

GS1 Healthcare
Global GDSN Pilot Strategy

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Revision record

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1	21 March 2008	Peter Alvarez	Documentation of strategy as agreed to in the GS1 Healthcare GDSN Meeting, Granada, Spain
2	27 March 2008	Review Group	Resolution of comments from the Review Group listed above.

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1. Strategy

The global healthcare GDSN pilot strategy consists of two phases.

- Phase one: Execution of a pilot to assess and demonstrate how the GDSN and the attributes support local data synchronisation business needs in the Healthcare sector.
- Phase two: Connection to other markets to demonstrate how the GDSN supports the exchange of information across markets/countries and with multiple data pools in the Healthcare sector.

It is possible, and conceivable, that both phases can take place simultaneously if market conditions or trading partner business requirements necessitate it. For example, one market served by two GDSN certified data pools participating in the pilot at the same time.

Phase One

In this phase the trading partners conduct local data synchronisation in compliance with the GDSN standard within one country and / or market. In this scenario, the pilot is typically serviced by one data pool.

- Identification of participants.
 - Data Supplier (typically a manufacturer)
 - Data Recipient (typically a hospital or Group Purchasing Organisation).
 - A GDSN certified data pool.
- Identification of data requirements.
 - A list of the minimum GDSN required attributes is provided at the end of this document.
- Internal trading partner preparation.
 - GTIN and GLN assignment.
 - Preparation of internal data:
 - Master files, product data, supplier master, customer master among others.
- Preparation of internal systems.
 - Ensure internal systems are able to provide the data needed to execute the pilot.
 - Ensure internal connectivity of systems.

- Connection to solution providers (optional).
 - In some cases trading partners need to connect to a solution provider before or instead of connecting directly to a GDSN certified data pool.
 - This is a business driven decision based on a trading partner's operational requirements.
- Connection to a GDSN certified data pool (required).
 - A GDSN certified data pool is only access point to the GDSN.
 - The GDSN model is based on a single point of entry, where a trading partner chooses a data pool to serve their global needs.
 - Refer to the following link for a list of the currently certified GDSN data pools http://www.gs1.org/docs/gdsn/gdsn_certified_data_pools.pdf
- The certified data pool selected to service the pilot registers the trading partner's GLN and GTIN in the GS1 Global Registry®.
- The participating trading partners determine the product(s) and the GDSN attributes required for data synchronisation in the pilot.
- Exchange product(s) data with other trading partners via a GDSN certified data pool.

A successful pilot must satisfy the two following questions:

- Was data received as expected?
- Does the data fulfil the users' requirements?

The data format must be compliant with GDSN standards and must be exchanged across two or more GDSN certified data pools.

To participate in a GDSN pilot contact Peter Alvarez, Senior Director, GDSN Healthcare, GS1 GDSN, Inc. via email at peter.alvarez@gs1.org or office +1 609 620 4547.

Phase Two

Once the requirements of phase one have been satisfied the second phase of the global GDSN pilot can be executed. As stated above, it is possible that phase one and two can be accomplished simultaneously if two or more GDSN certified data pools service the pilot together.

- Agreement by at least two trading partners to exchange data across two or more GDSN certified data pools.
- Identification and agreement on the products and the data attributes required to satisfy the business needs of the participating trading partners.
- Connection to other markets via two or more GDSN certified data pools.
- Connecting to other markets requires coordination with the local trading partners and the GDSN certified data pools which serve them.
 - Solution providers if required.

A successful pilot must satisfy the two following questions:

- Was data received as expected?
- Does the data fulfil the users' requirements?

The data format must be compliant with GDSN standards and must be exchanged across two or more GDSN certified data pools.

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2. Global Pilot Participation Requirements

Below are the target participation requirements for a global (multi-market) GDSN pilot.

Required

- Two GDSN certified data pools (minimum).

Recommended

- Two manufacturers.
- Two hospitals / providers.
- Two distributors.
- Two Group Purchasing Organisations.

The global (phase two) pilot can be executed with a minimum of two trading partners, one data supplier and one data recipient. A minimum of two GDSN certified data pools are required to complete this phase of the pilot.

Note: The term trading partner refers to manufacturers, hospitals, providers, distributors and Group Purchasing Organisations.

3. Goals and Objectives

The purpose of a global GDSN pilot in healthcare is to demonstrate that the Global Data Synchronisation Network is operational and can support the basic business needs of the healthcare supply chain. Internal system integration is not an objective of this pilot.

- Business Needs:
 - Demonstrate how the GDSN supports healthcare business needs
 - Global Registry, GDSN functionality, attributes.
- Process:
 - Demonstrate that the participating trading partners are able to synchronise healthcare supply chain product data using the GDSN globally and locally.
 - Internal readiness, system and data preparation, information exchange between the trading partner and their data pool and to the ultimate recipient.
 - End to end synchronisation (manufacturer, distributor, GPO, hospital).
- Technology:
 - Demonstrate how the GDSN works across international boundaries.
 - Single point of entry, single point of truth for product (GTIN) data and party (GLN)
 - Interoperability among data pools.
 - Data quality and consistency.

4. Business Case

- Inefficiencies in the Healthcare supply chain result in increased costs for manufacturers, distributors, and healthcare providers and impacts patient safety.
- Electronic health information systems improve the information flow between trading partners. These systems need to effectively and securely exchange data.
- Global product data synchronisation brings consistency to the Healthcare supply chain and provides a mechanism to improve data quality.
- This will reduce errors and increase efficiency, and thereby improve patient safety.

5. Current Situation

Areas of Opportunity:

- Data errors can result in the wrong item being shipped, which may have an impact on patient safety and well being.
- Data errors cause data quality problems across the healthcare supply chain further impacting efficiencies, such as, invoice mismatching, reimbursements, etc.
- Inconsistency in how products are listed or described, resulting in difficulties in sourcing and getting products to clinician. (e.g. the same glove is listed in ten different ways, the supplier is listed in different ways).
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Note: Leverage where ever possible the GS1 Australia, US DoD and other national pilot requirements and findings.

Party Role

- **Manufacturer**
 - Manufactures and physically handles products. Generates product data to sell and market products.
- **Distributor** (could be both a recipient or provider of data).
 - Physically handles products, changes, creates and manipulates data to meet customer base needs - national and regional.
- **Hospital / Provider / Group Purchasing Organization (GPO)**
 - Creates internal data item masters, catalogues and contracts in order to identify products, request & fill customer and patient needs.
- Problem / Opportunity Statement:
 - Need to expand infrastructure used to share data among trading partners.
 - No consistent data standards throughout supply chain.
 - Inaccurate or bad data at many points in the supply chain.
 - Everyone pays the ultimate price for bad data – *unnecessary interruptions and costs*.

6. Benefits

A global pilot will enable faster “production” implementation of the Global Data Synchronisation Network (GDSN) in healthcare.

- By allowing leading organizations to gain valuable implementation experience.
- Preparation of internal data and alignment of internal / external systems in a “test” environment.
- Identification of process issues:
 - Process redundancies.
 - Manual intervention and work-around.
 - Planned migration from proprietary practices to open and global standards.
 - non-value added work required by current practices
- Establish a standardized listing of business rules and data validations for use in the healthcare industry.
- Demonstrate the value of GDSN as single point entry for product data.
- Documentation of lessons learned for healthcare industry-wide education.

7. Specific Deliverables

- Demonstrate the functionality of GDSN in healthcare to the global community.
- Determine if any changes are needed to the GDSN standard to support healthcare.
- Document lessons learned and incorporate into a GDSN implementation guide for healthcare.
- Prepare the early adopters for migration to the GDSN production environment.

8. Minimum GDSN Required Attributes

The attributes listed below constitute the minimum required attributes to operate the GDSN. There are a total of 25 mandatory attributes.

The use of additional attributes is optional and is determined by mutual agreement between the trading partners exchanging information.

Attributes 1 – 8 reside in the GS1 Global Registry.

1.	GLN of source Data Pool	<p>The Global Location Number of the data pool who will serve as the trading partner's single point of entry into the GS1 Global Registry and the GDSN.</p> <p>A data pool that supports the functionality required by a Data Source such as Data Loading, Publication, Notification, Registration, etc.</p>
2.	GLN of data source	<p>The GLN of the organisation supplying the information to be registered. This organisation serves as the content owner. The Data Source is typically the manufacturer of the product.</p> <p>Unique location number mandatory within the Global Data Synchronization process to identify data owners/info providers, etc such as Distributors, brokers, manufacturers.</p>
3.	GTIN	<p>The Global Trade Item Number, a GS1 key used to identify the product.</p> <p>A particular Global Trade Item Number, a numerical value used to uniquely identify a trade item. A trade item is any trade item (trade item or service) upon which there is a need to retrieve pre-defined information and that may be planned, priced, ordered, delivered and or invoiced at any point in any supply chain.</p>
4.	Target Market Country Code	<p>The code that identifies the target market where the product is intended to be sold.</p> <p>The target market is at country level or higher geographical definition and is where a trade-item is in-tended to be sold. The GDSN uses ISO country codes.</p>
5.	Target Market Subdivision Code	<p>The code for country sub-division definition used to indicate the geo-political subdivision of the target market.</p>
6.	GPC	<p>The Global Product Classification identifies a category of the product being registered.</p> <p>Note: GPC codes exist for multiple industries including some product groups for retail pharmacies. GS1 Healthcare is in the process of determining to what degree GPC codes need to be developed to support the hospital and retail pharmacy driven healthcare supply chain.</p>

		<p>For the purpose of executing the global GDSN pilot in healthcare the GS1 Healthcare Classification Work Team has agreed on the following codes structure.</p> <ul style="list-style-type: none"> • Drugs and Nutritionals: 99999997. • Medical Devices: 99999998. • Non-medical supplies: Will use existing GPC codes. <p>This code structure allows us to proceed with the global Proof-of-Concept pilot with the proper hierarchy.</p> <p>NOTE: A long term classification proposal is being analyzed with the expectations that a global product classification strategy will be developed and agreed upon by the GS1 Healthcare users. The strategy should include the following:</p> <ul style="list-style-type: none"> • To what degree the GPC needs to be developed to support the use of the GDSN in the global healthcare industry. • The effort needed for further development of the GPC. • An agreement from GS1 Healthcare.
7.	State	<p>The status on the product registered. The four states are as follows:</p> <ul style="list-style-type: none"> • Registered. • Cancelled. • In Progress. • Discontinued.
8.	Date	<p>May have a combination of the following dates:</p> <ul style="list-style-type: none"> • Cancel. • Deletion. • Discontinued. • Last changed. • Registration.

Attributes 9 – 25 are mandatory to exchange data via the GDSN.

9.	GLN of manufacturer	Entity that provides the global data synchronization network with Master Data. The Data Source is officially recognized as the owner of this data. For a given Item or Party, the source of data is responsible for permanent updates of the information under its responsibility.
10.	Hierarchy level per GS1 code list	Describes the hierarchical level of the trade item. TradeItemUnitIndicator is mandatory. Examples: "CASE" , "PALLET". For listing refer to Appendix A.
11.	Brand name	The recognizable name used by a brand owner to uniquely identify a line of trade item or services. This is recognizable by the consumer.

12.	Description	<p>Describes use of the product or service by the consumer. Should help clarify the product classification associated with the GTIN. For the business requirements for item, please use the specific definition of this data type and field, 1-35 characters.</p> <p>Additionally, there is a 5000 character description attribute available for use if this is not sufficient.</p>
13.	Base Unit? (Y/N)	<p>An indicator identifying the trade item as the base unit level of the trade item hierarchy. This is y/n (Boolean) where y indicates the trade item is a base unit.</p> <p>Example:</p> <ul style="list-style-type: none"> • A single diabetic syringe identified with GTIN. <p>In many cases the Base Unit is a Consumer Unit. Such as, an MRI machine, or a high cost medical device.</p>
14.	Consumer Unit? (Y/N)	<p>Identifies whether the current hierarchy level of a trade item is intended for ultimate consumption. For retail, this trade item will be scanned at point of sale. At retail, this data is commonly used to select which GTINs should be used for shelf planning and for front end POS databases. This value reflects the intention of the Information Provider which may not necessarily be reflected by the retailer.</p> <p>Example:</p> <ul style="list-style-type: none"> • A box of diabetic syringes containing 10 individual units (Base Unit) identified with a GTIN and is the minimum quantity that can be ordered. However, in a hospital the individual syringes may be scanned and charged against the patient. <p>Additionally, the distribution channel can determine the Consumer Unit. For example a pharmacy may not distribute (sell) less than a box of diabetic syringes; where a hospital will charge a patient for an individual syringe when used as part of the care provided.</p>
15.	Despatch Unit? (Y/N)	<p>An indicator identifying that the information provider considers the trade item as a dispatch (shipping) unit. This may be relationship dependent based on channel of trade or other point to point agreement. This is y/n (Boolean) where y indicates the trade item is a dispatch unit.</p>
16.	Invoice Unit? (Y/N)	<p>An indicator identifying that the information provider will include this trade item on their billing or invoice. This may be relationship dependent based on channel of trade or other point to point agreement. This is y/n (Boolean) where y indicates the trade item is an invoicing unit.</p>
17.	Orderable Unit? (Y/N)	<p>An indicator identifying that the information provider considers this trade item to be at a hierarchy level where they will accept</p>

		orders from customers. This may be different from what the information provider identifies as a despatch unit. This may be a relationship dependent based on channel of trade or other point to point agreement. This is y/n (Boolean) where y indicates the trade item is an ordering unit.
18.	Variable Measure? (Y/N)	Indicates that an article is not a fixed quantity, but that the quantity is variable. Can be weight, length, volume. Trade item is used or traded in continuous rather than discrete quantities.
19.	Returnable packaging? (Y/N)	Trade item has returnable packaging. This is a yes/no (Boolean) where yes equals package can be returned. Attribute applies to returnable packaging with or without deposit.
20.	Batch/Lot Number? (Y/N)	hasBatchNumber: Indication whether the base trade item is batch or lot number requested by law, not batch or lot number requested by law but batch or lot number allocated, or not batch or lot number allocated. A batch or lot number is a manufacturer assigned code used to identify a trade item's trade item on batch or lot. Differs from Serial Number which is a manufacturer assigned code during the trade item on cycle to identify a unique trade item.
21.	Non-sold item returnable? (Y/N)	isNonSoldTradeItemReturnable: Indicates that the buyer can return the products that are not used (sold). Used, for example; with magazines and bread. This is a y/n (Boolean) where y equals right of return. This is at least relevant to General Merchandise, Publishing industries and for some FMCG trade item. May not be applicable to healthcare. If so, the attribute would contain a 'No'
22.	Marked Recyclable? (Y/N)	isTradeItemMarkedAsRecyclable: Trade item has a recyclable indication marked on it. This may be a symbol from one of many regional agencies.
23.	Height & UoM	The measurement of the height of the trade item. The vertical dimension from the lowest extremity to the highest extremity, including packaging. At a pallet level the trade item Height will include the height of the pallet itself. Business Rules: Measurements are relative to how the customer normally views the trade item. Needs to be associated with a valid UoM.
24.	Width & UoM	The measurement from left to right of the trade item. Measurements are relative to how the customer normally views the trade item. Needs to be associated with a valid UoM.
25.	Depth & UoM	The measurement from front to back of the trade item. Measurements are relative to how the customer normally views the trade item. Needs to be associated with a valid UoM.

Appendix A: Hierarchy level per GS1 code list. Supports attribute Number 10.

BASE UNIT OR EACH	The lowest level of the item hierarchy intended or labelled for individual retail sale.
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CASE	The standard shipping unit level.
DISPLAY SHIPPER	The lowest level of the item hierarchy intended or labelled for individual retail sale.
MIXED MODULE	A “mixed mod” or “display ready pallet” that is not the normal ‘turn’ for ordering.
MULTIPACK	A group of products (the same or different) that are intended to be sold as a single unit. A multipack is not intended to be broken apart and sold as individual products.
PACK OR INNER PACK	A logistical unit between case and each. This may be a consumable inner pack, or it may be simply a logistical pack (i.e. Dozens of toothbrushes).
PALLET	A pallet is a flat transport structure designed to support a variety of goods in a stable fashion while being lifted by any mobile forklift or other jacking device.
PREPACK	Contains multiple components, each of which represents a unique consumer unit item by color and size, or standard assortment of trade items, each different item within the prepack will be assigned a GTIN maintaining the one-to-one relationship between trade item/color ID/size ID and GTIN.
PREPACK ASSORTMENT	Contains multiple components, each of which represents a unique consumer unit item by color and size. Includes prepacks and setpacks.
SETPACK	Contains multiple components, each of which represents a unique consumer unit item by color and size. Each different trade item within the setpack will be assigned a GTIN, maintaining the one-to-one relationship between trade item/color ID/size ID and the GTIN.