



A Triple Crown Event

DISTRIBUTION, TECHNOLOGY & SUPPLY CHAIN



The Foodservice Distribution CONFERENCE & EXPO



Developing Efficiencies through GTINs and Data Synchronization Session 506

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Agenda

- Introduction
- Product Identification (GTIN)
- Location Identification (GLN)
- Data Integrity
- Data Synchronization
- Questions

GS1 US



- Neutral, standards development and management organization
- Works with suppliers, distributors, retailers, solution providers and trade organizations in over 25 industries to develop and promote the use of industry standards
- Part of the GS1 global federation of standards organizations

Trade Item Definition

- Trade Item - Any product for which there is a need to retrieve pre-defined information and that may be priced, ordered or invoiced at any point in the supply chain
 - Food products
 - Beef, poultry, pork and seafood products
 - Beverages
 - Supplies
 - Equipment
 - Apparel / Uniforms
 - Produce

What is a GTIN?

- GTIN is the Global Trade Item Number
 - A globally unique 8, 12, 13, or 14 digit number used to uniquely identify products
 - An identification number of the GS1 System
 - unique and unambiguous
 - a global standard for collaborative commerce

Used now on foodservice food and beverage products, supplies and equipment.

Can be used with trading partners across the street, across town and around the world.

GTIN Overview

1. Company Prefix
2. Item Reference
3. Check Digit

Company Prefix

1. The GS1 Company Prefix

- Uniquely identifies a company / organization and is assigned by a GS1 Member Organization. Nearly 3,000 GS1 US Members have classified themselves as in the “Foodservice Industry.”*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
GS1-14	1	0	N	N	N	N	N	N						

*Does not include companies serving the foodservice industry which classified themselves as food and beverage, produce, seafood, meat, equipment, etc.

Item Reference

2. Item Reference Number

- Uniquely identifies a product or service and is assigned by the holder of the GS1 Company Prefix
- Recommendation: assign the Item Reference numbers sequentially and do NOT build in any intelligence

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
GS1-14	1	0	N	N	N	N	N	N	N	N	N	N	N	

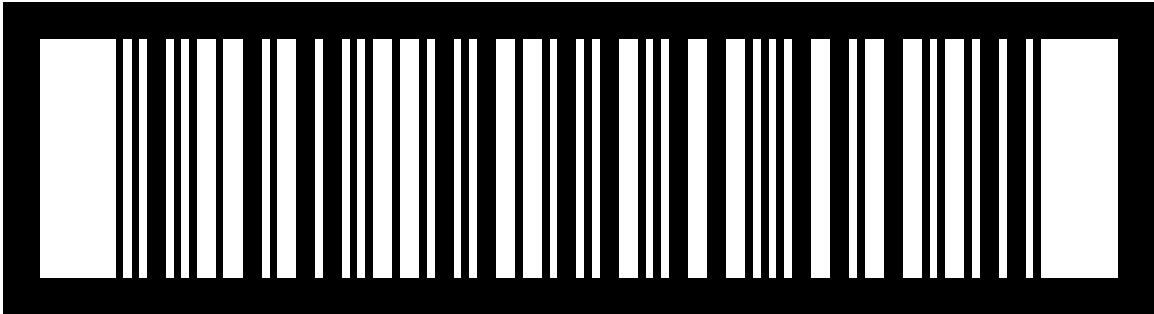
Check Digit

3. Check Digit

- A calculated one-digit number used to ensure data integrity
- The check digit formula is...
 - $N_1 \times 1 + N_2 \times 3 + N_3 \times 1 + N_4 \times 3 + N_5 \times 1 + N_6 \times 3 + N_7 \times 1 + N_8 \times 3 + N_9 \times 1 + N_{10} \times 3 + N_{11} \times 1 + N_{12} \times 3$...Then subtract sum from the nearest multiple of ten equal to or greater than the amount
- There is a check digit calculator at:
www.gs1us.org/checkdig

Global Trade Item Number

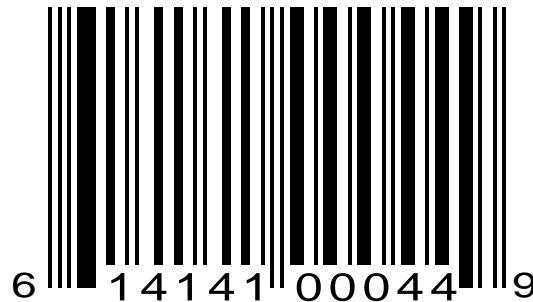
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
GS1-14	1	0	N	N	N	N	N	N	N	N	N	N	N	<u>N</u>



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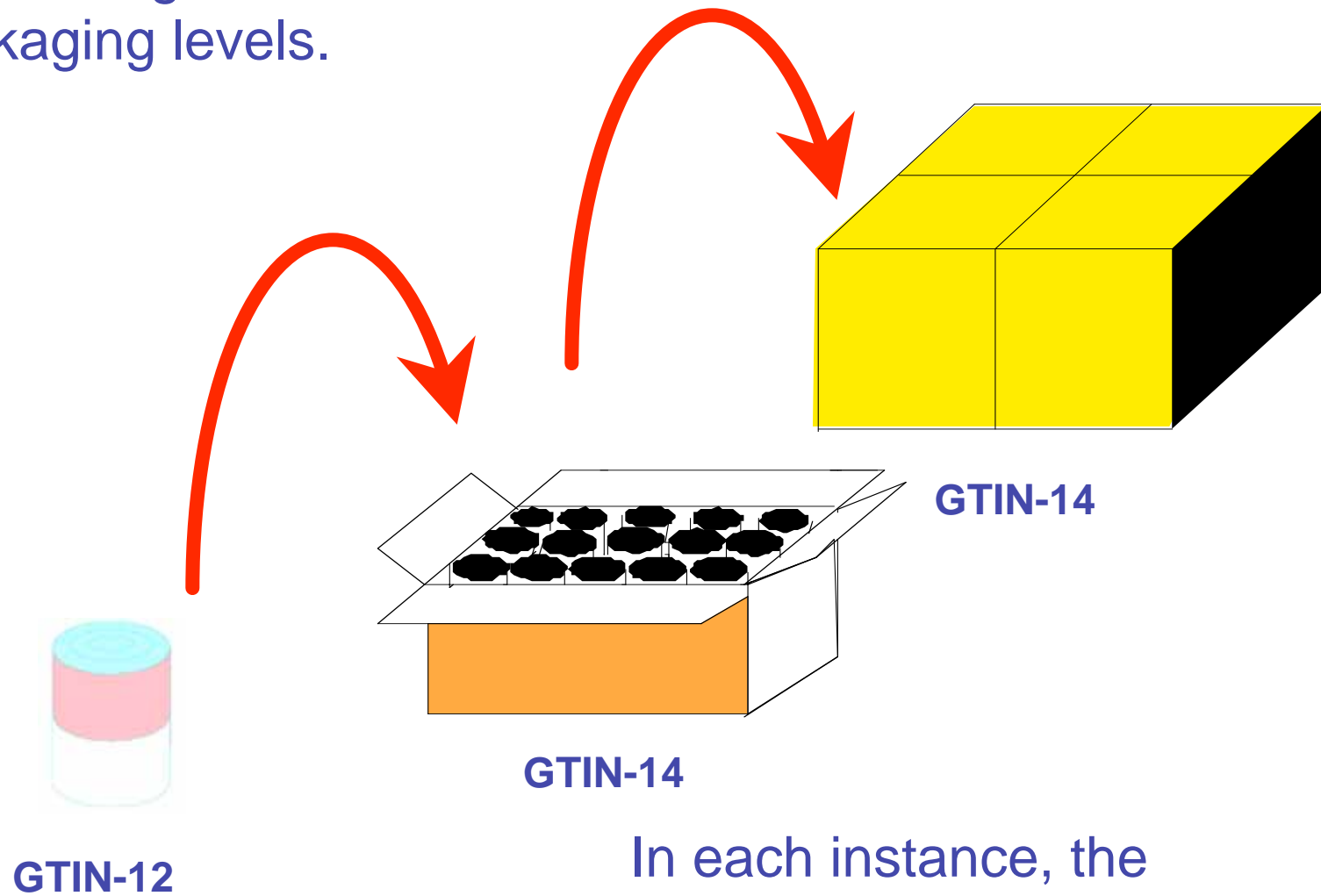
A U.P.C. is a GTIN (GS1-12)

- 12 Total Digits
 - 6 – GS1 US Company Prefix*
 - 5 - Item Reference (Item Number)
 - 1 - Check digit



*Note: Company Prefix can also have 7,8, or 9 digits which means a lower amount of item reference codes

GTIN assignment for packaging levels.



In each instance, the GTIN must be unique

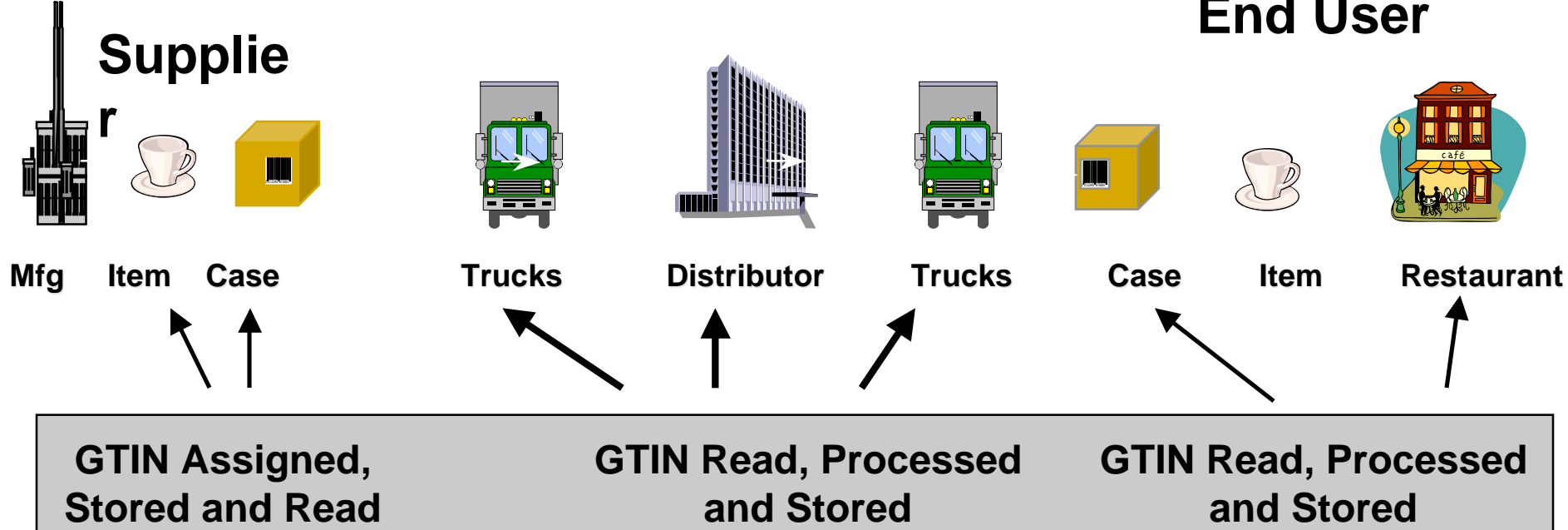
1 GTIN – 2 Roles

- Physical
 - Encoded in bar codes
 - Scanned in distribution centers, on/off trucks, restaurants, stock rooms, etc.
- Electronic
 - Stored in product masters to uniquely identify items
 - Used in electronic transactions between trading partners, e.g., purchase orders, invoices, advance ship notices, etc.
 - Used as a key to data synchronization

Standard Product Identification through the Foodservice Supply Chain

Trade Item Flow

End User



GS1 System Data Carriers
Bar codes or EPC

Item data , Data Sync, ship notice, invoice, recall

request for quotation, planning schedule, PO

Electronic Commerce Information Flow

Guidance for GTIN Assignment

- The manufacturer or brand owner determines how to assign GTINs
- The receiver (distributor, operator, etc.) depends on the manufacturer or brand owner to ensure uniqueness
- Contract manufacturers obtain GTIN from brand owner

Rules for Changing GTINs

- Basics
 - Quantity Change = GTIN change
 - Packaging Dimension Change > 20% = GTIN change
 - Brand Name Change = GTIN change

GTIN Summary

- Standards based unique product identification accepted and used in the U.S. and globally.
- Foodservice suppliers already are using GTINs on their products / equipment
- Operators are using GTINs on their own branded products and supplies in their restaurants now.
- Walk through your warehouse, distribution center or restaurant and look at how many products are already marked with GTINs.

Global Location Number (GLN)

Global Location Number Overview

- Use the GS1 Company Prefix as the base
- Create the “Location Reference” number
- Calculate the Check Digit

GLN Example From Land O'Lakes

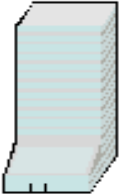
GS1 Company Prefix = 0034500



Division: Dairy Foods
GLN: 0034500000017



Corporate Headquarters
GLN: 0034500000000

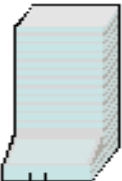


Division: Agriculture
GLN: 0034500XXXXXC



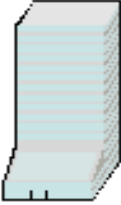
DF Business Unit
Retail/Deli

GLN: 0034500XXXXXC



DF Business Unit
Foodservice

GLN: 0034500XXXXXC



AG Business Unit
Feed

GLN: 0034500XXXXXC



AG Business Unit
Seed

GLN: 0034500XXXXXC



GLN Example for Restaurants

GS1 Company Prefix = 0012345



Restaurant Operator's Headquarters

GLN: 0012345000010



Princeton, NJ

GLN: 0012345000027



Appleton, WI

GLN: 0012345000034



Sagamore Hills, OH

GLN: 0012345000058



Glen Rock, NJ

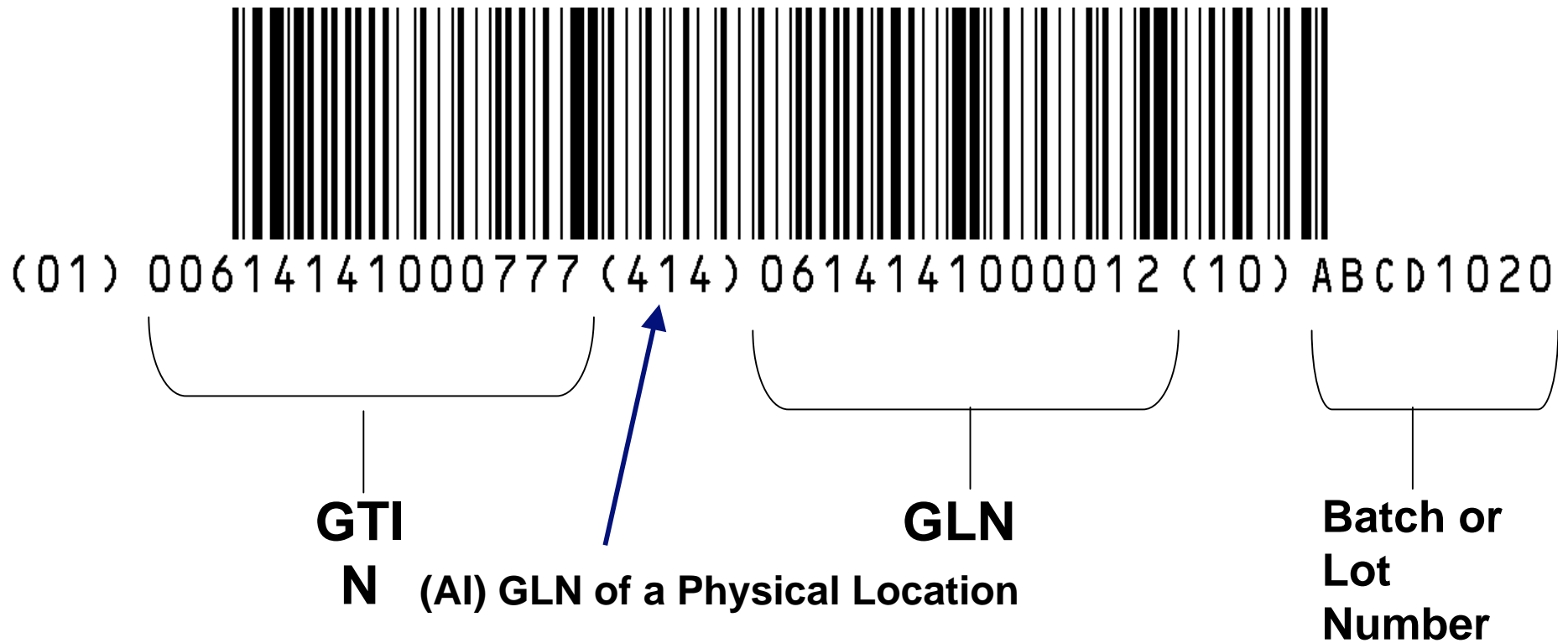
GLN: 0012345000065



Northbrook, IL

GLN: 0012345000089

GTIN, GLN and Lot # Application



GS1-128 symbol

Data Synchronization

The GS1 View Point



Data Quality



• Data that is **complete, consistent, and accurate** – is foundational to collaborative commerce and global data synchronisation.

- Global Trade Item Numbers
- Product / Case Descriptions
- Product / Case Dimensions and Weights

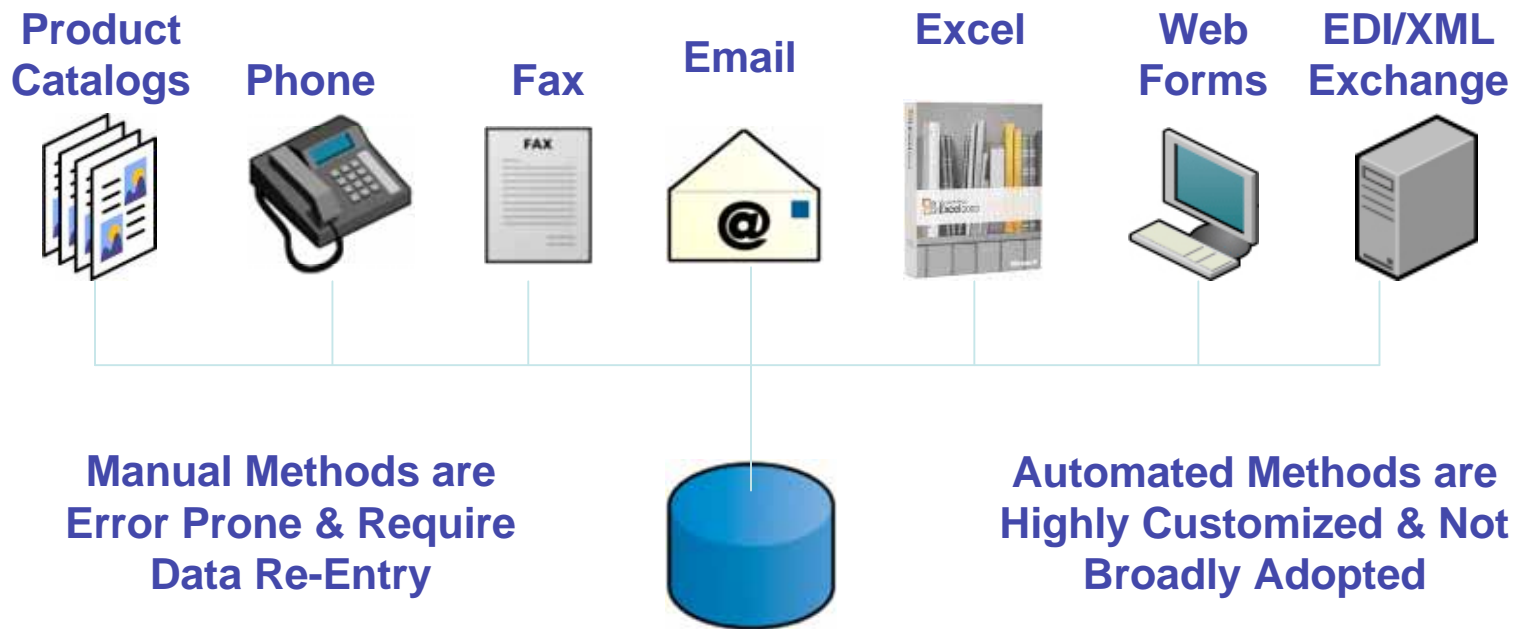
The Steps to Collaborative Commerce



Source: GS1 US™ and AT Kearney

Multi Industry Problem

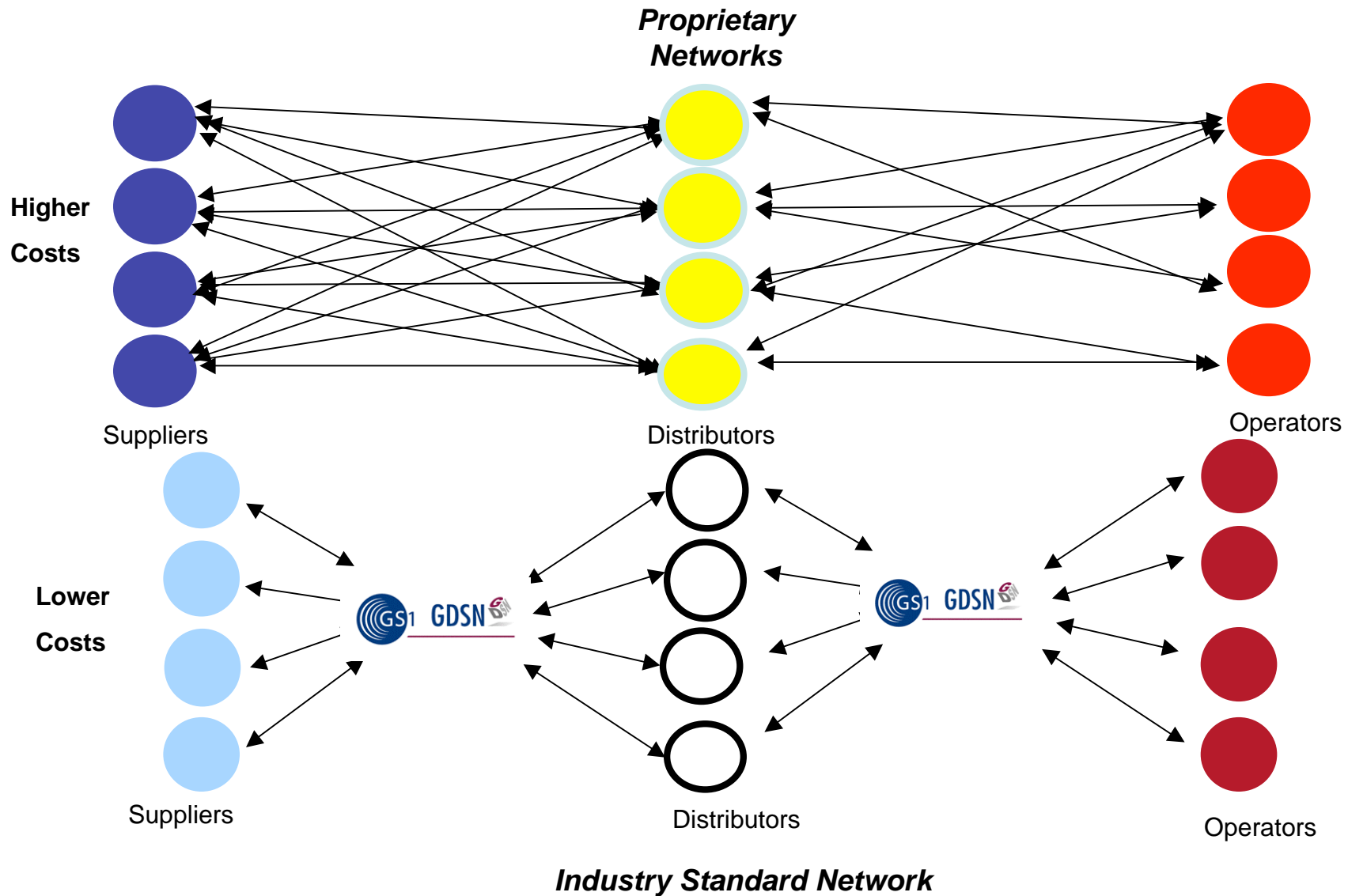
Multiple Ways for Manufacturers, Distributors & Operators to Exchange Product Information



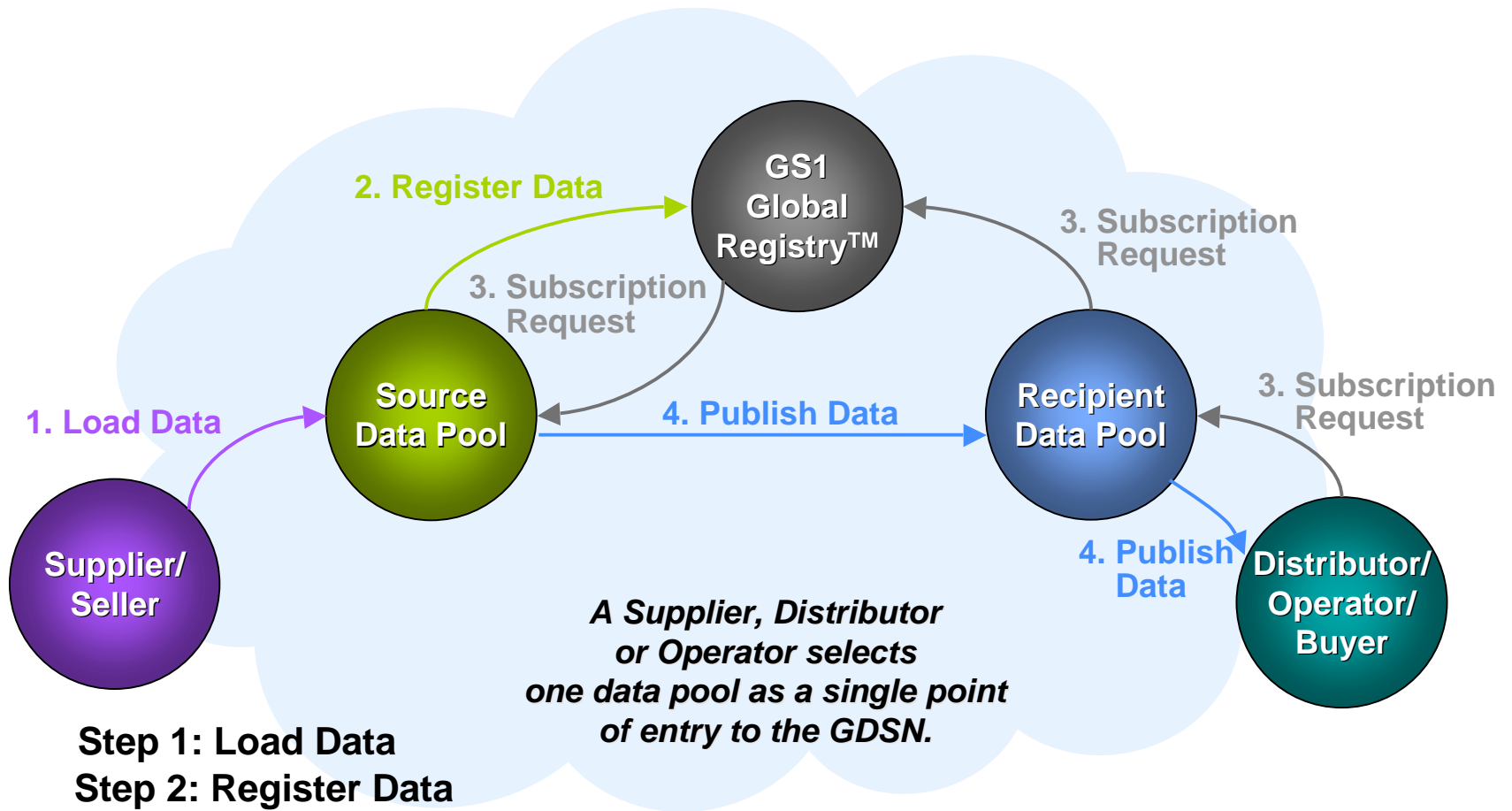
Data Synchronization

- Electronic transfer of standardized item and location information AND the continuous harmonization of that data over time
- Involves sharing standardized information
 - Item information (GTIN) including attributes controlled by the brand owner/data source (e.g., net content, dimensions, weights)
 - Location information (GLN) including locations involved in trade (e.g., headquarter, billing, ship to)
- Facilitates communication among trading partners
- Creates efficiencies across supply chains

Industry Standards Reduce Costs



How Does the GDSN Work?



- Step 1: Load Data**
- Step 2: Register Data**
- Step 3: Subscription Request**
- Step 4: Publish Data**

GDSN: Global Data Synchronization Network

Examples of GDSN Attributes Available for Foodservice

- Product Information
- Allergy Information
- Diet Information
- Nutrient Information
- Preparation Information
- Physiochemical Characteristics
- Microbiological Information
- Marketing Information
- Trade Item Certification

The Benefits



Product Information Management

Accurate and Efficient Receipt, Entry and Distribution of Product Information



Information received electronically from the brand owner / distributor facilitates loading of the data...automating the process

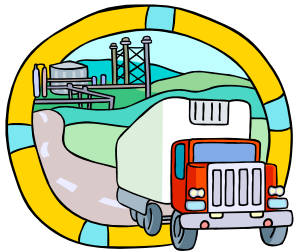
New item information loaded faster and more accurately

Contract and rebate standards in development

Eliminates paperwork!!!!

Logistics and Distribution Benefits

Synchronized and accurate cube and weight data



Allows inbound and outbound truckloads to be better utilized, reducing freight costs and increasing efficiency



Means inbound truckloads can be received and put away efficiently - reducing time, handling, cost and improving shelf service levels

Accounting Benefits

Accurate and synchronized data improves invoice accuracy and associated reconciliation processes



Invoice reconciliation

- More invoices will be accurate
- More streamlined/timely processes for resolving invoice discrepancies
- Reduced out of period adjustments which will make financial information more actionable
- Reduced receiving quantity errors to be reconciled

Thoughts on Getting Started

- Get **commitment from senior management**, communicate this commitment internally and to your trading partners, and **get “buy-in” across the company structure.**

- Build your **company-specific business case** and link it to key performance indicators (KPIs). Build your **project plan** for the coming years and use the business case to identify the KPIs to track the **benefits** and maintain visibility of **progress.**

- Clean up internal data catalogues** and ensure that you are able to send/receive all data attributes to and from your trading partners in a Global Data Dictionary-compliant structure. Studies have shown that this process could take time - anywhere from **several months to several years...**

- Start working with a **few key items** and with a **small number of trading partners** that are strategically important and committed to developing the capabilities required to exchange clean, GS1 System standards-compliant data via the GDSN.
- Engage in pilot tests** with these selected partners, **monitor results** and make the necessary workflow, process and technical **adjustments** before moving to full production.

This is not about technology...it is about introducing new business processes and change!!!!

Data Synchronization

Where's the Activity?

- Retail Food & Beverage
 - Consumer Packaged Goods
 - Hardlines / Hardware
 - Retail Drug
 - School & Home Office Products
 - Alcohol Beverage Industry
 - Healthcare
 - Government
 - GPO's
- Purchase foodservice products*

Some thoughts to take away



- If you are a manufacturer and not using GTINs; consider their use and potential benefits to your business
- Nearly 12,000 of the world's suppliers, retailers, and distributors have already made the Global Data Synchronization Network a cornerstone of their electronic business practice
- Data synchronisation must be implemented in parallel with a Data Quality program
- Benefits are numerous, real and measurable
- GDS is happening now
- Industry standards do work, do deliver value and are easily implemented

Questions???

Thank You!!

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