



# SUPPLIER SUMMIT

**USAID Global Health  
Supply Chain Program  
Supplier Summit**  
February 21-23, 2017

# YOU SAY DATA, I SAY DATA

STREAMLINED DATA EXCHANGE WITH GHSC-PSM



**USAID**  
FROM THE AMERICAN PEOPLE



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



**USAID**  
FROM THE AMERICAN PEOPLE



U.S. President's Malaria Initiative

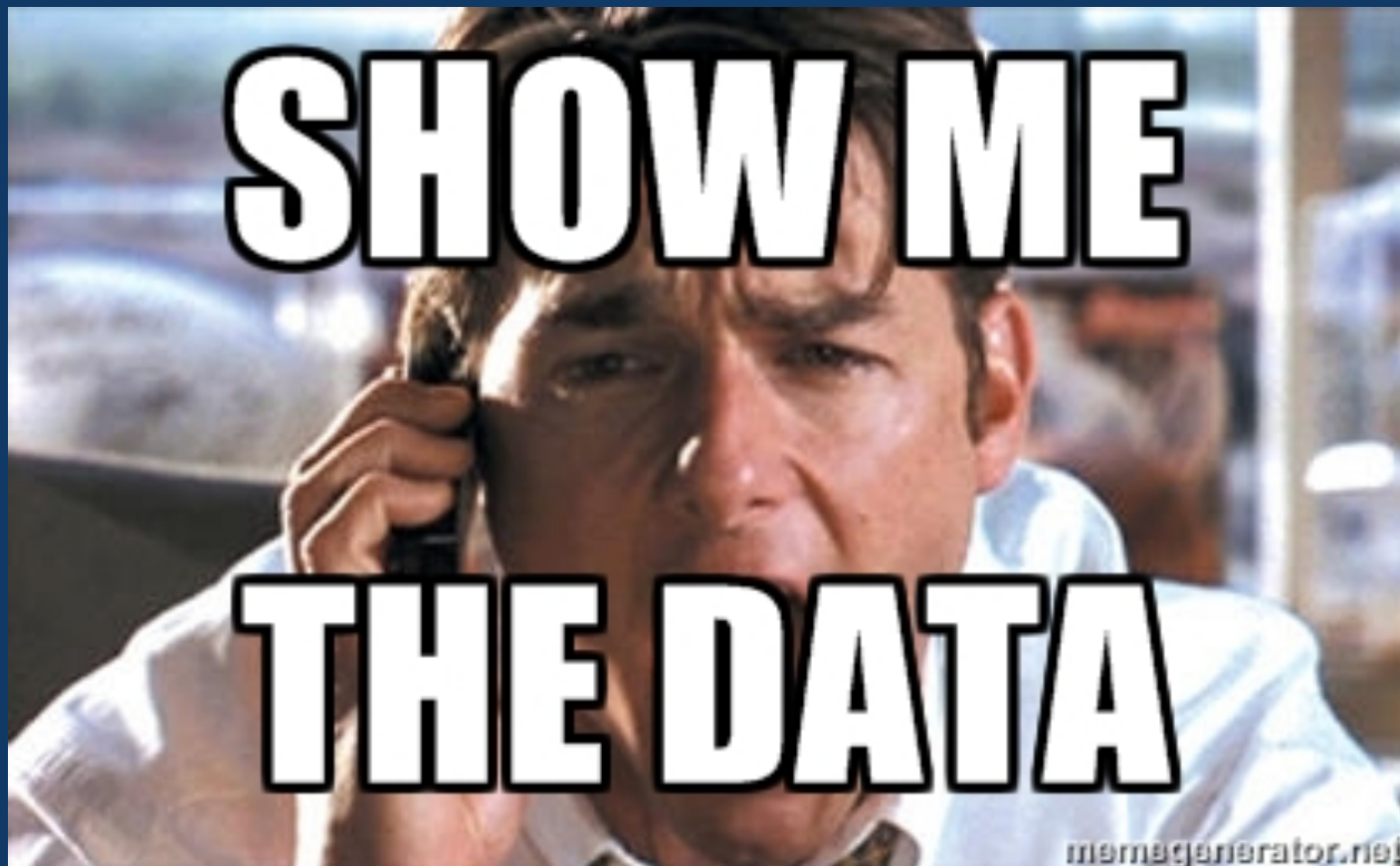
# AGENDA

- Overview and Data Exchange with ARTMIS
- Master Data vs. Transactional Data
- Master Data/Transactional Data Submission to ARTMIS
- Overview of GSI and GDSN
- Master Data Submission to GDSN Data Pool





# INTRODUCTION AND OVERVIEW





# GOALS OF GHSC-PSM AUTOMATION

- Extensively automate supply chain processes
- Electronically integrate with key stakeholder and partner systems
- Improve overall supply chain efficiency
- Reduce errors and re-work
- Reduce data quality issues and eliminate data redundancy
- Communicate more effectively with suppliers and other stakeholders
- Implement GSI standards
- Ensure supply chain security
- Increase patient safety

...LEADING TO MORE MEDICINE FOR MONEY

# OVERVIEW OF ARTMIS

**A**utomated  
**R**equisition  
**T**racking  
**M**anagement  
**I**nformation  
**S**ystem

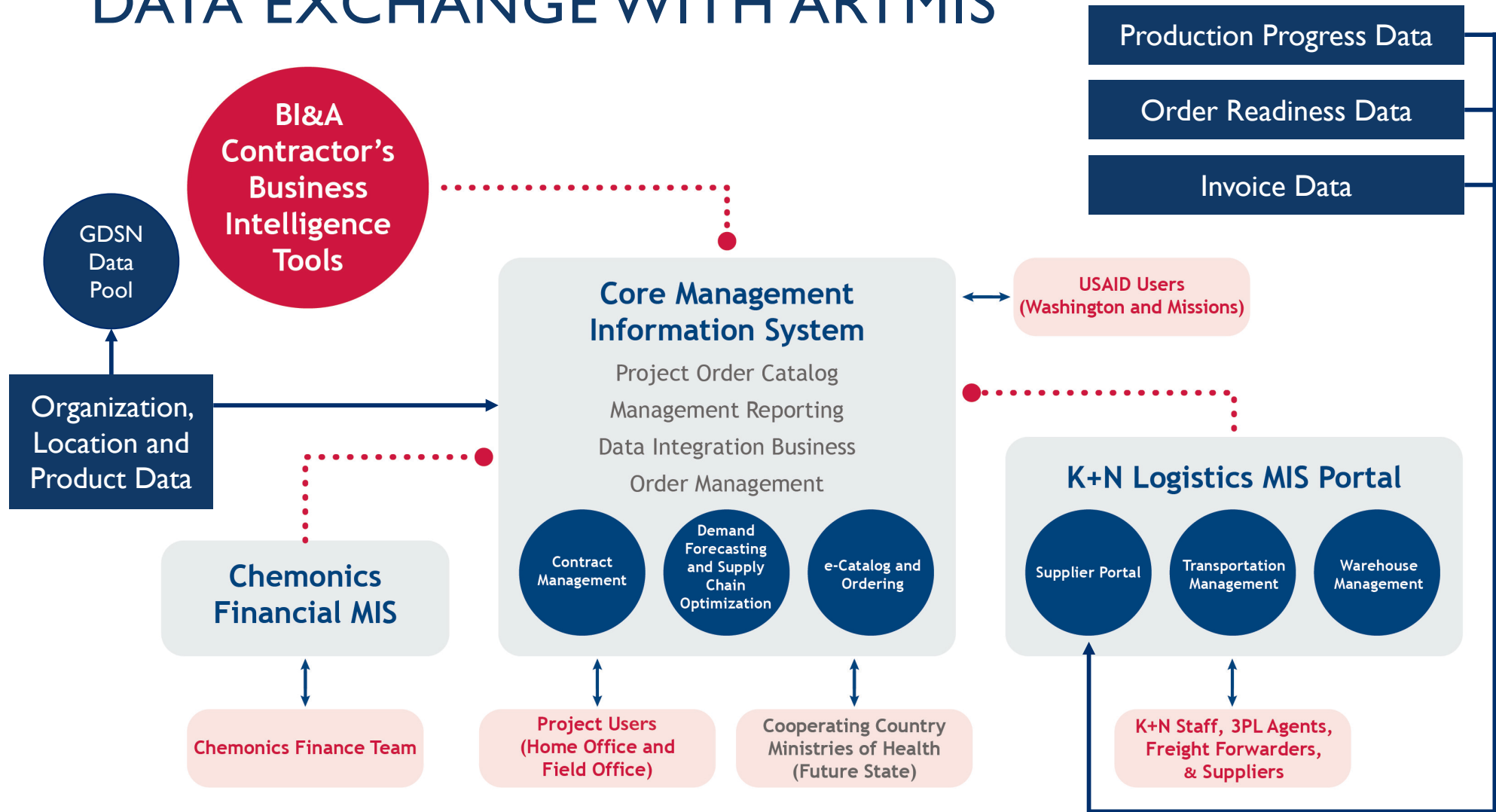
# ARTMIS OVERVIEW

End-to-end data visibility of the health commodities supply chain is an overarching objective of the GHSC-PSM program. To achieve the highest level of data visibility, GHSC-PSM has selected an MIS that automates key steps along the supply chain. ARTMIS integrates three best-in-class solutions:

1. IBM's e-Commerce Suite, ranked No. 1 by Gartner and Forrester Research, is used by some of the world's top supply chain operators, such as Cardinal Health.
2. K+N's Logistics Management Information System (LMIS) is used to manage the largest non-asset-based freight forwarding operation in the world.
3. Chemonics' Financial Management Information System (FMIS) manages hundreds of millions of dollars in turnover annually and ensures adherence to USAID's reporting requirements.



# DATA EXCHANGE WITH ARTMIS



# MASTER DATA VS. TRANSACTIONAL DATA

# KEY DATA SETS

- **Master Data** describes the people, places, and things that are involved in an organization's business.
  - Organizations
  - Locations
  - Product/catalog
- **Transactional Data** describes an internal or external event or transaction that takes place as an organization conducts its business.
  - Sourcing events
  - Production progress
  - QC testing
  - Order readiness
  - Invoice



# MASTER DATA - ORGANIZATIONS

<b>Company Name</b>
<b>Company Address</b>
Company Telephone and Website
Manufacturer Information
<b>Organization Name</b>
Contact name
Phone no.
Email
<b>Registered Address (HQ)</b>
Website
<b>Country of registration</b>
Date of registration

Attributes listed below are illustrative only. Product attributes to be submitted at first via ARTMIS and later via GDSN.

## MASTER DATA - PRODUCT/CATALOG

<b>Item Name</b>	<b>Name of the Manufacturer</b>	Registration Number
<b>GTIN/Manufacturer ID</b>	<b>Manufacturing Site Address</b>	Registration Expiry Date
<b>Lot</b>	<b>Pick-up Address (if Applicable)</b>	<b>Estimated Lead time (no. of weeks)</b>
<b>Description</b>	<b>Currency Code</b>	Lot Size in Number of Units
Desired Quantity	Remarks	Item Type
<b>Unit of Measure</b>	<b>Price Per Unit</b>	<b>Quantity On Stock</b>
What is your Regulatory Approval Status?	<b>Shelf Life (in months)</b>	Maximum Production Capacity Per Month (Number of Units)
Expiry Date of Regulatory Approval	Minimum Quantity	Product Registration Status for the Country
Maximum Desired Quantity	Maximum Quantity	Country
<b>Goods Availability Date</b>	GHSC-PSM Product ID	Action
Category	Unit Form	Manufacturer Item ID

# TRANSACTIONAL DATA – SUPPLY CHAIN

- Production Progress

- Production start date (within 24 hours after production started)
- Production complete date (within 24 hours after production completed)
- Batch Number/Quantity/Expiry Date (within 24 hours after production completed)
- QC testing request date upon readiness of production goods when QC is required (within 24 hours after sending samples)

- Expected Readiness

- Expected readiness date for confirmation (within 3 days of receiving email notification)
- Expected readiness date for change (with a reason code of why date is out of tolerance)

- Booking

- Booking Request/Packing List/Invoice



# MASTER DATA/TRANSACTIONAL DATA SUBMISSION TO ARTMIS

# SUPPLIER REGISTRATION AND SOURCING EVENTS

GHSC - PSM Supplier Lifecycle Management

**Welcome to the SRM Registration**  
In this short questionnaire we gather the key values of your company. This information will be given to our Clearing department, who will get in touch with you soon after the registration was sent. If you encounter difficulties filling out the registration or if you have questions about the content of the questionnaire, please feel free to contact us: [permishelpdesk@ghsc-psm.org](mailto:permishelpdesk@ghsc-psm.org)

Display language  
English

**Self registration**

Step 1: Answer Questionnaire

[ open all | collapse all ]

Introduction

Welcome to the Supplier Registration Questionnaire. Your organization's completion of this questionnaire will be an important step towards potentially becoming a supplier to the GHSC PSM project. Below, you will be requested to provide some high-level information about your organization, which may help us to identify and work with your organization in the future. This questionnaire should only take 5-10 minutes to complete. Please scroll down to begin the questionnaire.

General Company Information

Legal Company Name  
good company

Do you have a Doing Business As (DBA) name?  
☐ Yes  
☐ No

## Supplier Registration in ARTMIS (Emptoris)

## Responding to RFx in ARTMIS (Emptoris)

RFx(s) > RFx Event - Supplier Trial...

Description: Project requires 300,000 Long Leading Insecticide...  
Contract Information  
Routific Anne Schonen

Type: RFP  
Run RFP Report

Remaining Time: N/A  
Open Time: 07/20/2018 10:17:02Z  
Close Time:  
Status: Open

All Questionnaires (7) Questionnaires Singlelist

Questionnaire / Question	QID	Response	View History
Section 1 & 2: Background & Instructions to Offerors	QID (1)	Place Response	
Section 3: Specifications and Tax	QID (2)	Place Response	
Section 4: Offer over Letter	QID (3)	Place Response	
Section 5: Required Certifications	QID (4)	Place Response	
Section 6: General Terms and Conditions	QID (5)	Place Response	
Section 7: Manufacturer Information	QID (6)		
Section 8: Capability Survey	QID (7)		

**Accept Invitation RFx(s)**

Please confirm you are an authorized representative of your organization with the ability to acknowledge and agree to all terms, conditions, special provisions, and instructions on behalf of your firm and verify that you have the authority to provide information regarding all commodities and services offered in response to this RFP necessary to perform all work described under the activities and requirements this solicitation.

☒ By checking this box, I confirm that my company complies with this Terms and Conditions

OK Cancel

(Note: "OK" will appear after checking the box. If you can not comply please select "Cancel" and contact us.)

ARTMIS Sourcing - Supplier Job Aid

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# TRANSACTIONAL DATA SUBMISSION TO ARTMIS

## Supplier Portal in K&N LMIS

Action Entry Form														
Monitoring alert: 2.21-PO's pending Production Started														
Description: Vendor will provide production start date.														
Alert Info	Unknown Order	Alert Asst	Order Number	Line #	Item #	Batch/Lot Number	Production Started Immediately	Date/Time	Remarks	Delivery Window Start	Delivery Window End	Required Date of Delivery	QC Required	Vendor Ref Data/Entry
1			CP-PO1000211	1	100073AA08U032K	TBD				08/17/17	08/31/17	10/31/16		
1			ID10000083	1	100074AA08U032	TBD				08/17/16	08/31/16			
1			ID10000104	2	100128X0A01003A	TBD				10/17/16	10/31/16	11/28/16		
1			ID10000149	2	100300XU215	TBD				10/12/16	10/31/16	11/23/16		
1			ID10000150	1	100073AA08U	TBD				09/28/16	10/12/16	11/09/16		
1			ID10000155	1	100307XU215	TBD				10/20/16	11/03/16	12/21/16		
1			ID10000155	2	100015ACAD11G	TBD				10/17/16	10/31/16	12/21/16		

Production Progress

Action Entry Form														
Monitoring alert: 2.11-PO's pending Expected Readiness Confirmation														
Description: 2.11-PO's pending Expected Readiness Confirmation														
Alert Info	Unknown Order	Expected Readiness Date	Reason Code for missing Readiness Date	Reason code for readiness date out of tolerance	Alert Asst	Order Number	Line #	Item #	Batch/Lot Number	Task Order	Order Type	K&N Control Tower	Ordered Quantity	Exp
						32	ID10000892	1	100073AA08U032	TBD	TO3	PurchaseOrder	Europe	1000
						32	ID10000914	1	100073AA08U032	TBD		PurchaseOrder	Europe	1000
						21	ID10001019	1	100025A0B09W03V	TBD		PurchaseOrder	Europe	10
						10	BOC1000002-1	1	100073AA08U032	B334354	TO2	DistributionOrder	Middle East / Africa	2000

Expected Readiness

Booking Review														
Booking and Bill Reference Information														
Booking ID: 0501772254														
Shipped Reference: 0501772254														
Shipped Reference: 0501204540														
Booking Dates														
Shipping Information														
Forwarding Office: DMCC (DPL)														
Ocean Vessel: BMS1109														
Place of Receipt: Singapore														
Port of Loading: Lianyungang														
Estimated Ship Date: 17 Nov 2016														
Ready for Ship Date: 17 Oct 2016														
Charges / Insurance / Documents														
Name of Carrier: FCL / Free Carrier														
Freight Payment: Letter of Credit (L/C)														
Letter of Credit (L/C) No: No														
Insurance Code: No														
Additional Instructions (customer specific only)														
Container Information														
Container Type: 40HQ														
Container No: 57101000														
Seal No: 40HQ														
Weight (kg): 22,174.00														
Volume (cbm): 100.00														

Booking Request

Commercial Invoice														
Invoice #: 0000														
Vendor: Company Name, Address 1, Address 2, City, State, Zip/Postal Code, Country, Contact Name, First Last, TEL: phone #, FAX: fax #, Email: email address														
Bill To: Company Name, Address 1, Address 2, City, State, Zip/Postal Code, Country, Contact Name, First Last, TEL: phone #, FAX: fax #, Email: email address														
Consignee: Company Name, Address 1, Address 2, City, State, Zip/Postal Code, Country, Contact Name, First Last, TEL: phone #, FAX: fax #, Email: email address														
Invoice Date: YYYY-MM-DD														
Delivery Address: Company Name, Address 1, Address 2, City, State, Zip/Postal Code, Country, Contact Name, First Last, TEL: phone #, FAX: fax #, Email: email address														
RCC Terms: FOB Shanghai														
Main Origin: Air Road														
Currency: USD														
Order #, Order Line #, Item #, Item Description, Batch #, Expiration Date, Country of Origin, UNIT QUANTITY, UoM, UNIT PRICE, TOTAL AMOUNT														
PO1234567, 001, A12345, Details, 1111111111111111, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 002, B12345, Details, 2222222222222222, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 003, C12345, Details, 3333333333333333, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 004, D12345, Details, 4444444444444444, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 005, E12345, Details, 5555555555555555, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 006, F12345, Details, 6666666666666666, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
PO1234567, 007, G12345, Details, 7777777777777777, yyyy-mm-dd, CN, 1.000, C7N, \$1.7000, \$1,700.00														
Grand Total: 28.000 UNITS, \$45,280.00														
Prepared By: VENDOR LAST NAME, VENDOR FIRST NAME														
Prepared On: yyyy-mm-dd														

Invoice

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# OVERVIEW OF GSI AND GDSN



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# THE MASTER DATA PROBLEM

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Every company has a **database** filled with master data about the products they **make, sell, or buy**.

But when one company changes any bit of information in their database or adds a new item, **another database becomes outdated!**



# WHAT HAPPENED TO “MASTER DATA”



- Systems have evolved in “silos” over the last 40 years
- The link between “process” and data was broken (*remains so in many cases*)
- Numerous efforts to “unify” data and process, or views of data – one use at a time
- **So what?** Business success still happened anyway... (*and hospitals operated*)
- Only when costs increase, profits fall, (*or a patient is negatively affected*) does the real impact of bad data become known!



1970s



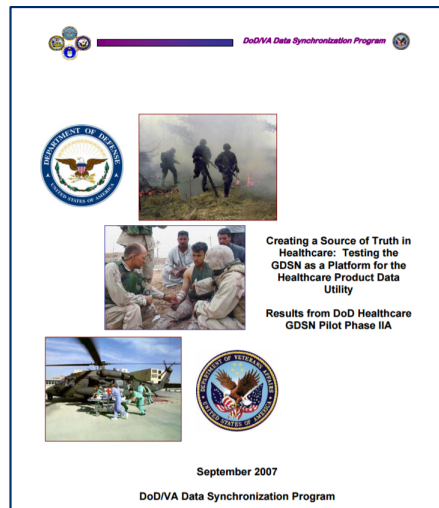
1990s



2000s

Original source: Gartner

# DATA ERRORS IN HEALTHCARE



**DoD Conclusion:**  
GDSN is capable  
of meeting the  
data needs of US  
healthcare

% of Total Data Error	Manufacturer	Distributor	GPO	Healthcare provider
Missing Middle Levels of Packaging	15-20%	1-4%	20-25%	15-25%
Hard "Packaging Quantity" Errors	1%	1%	2%	2-5%
Unit of Measure Confusion/Misuse	2-6%	1-3%	2-5%	Unknown
Missing Packaging—not Middle Level	3-8%	3-8%	3-7%	5%
Manufacturer Name Problems	NA	2-5%	1-4%	30%
Obsolete Products	1-4%	2-5%	1-8%	5-15%
Missing Product Brand Names	2-5%	5-10%	5-10%	20-25%
Incomplete Item Descriptions	5-15%	3-12%	5-15%	10-20%
Wrong Customer Unit Prices	Unknown	1-2%	NA	1-2%
Customer Paid More Than Lowest Contract Price	NA	Unknown	NA	3-6%

**DoD report:** [https://www.gs1us.org/DesktopModules/Bring2mind/DMX/Download.aspx?command=core\\_download&entryid=620&language=en-US&PortalId=0&TabId=134](https://www.gs1us.org/DesktopModules/Bring2mind/DMX/Download.aspx?command=core_download&entryid=620&language=en-US&PortalId=0&TabId=134)

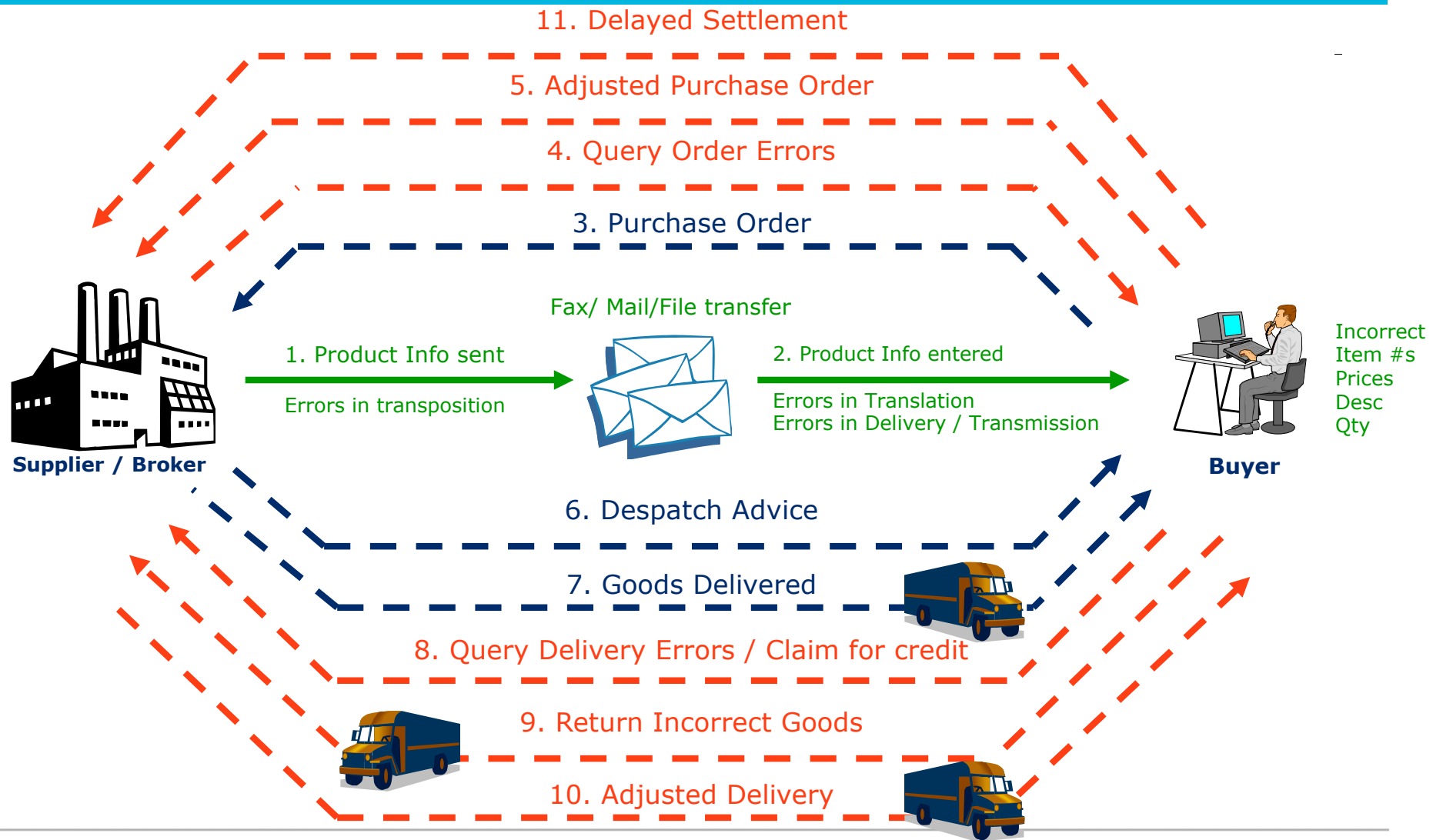


# THE AUSTRALIAN DATA CRUNCH REPORT PUTS A COST ON THE DATA QUALITY PROBLEM IN HEALTHCARE



Source: <https://www.gs1au.org/resources/publications/>

# ORDER-TO-CASH BEFORE DATA SYNCHRONISATION





# DATA QUALITY STARTS AT THE SOURCE



# DATA QUALITY STARTS AT THE SOURCE



Data Governance



Roles and Responsibility



Enterprise-wide  
Data Management



Data Quality

*The quality of  
the data is a  
direct  
reflection on  
the quality of  
the product*



# ROLES AND RESPONSIBILITIES



Enterprise-wide definition of roles and responsibilities of everyone involved in the information flow, internal and external

## Responsible

- The person who actually carries out the process or task assignment
- Responsible to get the job done

## Accountable

- The person who is ultimately accountable for process or task being completed appropriately
- Responsible person(s) are accountable to this person

## Consulted

- People who are not directly involved with carrying out the task, but who are consulted
- May be stakeholder or subject matter expert

## Informed

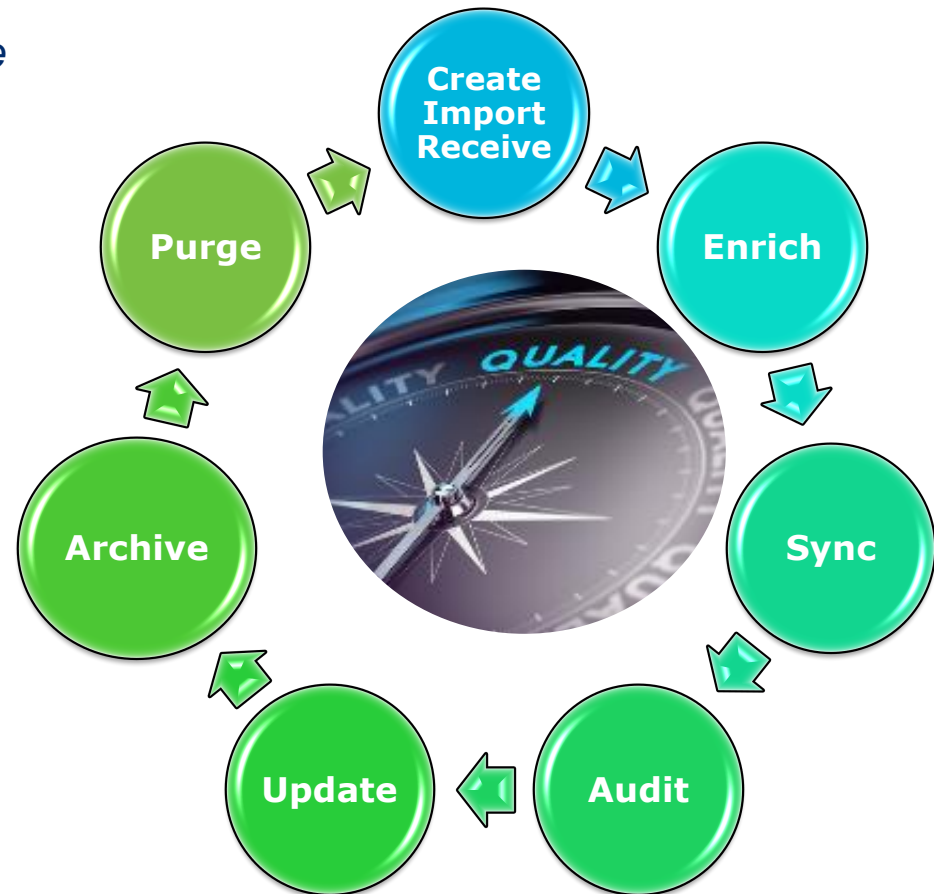
- Those who receive output from the process or task, or who have a need to stay informed

# ENTERPRISE-WIDE DATA MANAGEMENT

## Key Concepts – Information Lifecycle Processes



1. Create, Import or Receive
  - *Collect, Create, Receive & Capture*
2. Enrich/Validate
  - *Data Quality*
3. Sync/Activate
  - *Push to users*
4. Audit/Evaluate
  - *Routine Monitoring*
5. Update/Maintain
  - *Maintain, Protect & Preserve*
6. Inactivate/Archive
  - *Remove from active use*
7. Purge
  - *Delete from system*



# WHAT IS THE GDSN AND HOW DOES IT WORK?



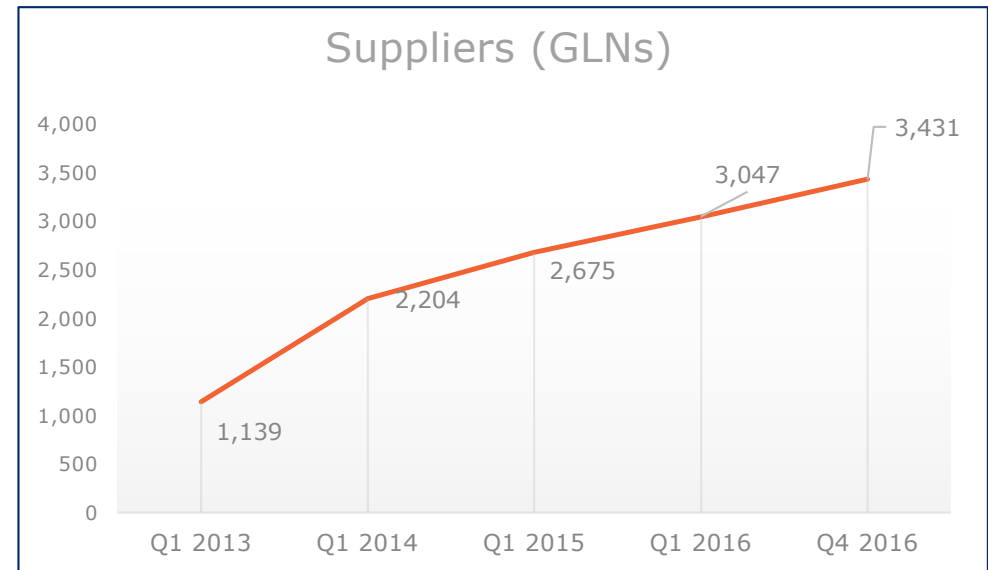
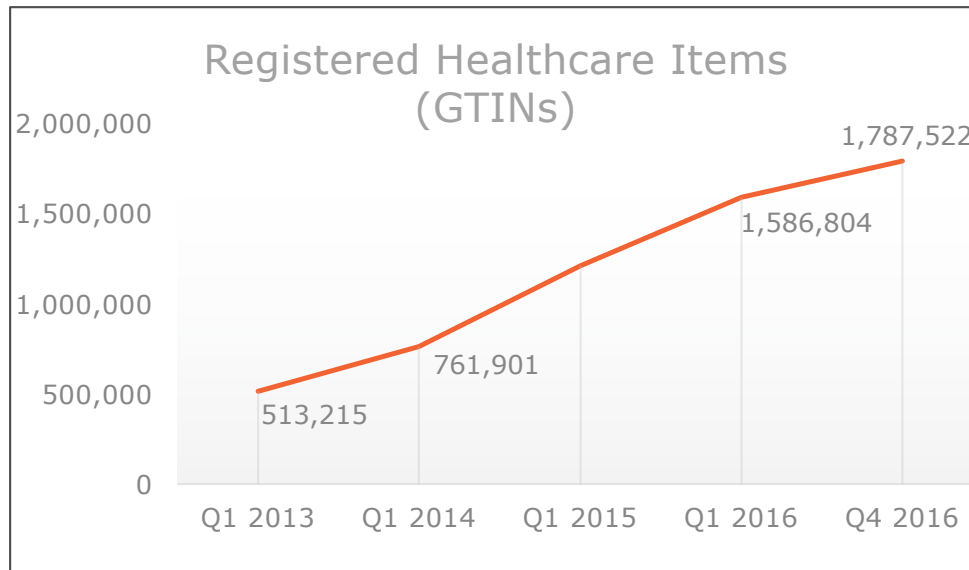
# GDSN GROWTH AS OF END OF JULY 2016



## Overall GDSN

	Feb 2015	Feb 2016	Feb 2017
GTINs	17,707,316	20,448,154	22,266,243

## Healthcare

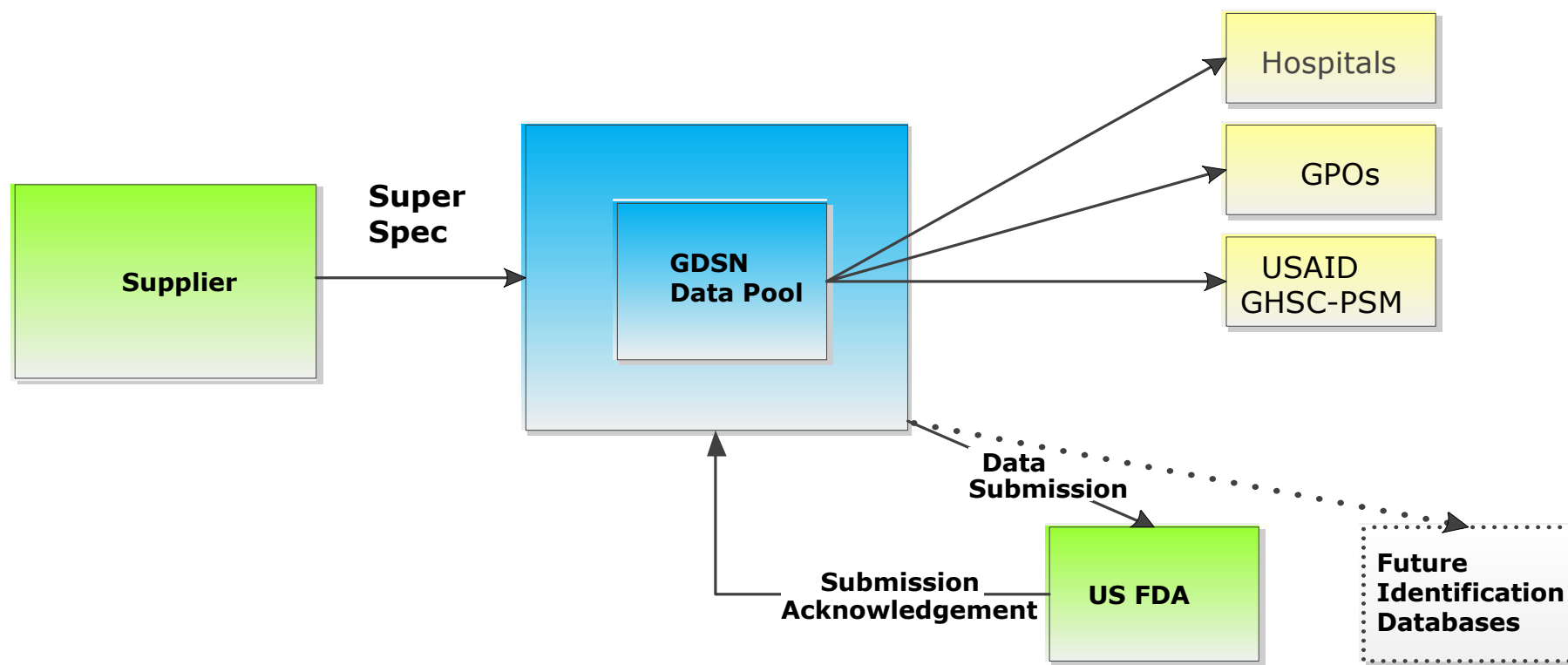






# MANAGING DATA AT GLOBAL LEVEL

1. Find a **standards based** solution which can scale as more countries release identification regulation
2. Find a technology partner that can connect you globally
3. Define ALL regulatory and commercial attributes (Super Spec)



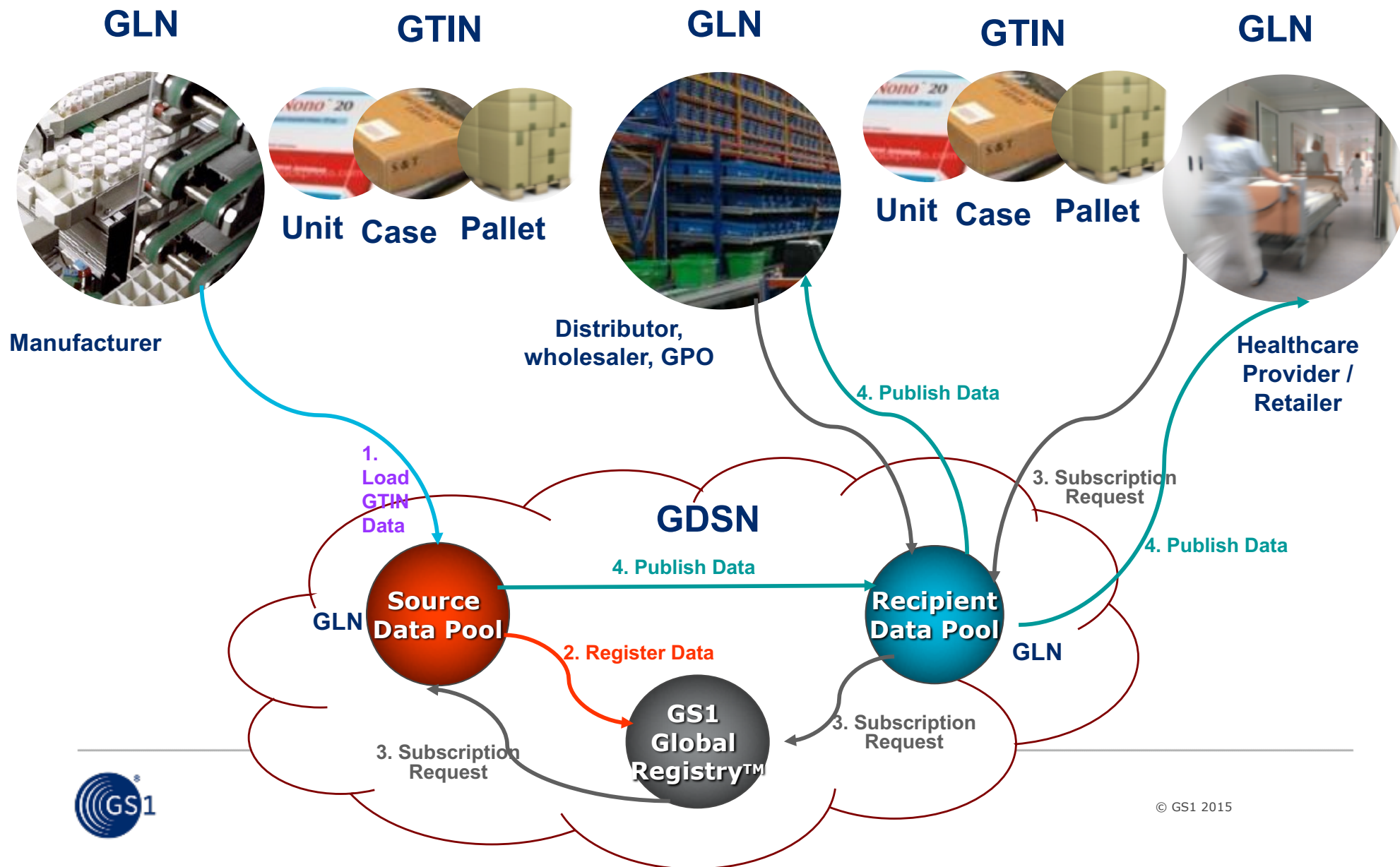


# A WORD ABOUT ACRONYMS

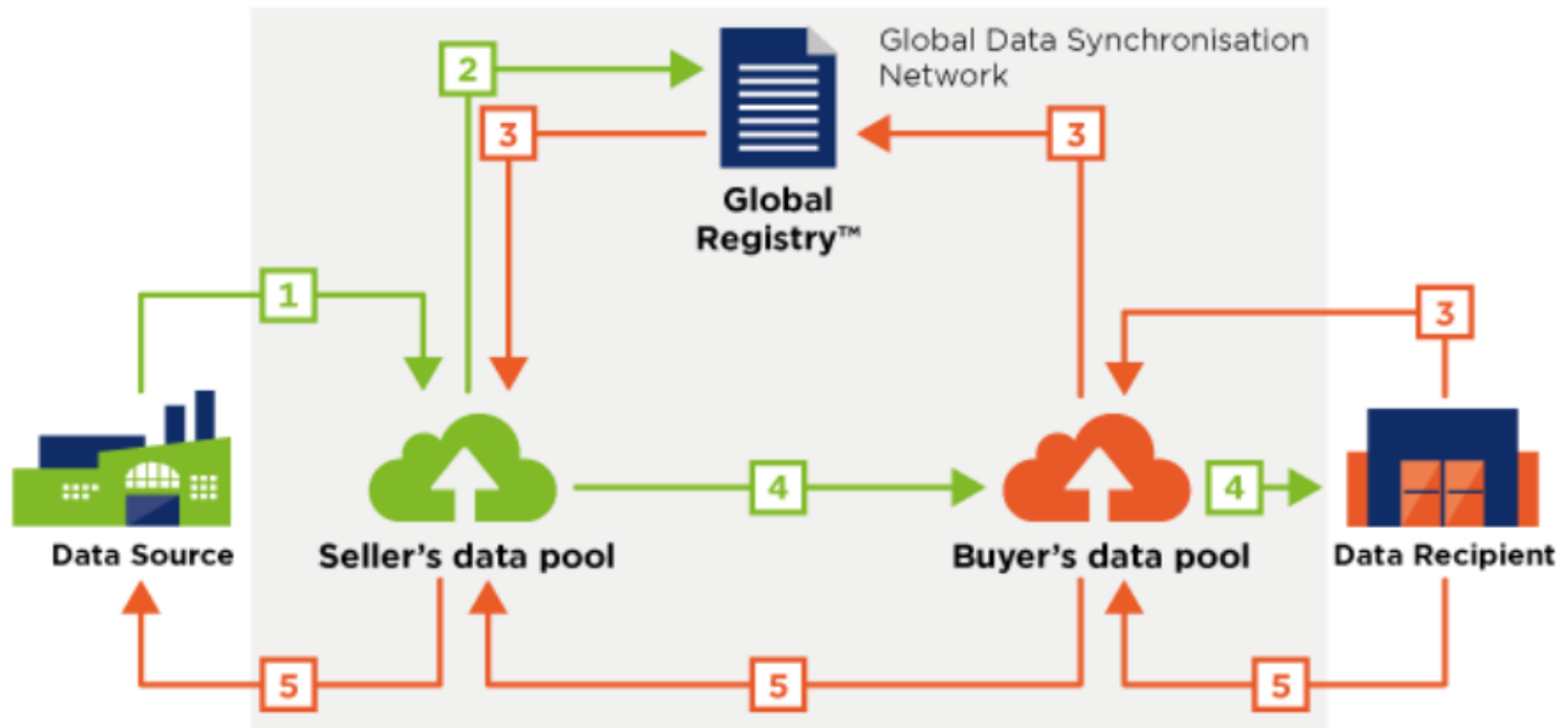
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- **GTIN:** Global Trade Item Number
  - Product identification
- **GLN:** Global Location Number
  - Identification of legal entities, physical, functions and digital locations
- **GDSN:** Global Data Synchronisation Network
  - Synchronisation of data between the Source (i.e. manufacturer) and the Recipient (e.g. hospital, retailers, etc.)

# GDSN IN ACTION



# HOW GDSN WORKS



# ORDER-TO-CASH AFTER DATA SYNCHRONISATION



# FOR MORE INFORMATION

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**[www.gs1.org/gdsn](http://www.gs1.org/gdsn)**

**[www.gs1.org/healthcare](http://www.gs1.org/healthcare)**



# MASTER DATA SUBMISSION TO GDSN DATA POOL

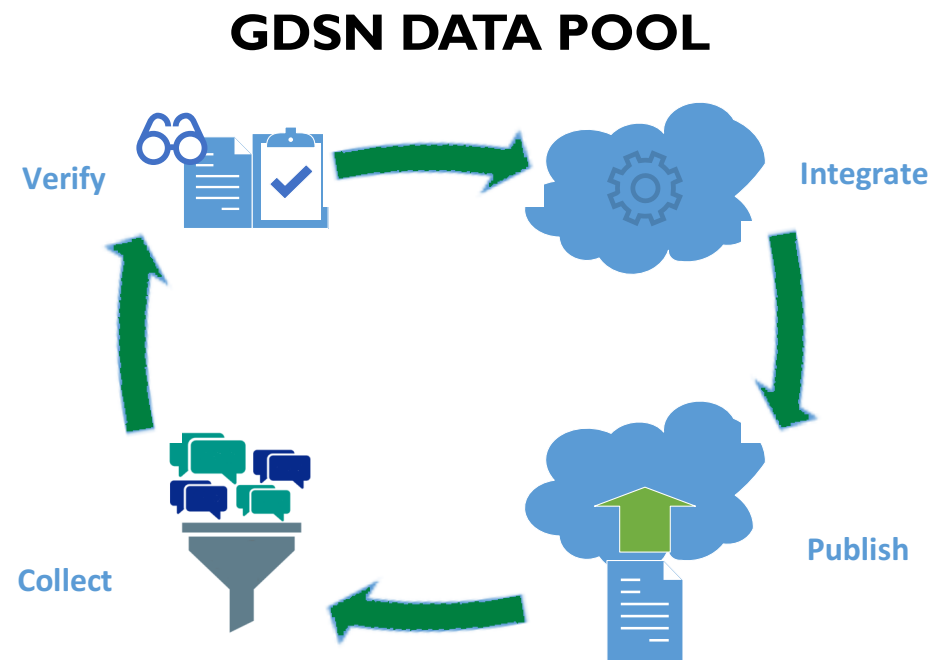


# GHSC-PSM'S PLANS FOR GSI SUPPORT AND GDSN DATA POOL INTEGRATION

- Engaged GSI consultants to aid in implementation of GSI standards
- ARTMIS supports tracking of commodities by global trade item numbers for identification and capture, including all corresponding documents
- GSI attributes are supported in ARTMIS with a subset selected for GHSC-PSM
- GHSC-PSM is procuring a global data synchronization network (GDSN) data pool subscription and planning to integrate with it to automatically feed GSI attributes into ARTMIS
- ARTMIS supports track and trace capabilities at the batch level and is preparing to support serialization
- A supplier strategy has been developed to encourage suppliers to register trade items with GSI, ensure proper item barcoding and labeling, and share product data via a GDSN data pool

# GHSC-PSM EXPECTATIONS OF SUPPLIERS

- 1) Supplier registers with GSI and obtains a prefix
- 2) Supplier assigns GTINs to its products
- 3) Supplier registers with a GDSN data pool provider
- 4) Supplier agrees to provide product attributes based on GHSC-PSM's requirements
- 5) Supplier shares its product attribute data with GHSC-PSM via a GDSN data pool provider
- 6) GHSC-PSM expects all suppliers to submit their product data to a GDSN data pool within 18 months



# SAMPLE LIST OF GDSN DATA POOL PROVIDERS

- IWorldSync
- Alkemics
- Attribytes
- Brandbank
- Comarch S.A.
- Comport Communications International, Inc.
- Contentis AG
- Edgenet
- EDICOM
- Equadis SA
- Eway FSE Inc
- GHX
- iTradeNetwork, Inc.
- LOGYCA / SERVICIOS Viagenie

# QUESTIONS?



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