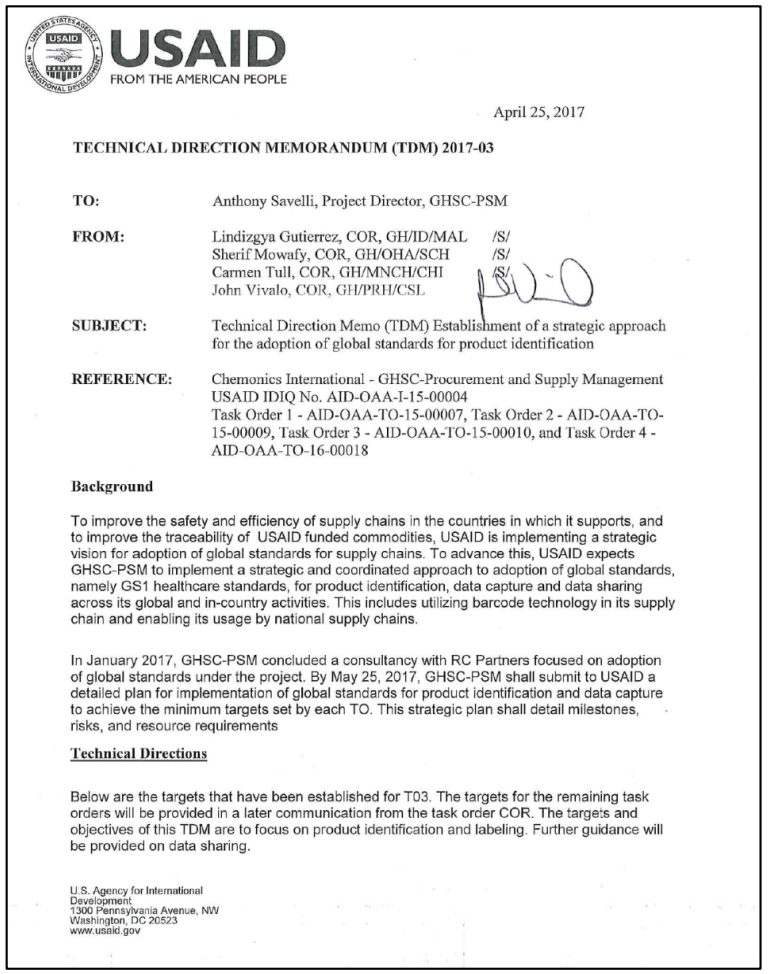
To enable a secure and efficient supply chain from source through to service delivery

Objectives

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

Global standards at GHSC-PSM

- Mandated by USAID in 2017
- Requirement formalized January 1, 2018 in Article 3 of the Standard Terms & Conditions
- Will be included in all new sourcing events / contracts; existing LTAs will be modified
- Accompanied by Global Standards Technical Implementation Guide and FAQ
- More information at ghsupplychain.org/globalstandards



USAID
FROM THE AMERICAN PEOPLE

April 25, 2017

TECHNICAL DIRECTION MEMORANDUM (TDM) 2017-03

TO: Anthony Savelli, Project Director, GHSC-PSM

FROM: Lindizgya Gutierrez, COR, GH/ID/MAL /S/
Sherif Mowafy, COR, GH/OHA/SCH /S/
Carmen Tull, COR, GH/MNCH/CHI /S/
John Vivalo, COR, GH/PRH/CSL

SUBJECT: Technical Direction Memo (TDM) Establishment of a strategic approach for the adoption of global standards for product identification

REFERENCE: Chemonics International - GHSC-Procurement and Supply Management USAID IDIQ No. AID-OAA-I-15-00004
Task Order 1 - AID-OAA-TO-15-00007, Task Order 2 - AID-OAA-TO-15-00009, Task Order 3 - AID-OAA-TO-15-00010, and Task Order 4 - AID-OAA-TO-16-00018

Background

To improve the safety and efficiency of supply chains in the countries in which it supports, and to improve the traceability of USAID funded commodities, USAID is implementing a strategic vision for adoption of global standards for supply chains. To advance this, USAID expects GHSC-PSM to implement a strategic and coordinated approach to adoption of global standards, namely GS1 healthcare standards, for product identification, data capture and data sharing across its global and in-country activities. This includes utilizing barcode technology in its supply chain and enabling its usage by national supply chains.

In January 2017, GHSC-PSM concluded a consultancy with RC Partners focused on adoption of global standards under the project. By May 25, 2017, GHSC-PSM shall submit to USAID a detailed plan for implementation of global standards for product identification and data capture to achieve the minimum targets set by each TO. This strategic plan shall detail milestones, risks, and resource requirements

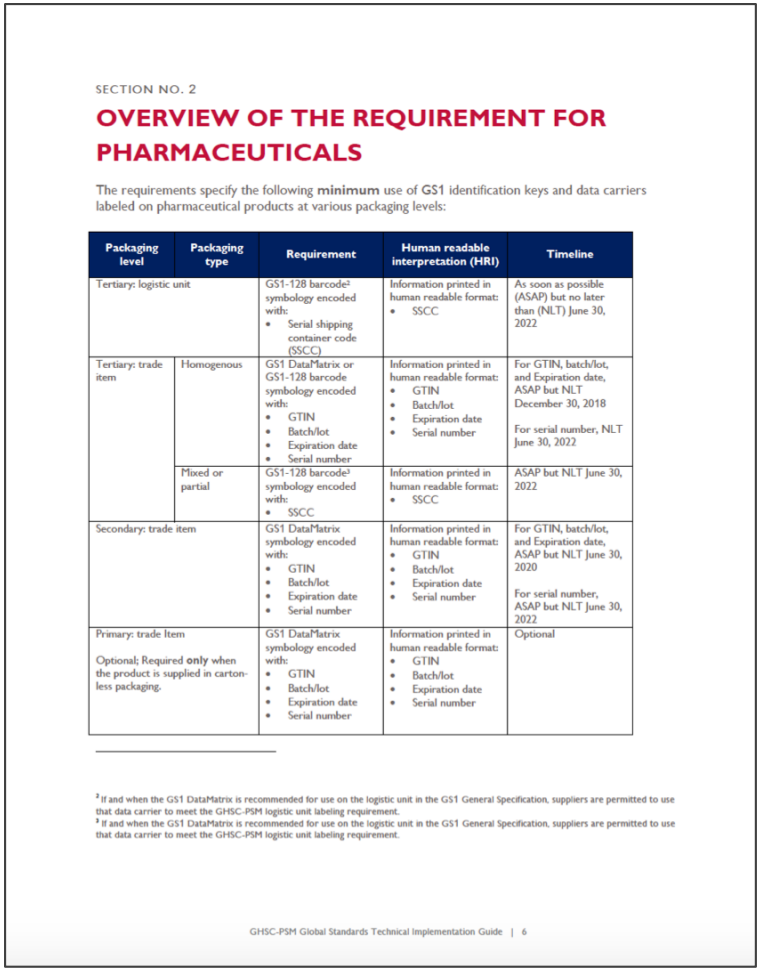
Technical Directions

Below are the targets that have been established for T03. The targets for the remaining task orders will be provided in a later communication from the task order COR. The targets and objectives of this TDM are to focus on product identification and labeling. Further guidance will be provided on data sharing.

U.S. Agency for International Development
1300 Pennsylvania Avenue, NW
Washington, DC 20523
www.usaid.gov

The GHSC-PSM procurement requirement

- Phased in over time
- Identification (items & locations) within 6 months of new contracts
- Labeling requirements for pharmaceuticals, medical devices, laboratory reagents, and sterile test kits phased in between Dec 2018 – Jun 2022
- Master data exchange via the GDSN required by Dec 2019



SECTION NO. 2

OVERVIEW OF THE REQUIREMENT FOR PHARMACEUTICALS

The requirements specify the following **minimum** use of GS1 identification keys and data carriers labeled on pharmaceutical products at various packaging levels:

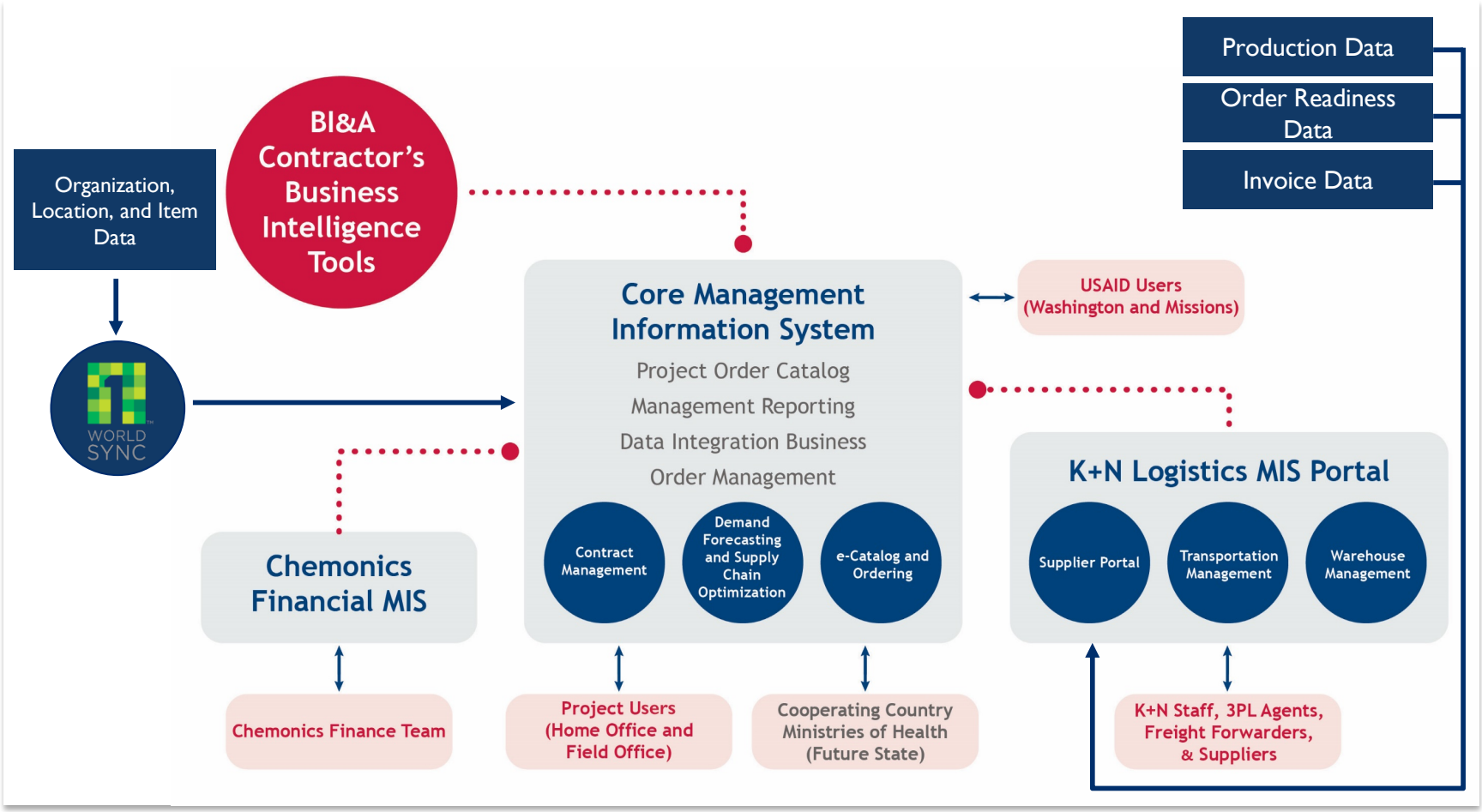
Packaging level	Packaging type	Requirement	Human readable interpretation (HRI)	Timeline
Tertiary: logistic unit		GS1-128 barcode[2] symbology encoded with: • Serial shipping container code (SSCC)	Information printed in human readable format: • SSCC	As soon as possible (ASAP) but no later than (NLT) June 30, 2022
Tertiary: trade item	Homogenous	GS1 DataMatrix or GS1-128 barcode symbology encoded with: • GTIN • Batch/lot • Expiration date • Serial number	Information printed in human readable format: • GTIN • Batch/lot • Expiration date • Serial number	For GTIN, batch/lot, and Expiration date, ASAP but NLT December 30, 2018 For serial number, NLT June 30, 2022
	Mixed or partial	GS1-128 barcode[3] symbology encoded with: • SSCC	Information printed in human readable format: • SSCC	ASAP but NLT June 30, 2022
Secondary: trade item		GS1 DataMatrix symbology encoded with: • GTIN • Batch/lot • Expiration date • Serial number	Information printed in human readable format: • GTIN • Batch/lot • Expiration date • Serial number	For GTIN, batch/lot, and Expiration date, ASAP but NLT June 30, 2020 For serial number, ASAP but NLT June 30, 2022
Primary: trade Item Optional; Required **only** when the product is supplied in carton-less packaging.		GS1 DataMatrix symbology encoded with: • GTIN • Batch/lot • Expiration date • Serial number	Information printed in human readable format: • GTIN • Batch/lot • Expiration date • Serial number	Optional

[2] If and when the GS1 DataMatrix is recommended for use on the logistic unit in the GS1 General Specification, suppliers are permitted to use that data carrier to meet the GHSC-PSM logistic unit labeling requirement.
[3] If and when the GS1 DataMatrix is recommended for use on the logistic unit in the GS1 General Specification, suppliers are permitted to use that data carrier to meet the GHSC-PSM logistic unit labeling requirement.

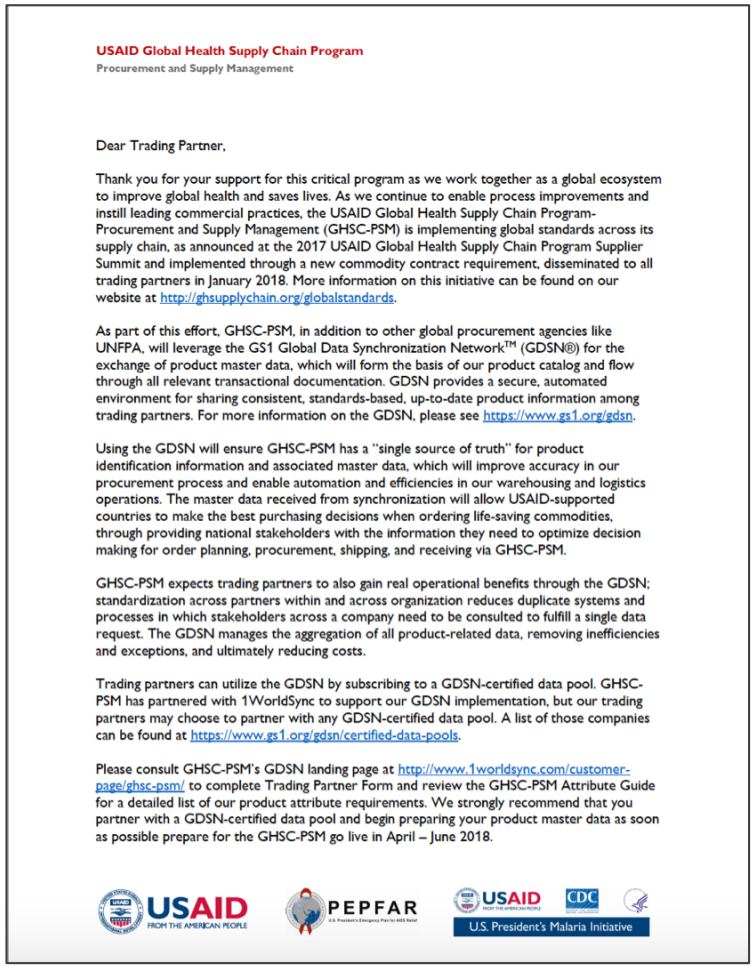
GHSC-PSM Global Standards Technical Implementation Guide | 6

Available here

GDSN data will feed into ARTMIS and form the basis of the GHSC-PSM product catalog



Launch of the GHSC-PSM GDSN initiative



USAID Global Health Supply Chain Program
Procurement and Supply Management

Dear Trading Partner,

Thank you for your support for this critical program as we work together as a global ecosystem to improve global health and saves lives. As we continue to enable process improvements and instill leading commercial practices, the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) is implementing global standards across its supply chain, as announced at the 2017 USAID Global Health Supply Chain Program Supplier Summit and implemented through a new commodity contract requirement, disseminated to all trading partners in January 2018. More information on this initiative can be found on our website at http://ghsupplychain.org/globalstandards.

As part of this effort, GHSC-PSM, in addition to other global procurement agencies like UNFPA, will leverage the GS1 Global Data Synchronization Network™ (GDSN®) for the exchange of product master data, which will form the basis of our product catalog and flow through all relevant transactional documentation. GDSN provides a secure, automated environment for sharing consistent, standards-based, up-to-date product information among trading partners. For more information on the GDSN, please see https://www.gs1.org/gdsn.

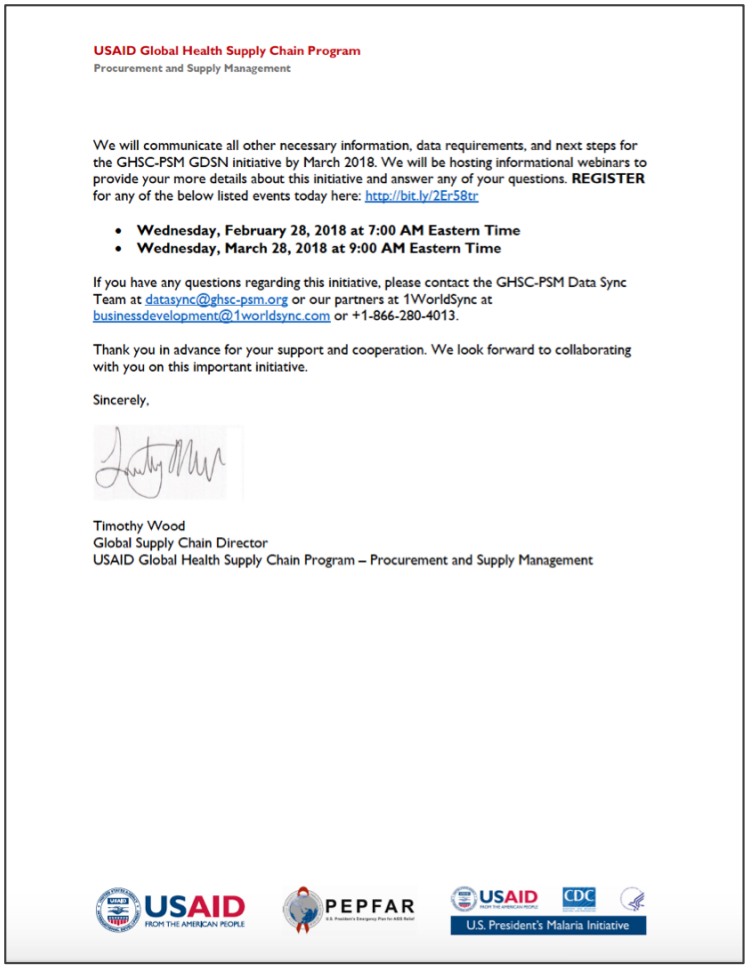
Using the GDSN will ensure GHSC-PSM has a "single source of truth" for product identification information and associated master data, which will improve accuracy in our procurement process and enable automation and efficiencies in our warehousing and logistics operations. The master data received from synchronization will allow USAID-supported countries to make the best purchasing decisions when ordering life-saving commodities, through providing national stakeholders with the information they need to optimize decision making for order planning, procurement, shipping, and receiving via GHSC-PSM.

GHSC-PSM expects trading partners to also gain real operational benefits through the GDSN; standardization across partners within and across organization reduces duplicate systems and processes in which stakeholders across a company need to be consulted to fulfill a single data request. The GDSN manages the aggregation of all product-related data, removing inefficiencies and exceptions, and ultimately reducing costs.

Trading partners can utilize the GDSN by subscribing to a GDSN-certified data pool. GHSC-PSM has partnered with 1WorldSync to support our GDSN implementation, but our trading partners may choose to partner with any GDSN-certified data pool. A list of those companies can be found at https://www.gs1.org/gdsn/certified-data-pools.

Please consult GHSC-PSM's GDSN landing page at http://www.1worldsync.com/customer-page/ghsc-psm/ to complete Trading Partner Form and review the GHSC-PSM Attribute Guide for a detailed list of our product attribute requirements. We strongly recommend that you partner with a GDSN-certified data pool and begin preparing your product master data as soon as possible prepare for the GHSC-PSM go live in April – June 2018.

USAID FROM THE AMERICAN PEOPLE PEPFAR USAID CDC U.S. President's Malaria Initiative



USAID Global Health Supply Chain Program
Procurement and Supply Management

We will communicate all other necessary information, data requirements, and next steps for the GHSC-PSM GDSN initiative by March 2018. We will be hosting informational webinars to provide your more details about this initiative and answer any of your questions. **REGISTER** for any of the below listed events today here: http://bit.ly/2Er58tr

- **Wednesday, February 28, 2018 at 7:00 AM Eastern Time**
- **Wednesday, March 28, 2018 at 9:00 AM Eastern Time**

If you have any questions regarding this initiative, please contact the GHSC-PSM Data Sync Team at datasync@ghsc-psm.org or our partners at 1WorldSync at businessdevelopment@1worldsync.com or +1-866-280-4013.

Thank you in advance for your support and cooperation. We look forward to collaborating with you on this important initiative.

Sincerely,

Timothy Wood
Global Supply Chain Director
USAID Global Health Supply Chain Program – Procurement and Supply Management

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Available here

The GS1 Global Standards Organization

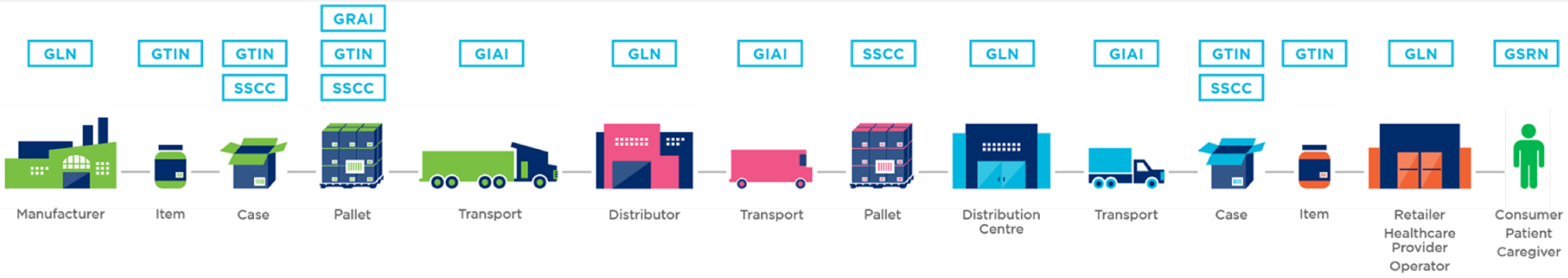
GS1 – an international standards organization

1 million	150 countries	6 billion	112 MOs
over 1 million companies use GS1 standards worldwide	25 industries served across 150 countries	Barcodes scanned more than 6 billion times per day globally	112 Member Organisations around the world

Source: GS1 Global Office

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)

Source: GS1 Global Office

The foundation: GS1 identification keys

- Unique
- Non-significant
- International
- Secure
- Foundational

Item Identifier
Global Trade Item Number (GTIN)
Uniquely identifies all trade items at any packaging level

Location Identifier
Global Location Number (GLN)
Uniquely identifies an organization - both legal entities and/or physical locations

…and there are more

Source: GS1 Global Office

Introduction to the GDSN

What is the GDSN?

The GS1 Global Data Synchronization Network™ is the GS1 standard for master data exchange.

Share: GS1 Standards for Data Exchange

Master Data Global Data Synchronisation Network (GDSN)

What is master data?

- Item or location related data created by the manufacturer / brand owner
- The data needed by the recipient to perform operational and commercial processes
- Product related data or characteristics are referred to as ATTRIBUTES in the GDSN
- GTINs and GLNs are the keys (or identification reference numbers) used to access master data across multiple systems, applications or processes

Examples of master data

- There are over 3,000 attributes available in the GDSN, but here are just a few:

1. Global Trade Item Number (GTIN)
2. GTIN Name
3. Product Type
4. Target Market
5. Language
6. Information Provider (GLN)
7. Brand Owner (GLN)
8. Manufacturer (GLN)
9. Brand Name
10. Qty. of Next Level Item(s)
11. Global Classification Code (GPC)
12. Ordering Unit Indicator
13. Start Availability Date
14. Functional Name
15. Product Description
16. POS Description
17. Depth/UOM
18. Height/UOM
19. Width/UOM
20. Gross Weight/UOM
21. Net Weight/UOM
22. Net Content/UOM
23. Base Unit Indicator
24. Consumer Unit Indicator
25. Dispatch Unit Indicator
26. Invoice Unit Indicator
27. Variable Weight Trade Item
28. Packaging Marked Returnable?

What does it aim to achieve?

Global

Data

Synchronization

Network

The GDSN was designed to:

- Enable customers, suppliers, consumers and other interested parties to share information on products using standardized fields and data formats
- Facilitate the rapid dissemination & continues flow of critical product **MASTER** data throughout the entire supply chain

Benefits of GDSN

Organizational Efficiencies

- ✓ Provides a single source of truth
- ✓ Enables common language between trading partners
- ✓ Reduces data management time errors
- ✓ Streamlines accounts receivable process
- ✓ Improves service levels, fill rate, and inventory management

Supply Chain Efficiencies

- ✓ Supports regulatory compliance
- ✓ Enhances physical movement process & inventory management
- ✓ Optimizes order, invoice, sales reporting, and chargeback/rebate processes
- ✓ Enables supply chain visibility

Improving Patient Safety

- ✓ Reduces medication errors
- ✓ Links critical product data to the patient record
- ✓ Enables effective product recalls
- ✓ Enables tracking of pharmaceutical products/medical devices
- ✓ Reduces introduction of counterfeit products

GDSN in the healthcare industry

- Overall, there are more than 24 million GTINs and 44,000 GLNs in the GDSN
- In healthcare –

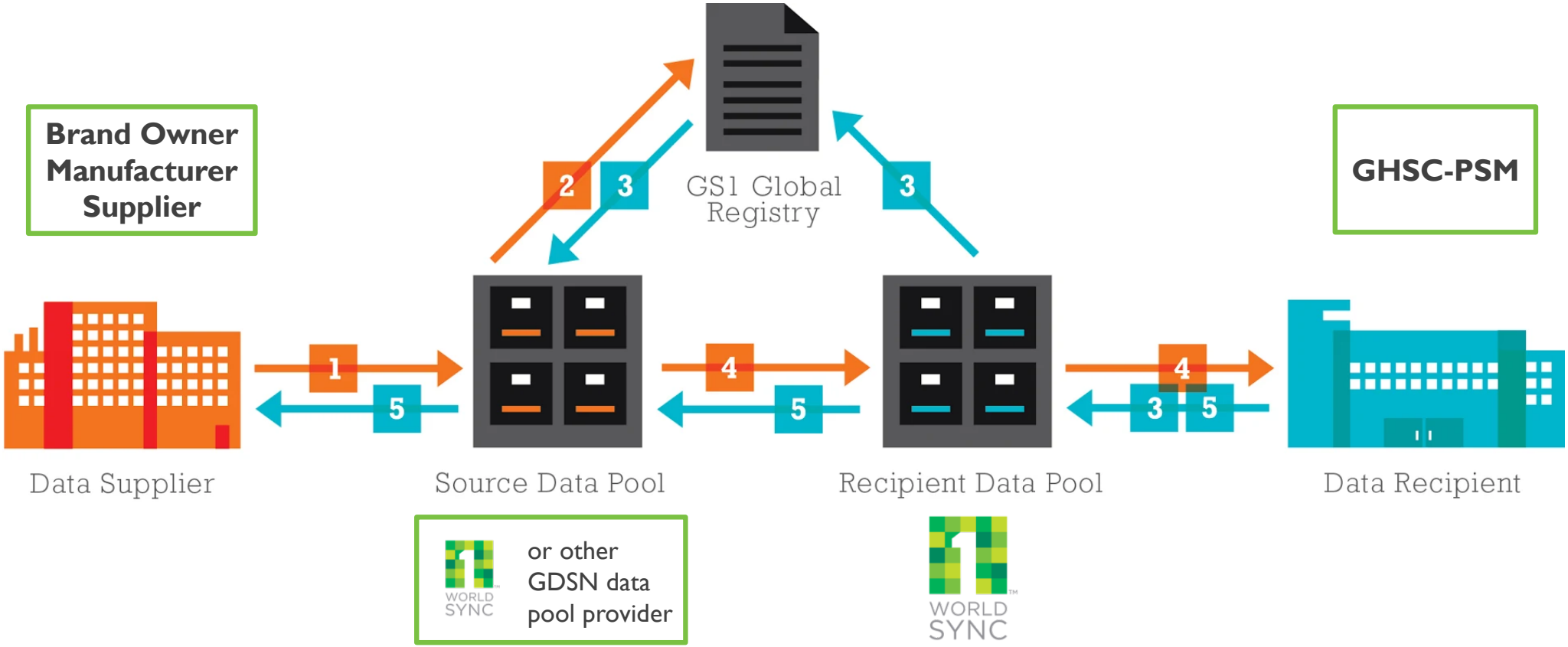
Total GTINs	**2,103,245**
Device GTINs	*1,578,835*
Pharma GTINs	*67,437*
All other GTINs	*456,973*
Total GLNs	**3,811**
Total Target Markets	**96**

Source: GS1 Global Office, Nov 2017

How GDSN works

1. The supplier loads item data into their GDSN data pool. Supplier data needs to adhere to GS1 global standards.
2. The recipients subscribe through their GDSN data pool to the supplier's data
3. The supplier sends their product data to their recipients
4. The recipients send confirmation of receipt to the supplier

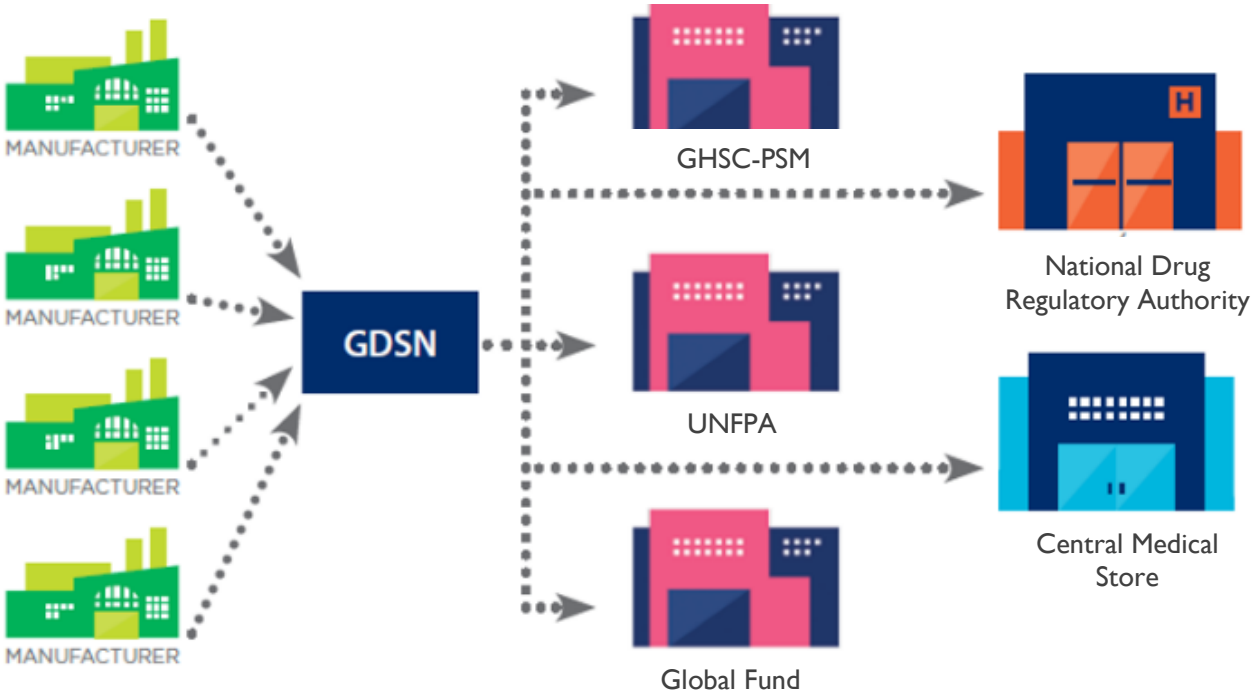
GDSN messaging choreography



For additional information: http://www.gs1.org/gdsn

The GDSN opportunity for global health

GS1 Global Data Synchronisation Network™ (GDSN®)



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

How to Implement

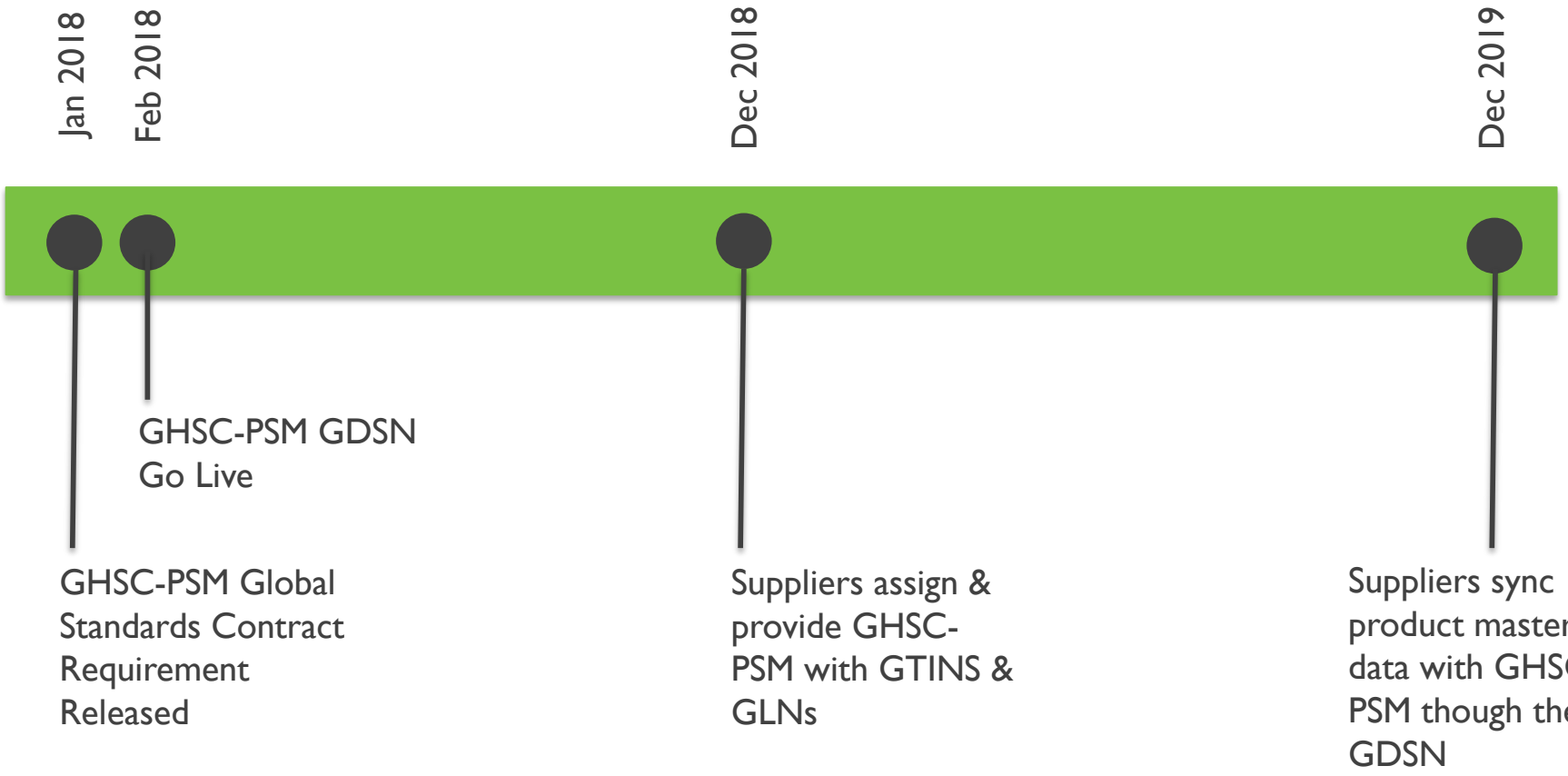
How to get GS1 compliant

1. Register with a GS1 Member Organization (MO) to obtain a GS1 Company Prefix
2. Assign a Global Trade Item Number (GTIN) to all items
3. Assign a Global Location Number (GLN) for relevant legal entities and locations
4. Subscribe to a GDSN-certified data pool provider of your choice
    - A list of all GDSN-certified data pool providers can be found at https://www.gs1.org/services/gdsn/certified-data-pools
    - 1WorldSync has a special offer for GHSC-PSM suppliers to join the GDSN. For more information, contact +1-866-280-4013 or businessdevelopment@1worldsync.com

How to publish item data in the GDSN

1. Complete the Trading Partner Form available via http://www.1worldsync.com/customer-page/ghsc-psm/
2. Load the GTIN, GLN, and associated item data into your GDSN data pool solution
   - Reference the GHSC-PSM Data Synchronization Attribute Guide for a complete list of attribute requirements
3. Provide your GTINs and GLNs to GHSC-PSM via the GTIN Submission Form to datasync@ghsc-psm.org
4. GHSC-PSM will subscribe to your GLN in the GDSN
5. Publish those items to GHSC-PSM production GLN 0858939007009
   - Reference the GHSC-PSM Data Synchronization Implementation Guide for more detailed specifications related to publication
6. Continue to maintain items through the data synchronization process

GHSC-PSM GDSN Timeline



USAID Global Health Supply Chain Program

GS1 resources

- For a list of all GDSN-certified data pool providers:
  - https://www.gs1.org/services/gdsn/certified-data-pools
- For a list of all GS1 Member Organizations:
  - https://www.gs1.org/contact/overview
- To learn more about GS1, including implementation of the GDSN, register to attend one of the 2018 GS1 Healthcare Conferences
  - April 10 – 12 in Bogota, Colombia
  - May 8 – 10 in Addis Ababa, Ethiopia
  - October 30 – November 1 in Bangkok, Thailand
  - https://www.gs1.org/healthcare/events

GHSC-PSM resources

- For more details on GHSC-PSM's requirement:
  - http://ghsupplychain.org/globalstandards
- GHSC-PSM's GDSN Landing Page:
  - http://www.1worldsync.com/customer-page/ghsc-psm/
- Key contacts:
  - GHSC-PSM Global Standards Team: globalstandards@ghsc-psm.org
  - GHSC-PSM Data Sync Team: datasync@ghsc-psm.org

1WorldSync resources

- Website:
  - http://www.1worldsync.com/
- Key contacts:
  - businessdevelopment@1worldsync.com
  - +1-866-280-4013