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GS 1 Standards Implementation: Summary of Key Findings and Additional Recommendations

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USAID Global Health Supply Chain Program

Glossary of Terms

Term used in this deliverable	Definition	Global Health/ GHSC-PSM term
Commodity (type)	Generic type of product (e.g., aspirin 325 mg).	Product
Trade items	Anything that may be priced, order, or invoiced anywhere in the supply chain. Can be an item, case, pallet, etc. – whatever packaging configurations that a manufacturer offers for sale. Often informally referred to in industry as "products."	Item
Product master	Authoritative database of product information. Data source for any/all other systems across the enterprise that need product information.	Datamart, product catalog, data store, etc.
Transactions	Electronic data interchange or paper-based business documents/messages exchanged between trading partners (e.g., purchase order; invoice, advanced shipping notice, packing slip).	Transactions
Business process	An activity or set of activities to accomplish an organizational and/or operational goal (e.g., shipping, receiving, etc.).	Transactions
Business step	Individual steps/physical activities performed as part of a business process.	Transactions

Standards Implementation: Expectations and Experience

"It's a journey."

- Many organizations struggle to understand what it means to "implement GS1 Standards" and how to approach implementation of the standards.
- In reality, it is a phased, iterative process with a learning curve that builds each capability piece by piece.
- Much progress has been achieved by GHSC-PSM in laying the groundwork, and the work will continue, as it always does.
- It's important to remember that it's a process – not a finish line.

Key Points:

- **Set expectations and planning around implementing and using** foundational elements across systems piece by piece for certain capabilities
  - Master data = Global Trade Item Number (GTIN) and Global Data Synchronization Network (GDSN)
  - Order process = purchase order; etc.
- Plan to **pilot test** with one to two partners before wide-scale implementation if/where possible.
- **Incorporate time to integrate learnings** from implementation and use of each piece to drive momentum and promote success.
- Identify **benefits** expected for each use and **metrics** for measuring them.
  - **Measure and monitor** metrics throughout each phase.
  - Highlight benefits achieved and any potential adjustments that may need to be made.
- **Standards education and experience are a key performance indicator** for success throughout the process.
  - Plan rollout to leverage education and experience through each phase.

GHSC-PSM AND ARTMIS

Implementation Roadmap

- **Key Considerations**
  - *Appendix A: The GHSC-PSM Supply Chain* details key considerations and research findings on which this roadmap and recommended GHSC-PSM rollout strategy was based.
- **Note About Serialization and Track & Trace**
  - There has been significant interest in learning about serialization and item-level applications.
  - Need to realize that these types of standards implementations are very advanced.
  - Although it is good to see the bigger picture and have a vision for the future:
    - USAID/GHSC-PSM and the recipient countries are just beginning the process of implementing GS1 Standards. Those types of goals lie much farther out in the future.

Recommended Rollout Strategy for GHSC-PSM

- The first step in any standards implementation is to **lay the foundation: implementing GTIN and GDSN in systems**.
- Beyond that, our research revealed that logistics activities throughout the channel are **heavily dependent on batch/lot and expiration date** for inventory management.
  - Suggesting a significant need for and potential benefits from case-level identification and barcoding.
- At this time, we recommend that GHSC-PSM focus on:
  - GTIN and GDSN
  - Purchase order
  - Case-level identification
  - Pallet-level identification and advance ship notice (ASN)
- Notes and key activities for each focus are provided in the table below.

Recommended Rollout Strategy for GHSC-PSM

(continued)

Implementation Focus	Activities/Notes (prior to wide scale rollout)
GTIN* and GDSN **** lowest saleable unit and homogeneous case***	– Plan and implement changes to ARTMIS to accommodate GTIN – Work with data pool to prepare for GDSN – When ready, identify one or two suppliers to run a GTIN/GDSN pilot to test GDSN synchronization to product master, and flow-through of GTIN attributes to ARTMIS
Purchase order	– Plan and implement any changes to the ARTMIS ordering function and purchase order (PO) to accommodate GTIN. – Identify one or two suppliers to run a pilot to test the new PO and procurement/ordering function.
Case-level identification	– Homogeneous cases: GTIN and Heterogeneous or partial cases: SSCC – Plan and implement changes to ARTMIS to convert item-level requisition amounts to case-level purchase orders
Pallet-level identification and ASN	– Plan and implement changes to ARTMIS ASN to accommodate SSCC and aggregation data – Identify one or two suppliers to run a pilot to test the new ASN

Impact of Case-Level GTINs on Procurement

- Currently, there is a **heavy item-level focus in USAID/GHSC-PSM operations**, e.g., 30,000 items, 500,000 items.
  - Necessary to simplify certain activities, e.g., demand planning; quantifying requisition amounts.
- However, **case-level GTINs** should be leveraged wherever possible in procurement strategies.
  - Lays the foundation for cases to be marked with GTIN, batch/lot, and expiration to support downstream operations.
  - Enables more efficient and less costly procurement when possible.
- **IMPORTANT:** Case-level GTINs, batch/lot, and expiration date are triggered only if/when GHSC-PSM procurement teams actually order by the case.

Impact of Case-Level GTINs on Procurement *(continued)*

Recommendations

- **Define a procurement strategy** for rounding up or down based on GTIN case quantity for selected product, minimum requisition order quantities, etc.
- **Requisition orders** from countries and demand planning can still be based on **unit estimates**
  - Because specific products to be used for fulfillment are not selected until later in the process and case quantities vary across suppliers
  - Should be understood that amounts will be adjusted/converted during procurement based on case quantity
- ARTMIS needs to be able to **convert item-level requisition amounts to case-level purchase orders**.
  - Should **leverage the quantity fields** associated with case GTINs in the product master
- **GHSC-PSM procurement teams need education and training** on case-level procurement strategy and implementation
  - Currently order/purchase at the item level
  - Need to order by the case whenever possible to trigger case-level GTINs, batch/lot, and expiration date on cases to support downstream operations

Impact of Case-Level GTINs on Procurement *(continued)*

Recommendations

- Work with suppliers to develop strategies to **max out full cases and full pallets** wherever possible, and minimize or eliminate partials.
  - Do not limit the discussion and strategy to one product.
  - Enable evaluation of strategies for orders encompassing multiple products.
- Define GHSC-PSM **preferred strategy for "less than full" case quantities** if/when they occur
  - Would you prefer full mixed case or partial homogeneous case?
- Define GHSC-PSM preferred strategy for **"less than full pallet" quantities** if/when they occur
  - Would you prefer full mixed pallet or partial homogeneous pallet?
- Consider costs, benefits, and operational impact of both options.

Data Quality Compliance Monitoring Metrics

- As discussed in the GDSN and data quality presentation, data quality is less about technology and more about data governance, organizational discipline, and formalized processes.
- Periodic auditing of certain key attributes to validate that they are correct against the physical product is part of a data quality program.
- GHSC-PSM can be strategic in how it approaches this:
  - Focus initial data quality efforts on **weights and dimensions attributes**
  - Benefits:
    - Common areas for data quality issues
    - Can cause significant waste in transport and logistics operations
    - Enables strategic use of teams to find issues

Data Quality Compliance Monitoring Metrics *(continued)*

- Errors in weights and dimensions will **cause transport and logistics operational issues**
  - Issues cubing or weighing out trucks
  - Fines for being overweight
  - Problems with warehouse storage management due to pallets not fitting as expected per dimension attributes, etc.
- STRATEGY:
  - Leverage transport, warehouse, and in-country logistics operations teams to help identify products that need to be checked
  - Communicate the following list of questions to these teams to help them identify the types of issues they should be looking for and reporting to GHSC-PSM to help identify data quality issues in weights and dimension attributes

Data Quality Compliance Monitoring Metrics *(continued)*

- Do your distribution and transportation teams routinely struggle with certain items, e.g., pulling pallets off trucks because products would not fit or are too heavy; pallets too tall to double stack; pallets too tall for racking?
- Does your customer service team routinely get complaints about certain items, e.g., order multiples, adjustments, damages?
- Are there certain distribution centers (DCs) and warehouses where it is more challenging to build truckloads than others?
- Are there cases with excessive head space causing crushing?
- Are there pallets with excessive overhang or underhang?
- Do your distribution and transportation teams report problems with specific cases that have excessive or repetitive instances of damage?

Data Quality ROI Calculator for Brand Owners: Transportation Costs & Case Dimensions. GS1 US. 2016.

Data Quality Compliance Monitoring Metrics *(continued)*

- Formalize a process for transport, warehouse, in-country logistics, and GHSC-PSM customer service teams to report issues to GHSC-PSM
  - Including GHSC-PSM data quality contact person, periodic reporting of issues, e.g., weekly, monthly, and the information they need to report, e.g., GTIN, problem description, date, shipment or ASN number.
- Formalize a process for the GHSC-PSM data quality contact person to report issues to suppliers:
  - Require a data quality contact person at the supplier, including name, phone number, and email; a process for submitting issues, e.g., initial phone call; email; acknowledgement by supplier; and a timeline for the supplier to research the issue and resolve by updating the data in GDSN.

Institutionalizing GS1 Standards

- Knowledge about and experience with the standards are key performance indicators.
- Formalized, ongoing education and training are one of the pillars of a data quality program.
- The importance of institutionalizing GS1 Standards experience and expertise within GHSC-PSM cannot be overstated.

Institutionalizing GS1 Standards *(continued)*

Formalized Education and Training

- GS1 Standards are designed to support supply chain information needs, which are complex and layered. There are numerous levels of design embodied in each standard to support various needs and functionalities, e.g., GTIN: structure; segments; length; check digit; packaging levels.
  - **Formalized education and training throughout GHSC-PSM** will enable teams to cultivate deeper understanding of the standards to support successful and strategic implementation and use.
  - **Educational programs should support progression** from high-level understanding of standards, to technical considerations, to understanding the standards in action.
  - **Incorporating use-level education,** e.g., functional implementations, case studies, best practices, and lessons learned, is important for gaining insight about strategic approaches to implementation based on business processes and use.
  - **Different teams may focus on different standards** education, e.g., GDSN, GTIN allocation, use of barcodes in receiving operations, enabling the teams to cross-pollinate knowledge and collaborate to bring it all together.

Institutionalizing GS1 Standards *(continued)*

Training for Standards Integration into Business Processes

- Implementation of GS1 Standards is not simply a technical/systems effort
- Operational teams need to be trained in the use and impact/import of GS1 standards in their functions (business processes)
- If the standards are not implemented in business processes as well as systems, the benefits of the standards will be severely inhibited
  - Example: GHSC-PSM procurement teams currently order at the each level -- need to be trained to order at the case level wherever possible
    - GHSC-PSM supplier requirements for case-level GTINs, batch/lot, and expiration date marking only triggered for case-level products
    - If ordering eaches, cases won't have that information on the case label to support downstream operations

Institutionalizing GS1 Standards *(continued)*

Document Lessons Learned

- GHSC-PSM teams implementing GS1 Standards in systems and operations should be required to submit periodic reports of lessons learned.
- The GHSC-PSM organization should formally review these reports together on a standing periodic basis, e.g., monthly, quarterly.
- Promotes institutional knowledge sharing and collaborative learning.

Institutionalizing GS1 Standards *(continued)*

GHSC-SM Supply Chain Management Subject Matter Expertise Support

- Consider incorporating supply chain management (SCM) professional(s) with experience managing supply chain operations (SCOs) using GS1 Standards into the GHSC-PSM team to help institutionalize subject matter expertise (SME).
- This SME can help identify opportunities to evolve business processes and operations across procurement, delivery and return, and warehouse operations to optimize the benefits of using GS1 Standards.
- Also, this SME can provide advice and support for in-country operations as standards implementation progresses.
- Pharmaceutical or medical device distributors are recommended, as their experience will more easily align with GHSC-PSM's business model.

Institutionalizing GS1 Standards *(continued)*

GS1-Based RDC/Warehouse Management SME

- The GHSC-PSM warehouse management RFP and contract included language about the ability to support and use GS1 Standards.
- To enforce that provision and ensure that the contractor can fulfill that obligation, it is recommended that GHSC-PSM have the contractor verify that it has someone in management with significant experience managing regional distribution centers (RDCs)/warehouses with GS1 Standards (identifying them and providing their CV).
- This SME is necessary to identify any needed process changes and to ensure that the contractor's operations actually leverage the standards to improve operations.

Institutionalizing GS1 Standards *(continued)*

GS1-Based Transport Operations SME

- If the GHSC-PSM transport RFP and resulting contract with K+N includes language about the ability to support and use GS1 Standards:
  - Recommended that GHSC-PSM use that provision to require K+N to have onsite management personnel with significant experience managing storage and transport operations using GS1 Standards.
- This SME is necessary to identify any needed process changes and to ensure that the contractor's operations actually leverage the standards to improve operations.

Follow-Up Technical Notes for ARTMIS

- **Naming GHSC-PSM-Specific Attributes and ARTMIS Fields**
  - Care needs to be taken in naming GHSC-PSM-specific attributes and ARTMIS fields so they are clear as to precise definition, especially when they are close to an existing GTIN attribute and/or a regulatory attribute, e.g., pediatric/adult designation.
- **GDD versus GDSN Attribute Definitions**
  - The GS1 Global Data Dictionary (GDD) evolved from use of data in transactions and pre-existing GDSN.
  - Although there is strong overlap across the definitions, GHSC-PSM should leverage GDSN and GS1 US Attribute Explorer for attribute definitions to ensure best understanding of the attributes in the context of master data management and data synchronization.

Follow-Up Technical Notes for ARTMIS *(continued)*

- **The Importance of GTIN Meta-Data Requirements**
  - GTINs must be stored in systems in a fixed length, 14-digit, alpha-numeric field with leading zeros.
  - This was noted in Deliverable 1, but it's important to reinforce why because ARTMIS uses a default field length for most fields:
    - GS1 Standards enable manufacturers to assign GTINs in different lengths (8, 12, 13, and 14 digits) depending on needs and applications.
    - The GTIN meta-data standards enable systems to parse and interpret GTINs no matter how they are assigned.

Follow-Up Technical Notes for ARTMIS *(continued)*

- **Sharing GDSN Data with Recipient Countries**
  - In the GHSC-PSM business model, GHSC-PSM operates much like a distributor, with suppliers/manufacturers as their upstream partners and recipient countries as their downstream partners.
  - In this model, downstream partners can receive product information either directly from the manufacturer or from the distributor.
  - Although GHSC-PSM will receive GTIN attributes from suppliers/manufacturers through GDSN, it will need to determine how to best share GTIN attributes with recipient countries for the products USAID/GHSC-PSM provides.

Recipient Countries

Recipient Countries

- One of USAID's goals is for recipient countries to be able to leverage the GS1 Standards that GHSC-PSM implements
  - To support global health reporting and analytics, as well as their own operations.
- The following recommendations can help support that goal.

Establish a Recipient Country Engagement Program

- As GHSC-PSM progresses through implementation and use of various standards, it is recommended that there be a formal information exchange program with recipient countries.
- The program should inform recipient countries about what GS1 Standards they will be experiencing/seeing with USAID-provided commodities in advance of those requirements sunrising.
- Also, the program should look to provide practical insights and guidance for how to leverage the standards they will be seeing in their systems and operations.
- Leverage and share the lessons learned documentation developed by GHSC-PSM systems and operational teams (discussed above) to communicate and share this vital information with recipient country counterparts.
- For example, the program may sponsor an annual or semiannual conference for recipient countries where GHSC-PSM and supply chain experts share insights based on their implementation experience that the countries can use for their own implementations, and provide guidance for how to use the standards into their operations and business processes.

Regulatory Efforts

- Some recipient countries are examining whether they should also adopt GS1 Standards and integrate them into regulatory requirements.
  - These efforts would extend implementation of GS1 Standards across all commodities in the country, not just those provided by USAID.
- Nonetheless, there exist certain regulatory needs in recipient countries today that, although not standards-based, will undermine the benefit and use of the standards for things like traceability and authentication.

Regulatory Efforts *(continued)*

- Example from our report titled "Ethiopia Anti-Counterfeit Pilots: Recommendations and Insights"
  - Discussed the importance of regulatory requirements for **pharmaceutical packaging disposal**
  - Disposed pharmaceutical packaging is a cheap, easy packaging option for counterfeiters.
    - Simply collect the trash from facilities and get free, authentic packaging in which they can distribute their counterfeit goods
  - Many countries around the world have strict packaging disposal regulations for just this reason; however, **Ethiopia does not**.
  - The pilot was looking to test an app that enables users to scan a GS1 barcode + serial number from a product label to authenticate the product and enhance patient safety.
  - However, counterfeit products in stolen/recycled packaging will be read as authentic – completely undermining a valuable use of GTIN + serial number.

Regulatory Efforts *(continued)*

- Therefore, beyond supporting regulatory requirements for GS1 Standards, it is also important to support regulations to resolve issues that inhibit a country from taking advantage of all that the standards have to offer. Examples:
  - Pharmaceutical packaging disposal regulations
  - Customs procedures (to tie legal entry documents to supply chain information through Serial Shipping Container Code (SSCC), advanced shipping notice (ASN), etc.)

Donor Community and Long-term Strategies

GLN Strategy

- Location/party identification and data quality are significant issues within the USAID/GHSC-PSM supply chain and the global health supply chain
- Evaluation of GS1 Global Location Number will be a longer-term strategy due to issues of compatibility with ARTMIS, as well as questions about how to implement by various actors including recipient countries.
- Key notes:
  - Manufacturers will likely need only a few GLNs to support GHSC-PSM operational needs, e.g., manufactured-by, shipped-from.
  - GHSC-PSM will likely need only a few GLNs (e.g., bill-to, warehouse locations, RDC locations).
    - *NOTE: since the original writing of this report, it has been discovered that GHSC-PSM is sub-contracting warehouses and distribution centers. Therefore, GHSC-PSM would not assign those GLNs. Instead, the subcontractor would actually assign the GLNs to those locations.*
  - The real challenge involves the recipient countries, which have large, in-country distribution channels often with hundreds of locations that would need GLNs.

GLN Strategy *(continued)*

- Although the supply chain ends for GHSC-PSM at CMS/MSD locations, there is a need for party/location information throughout the rest of the in-country distribution channel to support collaborative efforts, as well as global health reporting and analytics.
- Questions remain about who is best positioned to assign and manage GLNs: the country; a consortium of donor organizations, etc.
- It is recommended that the donor community and recipient countries work together to assess and evaluate.

GLN Strategy *(continued)*

- **GS1 US DATAHUB LOCATION: CAPTURING AND SHARING GLN INFORMATION**
- GS1 US provides a tool called DataHub Location that enables users to:
  - Create, store, and manage their own GLNs and associated location information
  - Search, view, and download other companies' GLNs and location information
  - Connect to GS1 US Data Hub using an API
- Any company can use GS1 US DataHub Location for a fee. USAID will be able to use DataHub Location to support USAID with GLN implementation with both US and non-US trading partners.

GLN Strategy *(continued)*

PARTY	WHO's GLNs	CAN USE DATAHUB LOCATION TO:
USAID	Its own GLNs	• Create, store, manage, and download USAID GLNs and associated location information. • Share USAID GLNs and location information with trading partners in one of two ways: ○ Trading partners who subscribe to DataHub: access USAID's GLNs and information from directly from DataHub , or ○ Trading partners who do not subscribe to DataHub: USAID can download a spreadsheet of USAID's own GLNs and associated location information and share it directly with trading partners
USAID	Trading partner GLNs	• Trading partners who subscribe to DataHub: USAID can search, view and download their GLNs and associated location information directly from DataHub • Trading partners who do not subscribe to DataHub: USAID can use the DataHub Location download spreadsheet as the template for its own spreadsheet to receive their GLNs and associated location information

GLN Strategy *(continued)*

PARTY	WHO's GLNs	CAN USE DATAHUB LOCATION TO:
Partners	Their own GLNs	• Trading partners who subscribe to DataHub: • *if are a GS1 US Member* - automatically generate/create GLNs from within DataHub • *If not a GS1 US member* - enter externally assigned GLNs and associated location information into DataHub manually • Trading partners who do not subscribe to DataHub: USAID can use the DataHub Location download spreadsheet as the template for its own spreadsheet trading partners use to submit their GLNs and associated location information
Partners	USAID GLNs	• Trading partners who subscribe to DataHub: search, view and download USAID' GLNs and associated location information directly from DataHub • Trading partners who do not subscribe to DataHub: USAID can download a spreadsheet of USAID's own GLNs and associated location information and share it directly with trading partners

Global Health Commodity Codes

- There is a need for commodity categories/classifications to be standardized across the global health supply chain so that all of the donor organizations and recipient countries can use the same commodity codes/values to support ordering, reporting, analytics, etc.
- GHSC-PSM evaluated options when designing ARTMIS, and ultimately decided to use UNSPSC for pharmaceuticals and GS1 GPC for medical devices and other commodities.
- If implementation and use of these classification prove sufficient for commodity classification/identification needs, then it is recommended that USAID/GHSC-PSM share this approach with the donor community and recipient countries to consider.

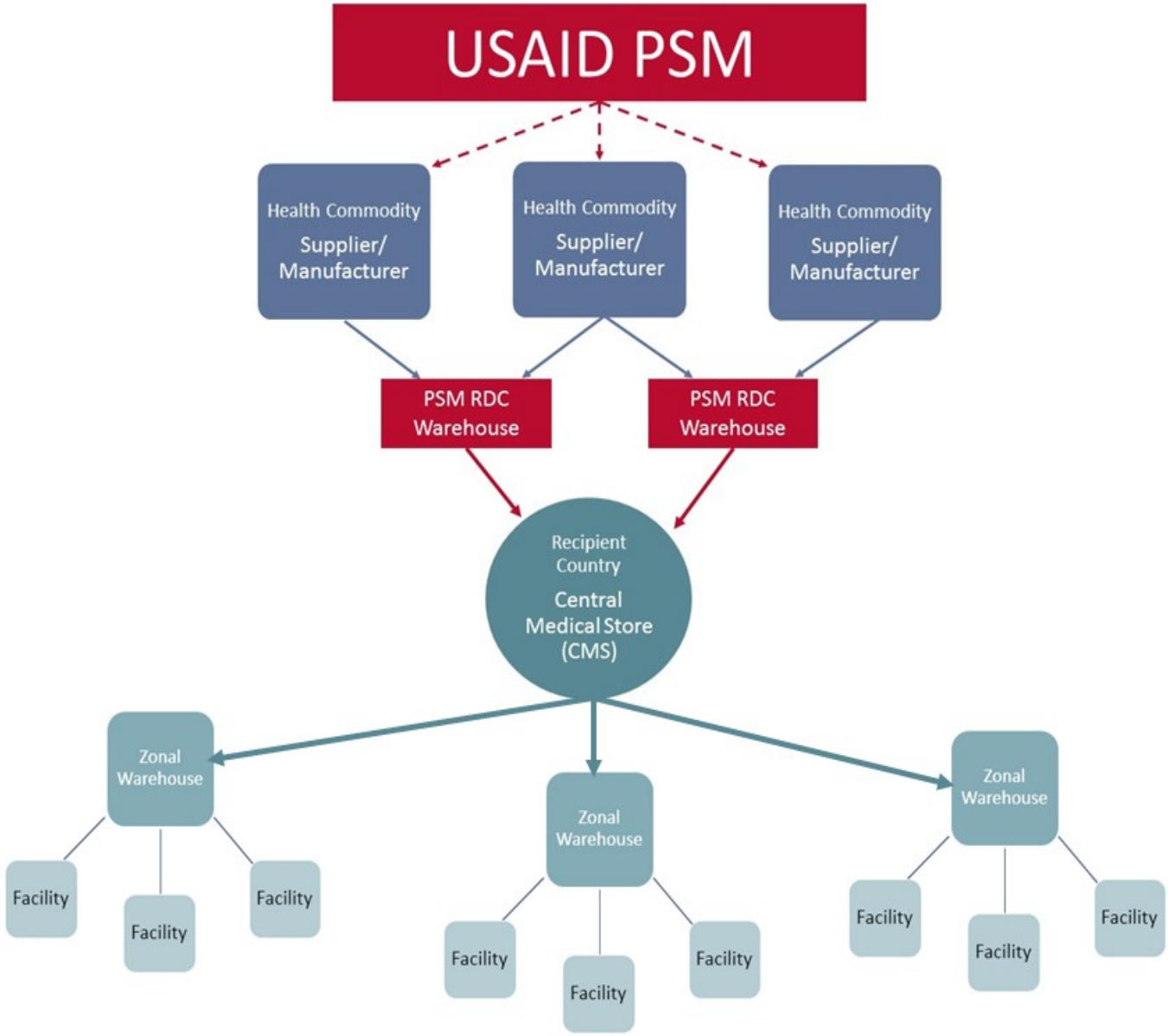
Appendix A: The GHSC-PSM Supply Chain

GHSC-PSM Supply Chain

- For the purposes of this discussion, the key members of the GHSC-PSM supply chain include GHSC-PSM sourcing/procurement, suppliers/manufacturers, GHSC-PSM warehouses and RDCs, and finally the recipient country's Central Medical Store (CMS). GHSC-PSM operational and logistics activities end at the CMS.
- *NOTE: Although GHSC-PSM operational activities end at the CMS, USAID support and efforts in-country continue beyond the CMS, and it is a long-term goal for countries to be able to leverage the GS1 Standards that GHSC-PSM implements to support global health reporting and analytics, as well as their own operations. Therefore, they have been included in this discussion as well.*

Snapshot of Participants an Product Flow

- *For simplicity, the diagram shows suppliers/ manufacturers only shipping to GHSC-PSM RDCs and warehouses. However, they also ship direct to country in certain circumstances.*



Core Business Processes

- As GHSC-PSM develops its implementation plan, it is essential to focus on the business processes being performed by the various participants.
- Research and analysis revealed the following core business processes for each participant:

Core Business Processes

Supply Chain Participant	Core Processes
USAID GHSC-PSM – Sourcing and Procurement	Product master data management (MDM) and data quality Demand planning and requisition management (commodity level) Order to cash transactions (product level)
USAID GHSC-PSM -- Warehouses and RDCs	Efficient receiving (pallet level) Disaggregation management First-in first-out (FIFO) management Aggregation management Shipping
Recipient Country Central Medical Store (CMS)/Medical Store Department (MSD)	Product MDM Efficient receiving (pallet level) Disaggregation management (pallet to case) FIFO management (case level) Order management (case level) Aggregation management (level varies) Shipping
Recipient Country Hubs and Warehouses	Efficient receiving (level varies) Disaggregation management (package to case) FIFO management (case level) Order management (case level) Aggregation management Shipping
Recipient Country Facilities	Efficient receiving (case level) Disaggregation management (case to item) FIFO management (item level) Inventory management (commodity level)

NOTE: Where identified, the level at which each business process is conducted is noted in the table. It is important to differentiate between pallet-level, case-level, and item-level operations to understand standards needs and establish implementation priorities.

Core Business Processes *(continued)*

- GHSC-PSM supply chain activities are conducted at different levels: pallet, case, item, commodity. Be acutely aware of each level when assessing needs and designing implementation/use strategies.
- Key standards implementation activities to support Sourcing/Procurement is product identification (GTINs), master data management (GDSN), and order-to-cash transactions.
- Key standards implementation activities to support all other participants include barcoding, logistics labelling, and logistics transactions (such as ASN).

Operational Considerations

Research throughout the GS1 Standards project revealed the following operational considerations that should help guide prioritization of standards implementation activities across GHSC-PSM:

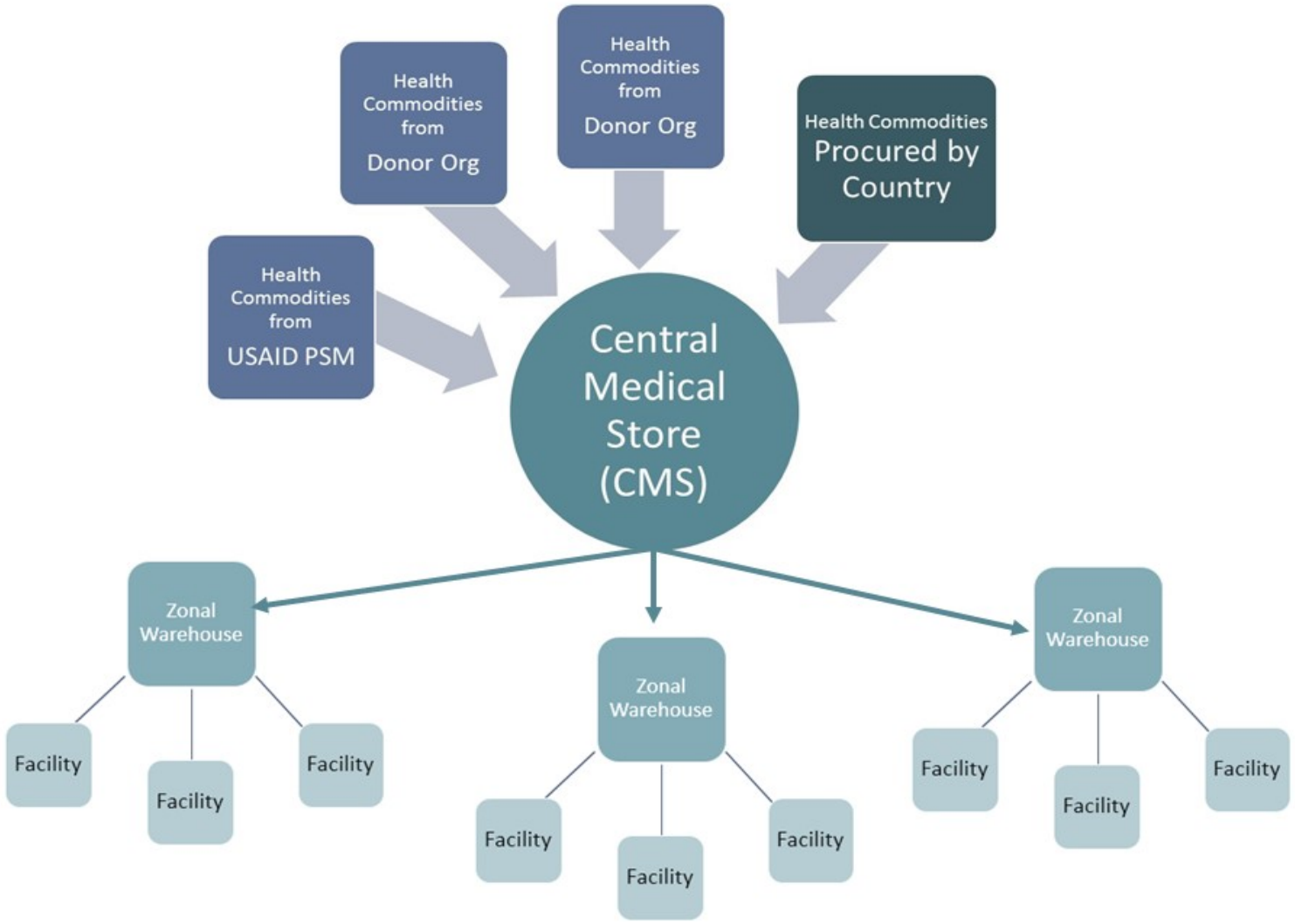
- USAID demand planning and country requisition activities are conducted at the commodity level with quantities expressed in terms of "eaches" (e.g., 30,000 units; 500,000 units).
- Orderable unit for GHSC-PSM procurement was also described as the "each" level.
- Batch/lot number and expiration date are essential information for supply chain management (SCM) activities throughout the channel.
- Visibility of batch/lot number and expiration date at the case-level is key as cases are not broken down to items until they reach the facility.
- There is an unknown level of breaking down inbound pallets and re-palletizing cases for outbound shipment at GHSC-PSM warehouses and RDCs.
- In-country, CMS breaks down pallets to cases, stores cases, and configures cases for shipment to hubs.
- Hubs break down inbound deliveries into cases, and configure cases for shipment to facilities.
- Facilities break down cases and manage inventory at the each level.
- Disaggregation and aggregation activities across the channel are not currently supported by standardized pallet-level identification.

Appendix B: The Global Health Supply Chain

The Global Health Supply Chain

- The global health supply chain is extremely complex: numerous donor organizations running numerous health initiatives to provide numerous health commodities from numerous suppliers to numerous recipient countries. Regardless of source, all health commodities are received in country at a CMS or MSD. From there, recipient countries manage the in-country distribution channel to distribute health commodities throughout their country (from the CMS/MSD, to zonal warehouses or hubs, to sub-hubs, and ultimately, to facilities).

The Global Health Supply Chain *(continued)*



The Global Health Supply Chain *(continued)*

- Today, there is no widespread use of supply chain standards by the donor community or recipient countries, creating operational and informational challenges for all participants. USAID's adoption of GS1 Standards, along with its partnerships and collaboration with other donor organizations and recipient countries, provides an opportunity for positive transformation across the global health supply chain. This is the long-term, larger vision. USAID GHSC-PSM's implementation of GS1 Standards is the first step. Nonetheless, it is essential to bear that larger vision in mind to support strategy development throughout GHSC-PSM's implementation of GS1 Standards.

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The USAID Global Health Supply Chain-Procurement and Supply Management project provides commodity procurement and logistics services, strengthens supply chain systems, and promotes commodity security.
We support USAID programs and Presidential Initiatives in Africa, Asia, Latin America, and the Caribbean, focusing on HIV/AIDS, malaria, and population and reproductive health commodities.