Barcode Registration to GDSN Synchronization

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management
The following training is based on materials developed by 1WorldSync and GS1 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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Today’s Attendees

• Manufacturers
• Suppliers
• GHSC-PSM
• USAID
• GS1
• 1WorldSync
Meeting Objectives

• Build awareness of the upcoming GHSC-PSM GS1 deadlines

• Provide education on:
  – GHSC-PSM’s initiative
  – GS1 standards
  – Master data & the GDSN

• Review timelines and required actions to get compliant

• Provide information about supporting resources
# 2018-2019 Timeline for Compliance

## 1. Now! Identification & Labeling
- Assign GTINs & GLNs
- COMPLETE GTIN & GLN Submission Form [HERE](#)
- Label your tertiary pack trade items*  

## 2. Register for Data-pool
- Data-pools are the mechanism for sending GTIN master data to GHS-PSM
- Find List of Data Pools [HERE](#)

## 3. Publish Content to GHSC-PSM
- COMPLETE Trading Partner Form [HERE](#)
- Attribute Requirements
- GDSN Process and Communication

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<th><strong>DEADLINE</strong></th>
<th><strong>RECOMMENDED</strong></th>
<th><strong>DEADLINE</strong></th>
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<td>30th December 2018</td>
<td>30th January 2019</td>
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*Required for pharma, medical devices, sterile test kits, laboratory reagents only
Introduction & Progress
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

More information available here
Summary of GHSC-PSM GS1 Global Standards Requirements

Phase 1
- Homogenous Trade Item
  - GS1 Data Matrix or GS1-128 barcode encoded with:
    - (01) GTIN
    - (10) Batch/lot
    - (17) Expiration Date

Phase 2
- Mixed or Partial Trade Item
  - GS1-128 barcode encoded with:
    - (00) SSCC

Phase 3
- GS1 Data Matrix or GS1-128 barcode also encoded with:
  - (21) Serial Number
- GS1-128 barcode encoded with:
  - (00) SSCC

MASTER DATA
- GTIN for each unit of measure
  - (416) GLN Sold-From
  - (415) GLN Invoice-From
  - (414) GLN Production
- All item master data submitted through the GDSN*

SECONDARY PACKAGING
- Trade Item

TERTIARY PACKAGING
- Trade Item
  - Pharmaceutical
  - Medical devices, Sterile Test Kits & Laboratory Reagents
  - Other global health commodities

Identify Items & Locations
Capture data on barcode label
Share data with trading partners

*For more information on how to comply: www.1worldsync.com/customer-page/ghsc-psm
For more information on our requirements: http://ghsupplychain.org/globalstandards

GTIN: Global Trade Item Number
GLN: Global Location Number
GDSN: Global Data Synchronization Network
SSCC: Serial Shipping Container Code
GDSN data will feed into ARTMIS and form the basis of the GHSC-PSM product catalog
The GDSN opportunity for global health

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.
Opportunities for GHSC-PSM with GDSN

- Information asymmetry is rampant in our supply chains. GDSN provides a single source of truth on Master Data – the supplier!
- Get a consistent set of attribute data from all trading partners
- Near real-time updates if product data changes
- Opportunity to receive registration (marketing authorization) information in a standard and consistent manner
- GHSC-PSM will have the same identifying data as UNFPA, Global Fund, and others, improving cross-agency procurement analytics
- Countries want to use GDSN data as the basis for a National Product Registry
In Summary…

• This is new to all of us!
  – We don’t have all of the answers (yet)
  – We will work with you to figure it out
  – We are keen to start early and do testing with anyone who is ready to start
  – Communication will be key

• Countries are very interested in this service – lack of consistent identification and poor master data is central to supply chain challenges!

• We really believe that this will have a transformational impact in the global health community
GS1 in the Healthcare Industry
GS1 standards framework

**Identify**
*Globally unique identification keys*
- Companies, Products, Locations, Patients, Providers, Logistics, Assets, Documents, Services, Shipments, Consignments

**Capture**
*Automatic data capture*
- Barcodes and EPC-enabled RFID

**Share**
*Exchange of patient care & business critical information*
- Master Data, Transactional Data, Traceability & Event Data and Digital Content
The GS1 system of standards

USAID Global Health Supply Chain Program
The GS1 Global Company Prefix (GCP)

- The GS1 Global Company Prefix is the base component used to create a GS1 Key such as a Global Trade Item Number (GTIN).
- The GS1 Global Company Prefix is a license to create GS1 Keys and is issued by any one of the GS1 Member Organisations to companies who wish to use the GS1 system of standards.

![Diagram of GS1 company Prefix](image)
Getting Started with GS1 Standards

Ten Steps to Barcode Implementation

1. Get a GS1 Company Prefix
2. Assign numbers
3. Select a barcode printing process
4. Select a "primary" scanning environment
5. Select a barcode
6. Pick a barcode size
7. Format the barcode text
8. Pick a barcode colour
9. Pick the barcode placement
10. Build a barcode quality plan

https://www.gs1.org/standards/barcodes/10-steps-to-barcode-your-product/english
Packaging Level Hierarchies

Identification at all levels

Note: * There is no globally standardized definition of “tertiary package”…

Note: Images shown are for illustration example only, refer to local regulations and/or the latest version of the GS1 General Specification for more detail.
GS1 Barcodes in a Healthcare Hierarchy

GTIN A (GTIN-14)
29504000059273

GTIN B (GTIN-14)
39504000059270

GTIN C (GTIN-14)
49504000059277

GTIN D (GTIN-14)
69504000059271

GTIN E (pallet as a Trade Item with GTIN-14)
89504000059275
GS1 DataMatrix: The Favored 2D Carrier for Pharmaceuticals

Note: These are the four data elements supported by regulators
Related GS1 Resources

• Healthcare GTIN Allocation Rules

• Healthcare GLN Guideline

• GS1 General Specifications
  https://www.gs1.org/standards/barcodes-epcrfid-id-keys/gs1-general-specifications
GDSN: How it works & common misconceptions
Synchronizing Your Product Information

1) Is there a match?
- Target Market (Development Assistance)
- GLN
- GTIN
- Target Market (Development Assistance)
- GLN
- GTIN

1) Secure connection established between supplier and recipient
2) Product content is shared (synchronized) and updated in real time

USAID Global Health Supply Chain Program
Product Information: Entering Information

1. The Attribute Guide
The attribute guide serves as a dictionary/reference to attributes that USAID GHSC-PSM needs to receive.
Attribute Guide Link

2. Product Content Entry and Publication
Once you register with a data-pool service provider, you will have access to a platform where you can enter the specific GHSC-PSM attributes as data entry fields.

This information is securely stored on the data-pool and the information provider chooses who to send (publish) the entered information to.
Preparing for GDSN: Internal Structure

1. TEAM
   Approval of Product Content
   - Executive Buy-in
     - Marketing/Sales Department
     - Regulatory/Legal Department
     - Supply Chain Department

2. Process Approved Content
   Effective and Responsive Data Management Workflow

3. TEAM
   Master Data Management Team
   - Aggregates Information
   - Owns the GDSN Process
     - Sends Content
     - Makes Corrections

4. Process Feedback Channels

USAID Global Health Supply Chain Program
Once you are in, you can reach out to the broader industry.
Misconception 1: GTINs and GLNs can only be assigned to one Target Market

• GTINs and GLNs can be assigned to multiple target markets!
• This GDSN model works off a basic principle:
  – The entire set of data attributes are assigned to a GTIN
  – Those attributes may vary depending on who provides the information (GLN)
  – Those attributes may vary by which target market (TM) the data is designed for
• The following attributes that should not change across GTIN, GLN, Target Market
  ✓ GTIN
  ✓ GPC Category Code
  ✓ Brand Owner (GLN)
  ✓ Brand
  ✓ Sub Brand
  ✓ Functional name
  ✓ Variant
  ✓ Trade item unit descriptor
  ✓ Country of origin
  ✓ Quantity of next lower level trade item
  ✓ Net content
  ✓ Net content UOM
  ✓ Is trade item a base unit
  ✓ Is trade item a consumer unit
  ✓ Is trade item a variable unit
  ✓ Cancelled date
**Misconception 2: The GDSN exchanges transactional information**

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<th>GS1 GDSN</th>
<th>GS1 EDI</th>
<th>EPCIS / CBV</th>
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<tr>
<td>The Global Data Synchronization Network</td>
<td>Electronic Data Interchange</td>
<td>Electronic Product Code Information Services</td>
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### Master Data
- General Item Information / Classification
- Product Description Information / Images
- Unit Indicators / Hierarchy
- Dimensions / Packaging Information
- Contact Information / Additional Trade Items
- Storage, Handling, Shelf Life
- Warranty Information
- Ingredient Information / Pharmaceutical
- URL Links to Additional Information
- Market Authorization / Hazardous Information

### Transactional Data
- Add Items GTIN & Quantities
- Change Orders (Price, Items & Dates)
- Product Activity Exchanged
- Shipment tracking numbers
- Order Level PO Information
- Discounts
- Payment Terms
- Invoice Details

### Event Data
- What: EPC Number leverages GTIN
- Where: Location (Leverage GLN)
- When: Event Time, Record Time
- Why: Business Process (Receiving, Shipping), Product State (Active, In-Transit), Current Condition (Temperature Being Stored)

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**What item is this?**
- Item
- Pack
- Case

**What did this cost?**
- Price
- Items & Dates

**Who touched this along the way?**
- Business Process (Receiving, Shipping)
- Product State (Active, In-Transit)
- Current Condition (Temperature Being Stored)
Misconception 3: Suppliers must use the same data pool as GHSC-PSM

- GHSC-PSM suppliers can use any GDSN data pool
- As the world’s largest data pool, 1WorldSync would love to partner with you to meet the GHSC-PSM requirement
Timelines & Actions
2018-2019 Timeline for Compliance

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DEADLINE 30th December 2018
RECOMMENDED 30th January 2019
DEADLINE 30th December 2019

*Required for pharma, medical devices, sterile test kits, laboratory reagents only
I. Identification & Labeling

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. Fill out the GHSC-PSM GTIN and GLN Submission Form
   • https://www.ghsupplychain.org/sites/default/files/2018-08/20180812%20GHSC-PSMGTIONSubmissionForm_V1.1_Final.xlsx
5. Follow the GS1 barcode implementation guidance to print barcode labels on your tertiary pack trade items*

**DEADLINE**
30th December 2018

*Required for pharma, medical devices, sterile test kits, laboratory reagents only
2. Register for Data Pool

1. 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

2. Internal Preparation
   - Work with existing or establish an internal master data management process
   - Get executive buy-in and create internal initiatives to allow you to invest time and resources in GDSN

**RECOMMENDED COMPLETION**

30th January 2019
3. Publish Content to GHSC-PSM

1. Complete Trading Partner form and GHSC-PSM will subscribe to your GLN in the GDSN
   - 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. Publish items to GHSC-PSM production GLN 0858939007009
   - Reference the GHSC-PSM Data Synchronization Implementation Guide for more detailed specifications related to publication

4. Continue to maintain items through the data synchronization process

**DEADLINE**
30th December 2019
Resources
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 upcoming GS1 Healthcare Conferences
  – October 30 – November 1, 2018 in Bangkok, Thailand
  – March 26 – 28, 2019 in Noordwijk, Netherlands
  – November 5 – 7, 2019 in New Delhi, India
  – 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

• For upcoming events and training opportunities you can visit:
  – https://www.1worldsync.com/services/education-training/
THANK YOU