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

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management
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

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GHSC-PSM

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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
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

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

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 save lives. As we continue to enable process improvements and install 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://ghs Supplychain.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/gsn/certified-data-pools.

Please consult GHSC-PSM’s GDSN landing page at http://www.1WorldSync.com/customer- info/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 for the GHSC-PSM go live in April – June 2018.

Sincerely,

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

Available here
The GS1 Global Standards Organization
GS1 – an international standards organization

1 million
over 1 million companies use GS1 standards worldwide

150 countries
25 industries served across 150 countries

6 billion
Barcodes scanned more than 6 billion times per day globally

112 MOs
112 Member Organisations around the world

Source: GS1 Global Office

USAID Global Health Supply Chain Program
### Identify: GS1 Standards for Identification

<table>
<thead>
<tr>
<th>GLN Global Location Number</th>
<th>GTIN Global Trade Item Number</th>
<th>SSCC Serial Shipping Container Code</th>
<th>GRAL Global Returnable Asset Identifier</th>
<th>GIAI Global Individual Asset Identifier</th>
<th>GSRN Global Service Relation Number</th>
</tr>
</thead>
</table>

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

**GS1 Barcodes**
- EAN/UPC
- GS1-128
- ITF-14
- GS1 DataBar
- GS1 DataMatrix
- GS1 QR Code
- GS1 Composite Barcode

**GS1 EPC/RFID**
- EPC HF Gen 2
- EPC UHF Gen 2

### Share: GS1 Standards for Data Exchange

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

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**USAID Global Health Supply Chain Program**

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.
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

**USAID Global Health Supply Chain Program**
GDSN in the healthcare industry

• Overall, there are more than 24 million GTINs and 44,000 GLNs in the GDSN

• In healthcare –

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total GTINs</strong></td>
<td>2,103,245</td>
</tr>
<tr>
<td><em>Device GTINs</em></td>
<td>1,578,835</td>
</tr>
<tr>
<td><em>Pharma GTINs</em></td>
<td>67,437</td>
</tr>
<tr>
<td><em>All other GTINs</em></td>
<td>456,973</td>
</tr>
<tr>
<td><strong>Total GLNs</strong></td>
<td>3,811</td>
</tr>
<tr>
<td><strong>Total Target Markets</strong></td>
<td>96</td>
</tr>
</tbody>
</table>

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

USAID Global Health Supply Chain Program
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


2. Load the GTIN, GLN, and associated item data into your GDSN data pool solution
   - Reference the [GHSC-PSM Data Synchronization Attribute Guide](http://www.1worldsync.com/customer-page/ghsc-psm/) for a complete list of attribute requirements

3. Provide your GTINs and GLNs to GHSC-PSM via the [GTIN Submission Form](mailto:datasync@ghsc-psm.org) 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](http://www.1worldsync.com/customer-page/ghsc-psm/) for more detailed specifications related to publication

6. Continue to maintain items through the data synchronization process
GHSC-PSM GDSN Timeline

- Jan 2018: GHSC-PSM Global Standards Contract Requirement Released
- Feb 2018: GHSC-PSM GDSN Go Live
- Dec 2018: Suppliers assign & provide GHSC-PSM with GTINS & GLNs
- Dec 2019: Suppliers sync product master data with GHSC-PSM though the GDSN
THANK YOU
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