



The GS1 System & Traceability

Jim Bracken
11th November 2009

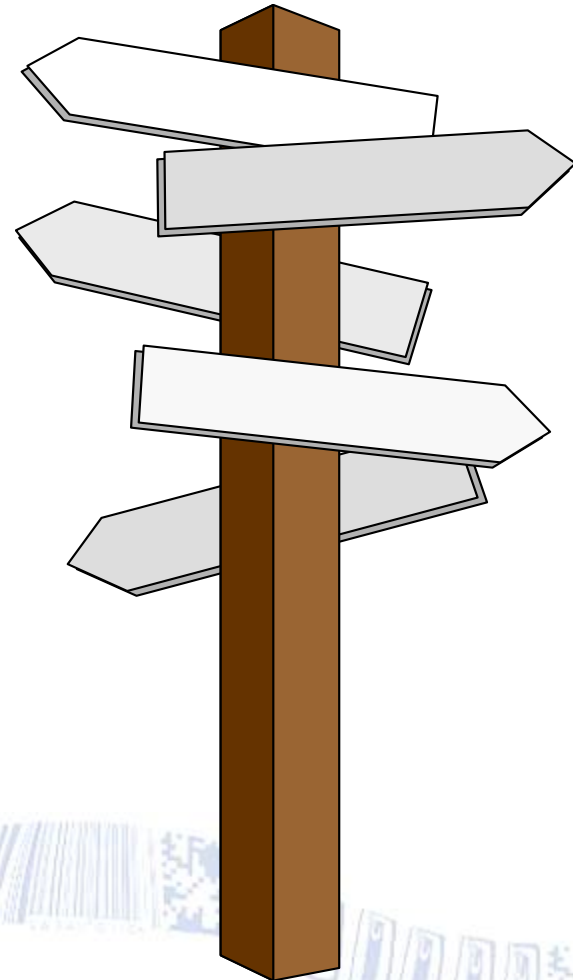




*Information is not Power, Sharing Information is the **Real Power***

Agenda

- **What is GS1?**
- **GS1 & Traceability –
Global Traceability
Conformance Programme**



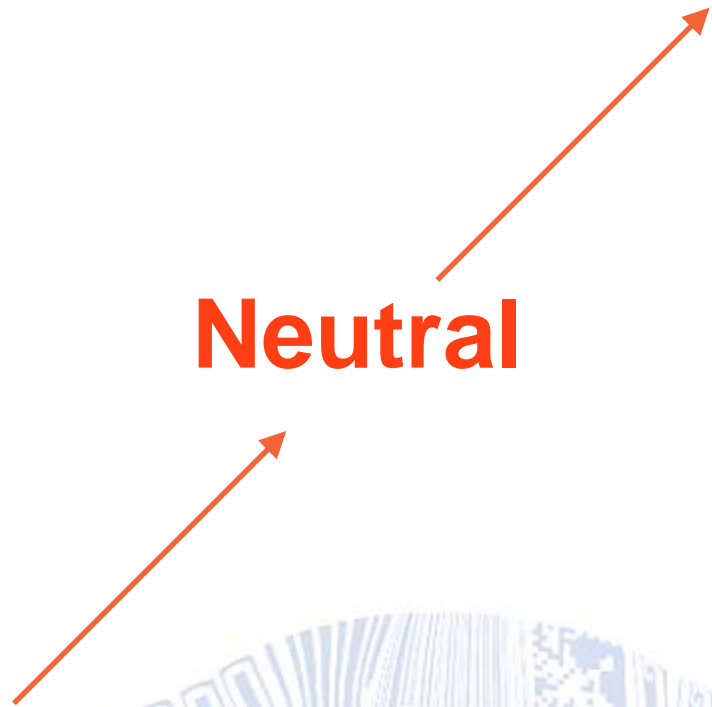


Who is GS1?

Not-for-Profit

Neutral

User Driven





Everybody, Everyday, Everywhere

GS1 standards are used by...

**Big
multinational
chains**

**Small
corner
shops**

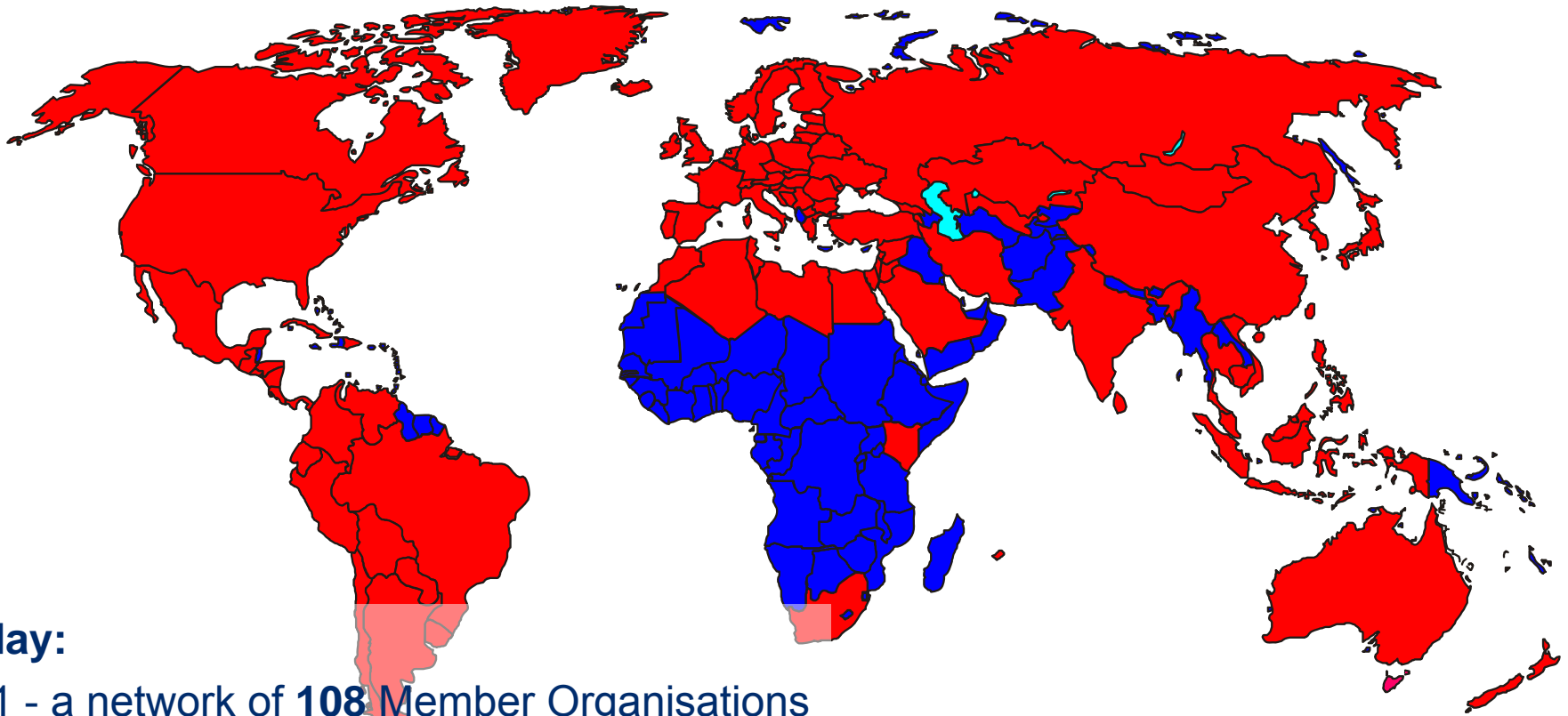
**World
famous
brands**

**Individual
craftsmen**





GS1 Around the Globe



Today:

GS1 - a network of **108** Member Organisations

Serving **155** countries

Covering **24** Industry Sectors

Over **1.3 million** members

Over **5 Billion** Electronic transactions Daily

-  Countries with GS1 Member Organisations
-  Countries served on a direct basis from GS1 Global Office (Brussels)



GS1's Vision

Improving the efficiency and visibility of **supply and demand chains**, across all sectors, globally.





The GS1 Architecture



The global language of business

OVERALL BENEFIT: Improving efficiency & visibility in supply and demand chains

GS1 SOLUTIONS & SERVICES USING GS1 STANDARDS

Solutions: POS / Inventory Management / Asset Management / Collaborative Planning / Traceability
Services: Global (GSMP, GEPIR, Global Registry, Training and Accreditation) & Local (e.g. Certification, Implementation, Training)



System - Integrated system of standards



Global standards
for automatic
identification

Rapid and accurate,
item, asset or
location identification



Global standards
for electronic business
messaging

Rapid, efficient
& accurate business
data exchange



The environment
for global data
synchronisation

Standardised, reliable
data for effective
business transactions



Powered by GS1

Global standards
for RFID-based
identification

More accurate, immediate
and cost-effective
visibility of information

GS1 Identification Keys (e.g. GTIN, GLN, SSCC, GRAI, GIAI, GSRN, EPC) & Attribute Data (e.g. Best Before Date)



GS1 Identifiers

GS1 Identifiers:

- GTIN - Global Trade Item Number
- SGTIN - Serialised Global Trade Item Number
- SSCC - Serial Shipping Container Code
- GLN - Global Location Number
- GRAI - Global Returnable Asset Identifier
- GIAI - Global Individual Asset Identifier

- GDTI - Global Document Type Identifier

Products

Places

Assets

Providing certainty of identification of

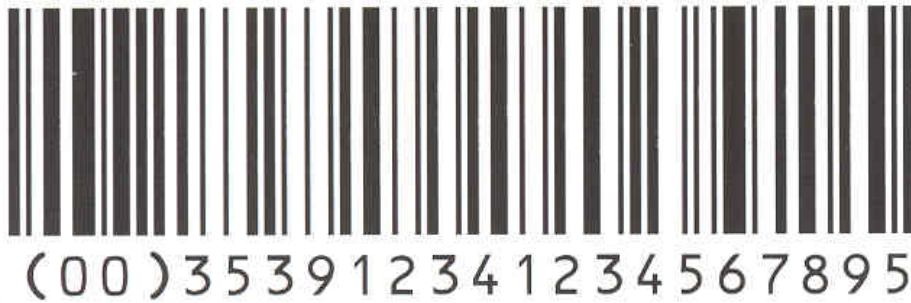
- Products
- Places
- Assets
- Documents





Data Carriers

Standard Data Carriers for representing data





GS1 128

GS1 128 Barcode





How Data 'Runs a Business' ?

Data is required to efficiently run the following functions:

Procurement
Systems

Payment & Accounts

Transport & Logistics

Front End Systems

Warehousing & Storage

Prescribing Systems

*'no matter how well designed and robust an IT application is, **bad data means that any system will be at best inefficient and at worst, cause it to fail**'*



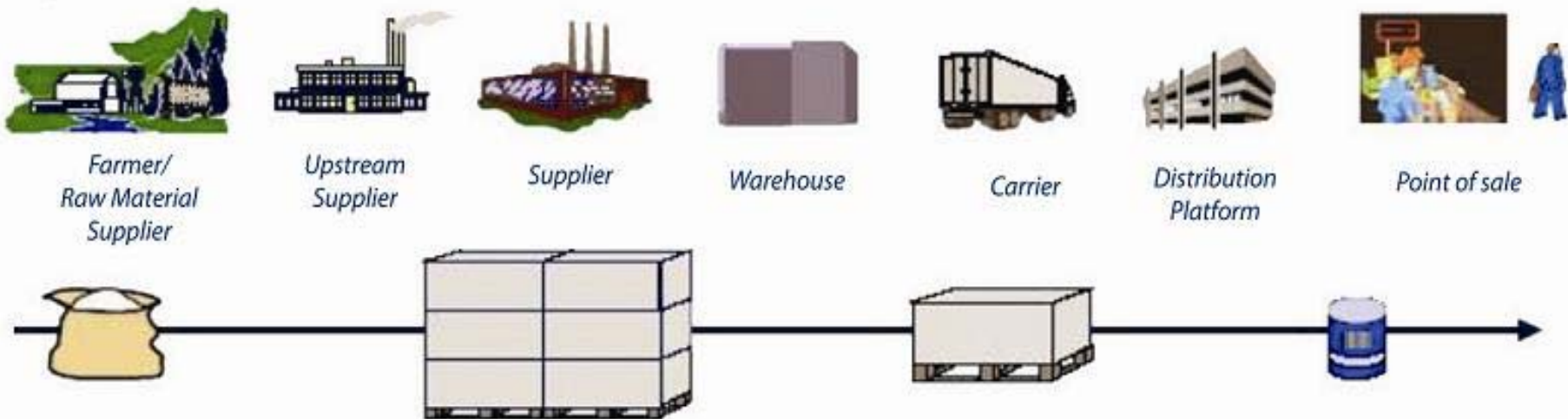


How Data Standards can Help **AIDC**

Use of data standards are fundamental to deliver secure and effective AIDC (**automatic Identification and data capture**) solutions:-

- to uniquely identify supply chain entities / locations
- to ensure that the **correct items are available** in the:
 - Right Quantity
 - At the Right Time
 - In the Right Place
 - By the Right Route
- to **track and trace** all items effectively in the event of urgent need or product recall
- to **analyse information** on requirements, users, purchases, suppliers and manufacturers in order **to improve performance across the Supply Chain**
- to achieve the above at the **minimum total cost to all parties** in the Supply Chain.

Associating a Flow of Information With the Physical Flow of Trade Items



Flow of Trade Items
Flow of Information





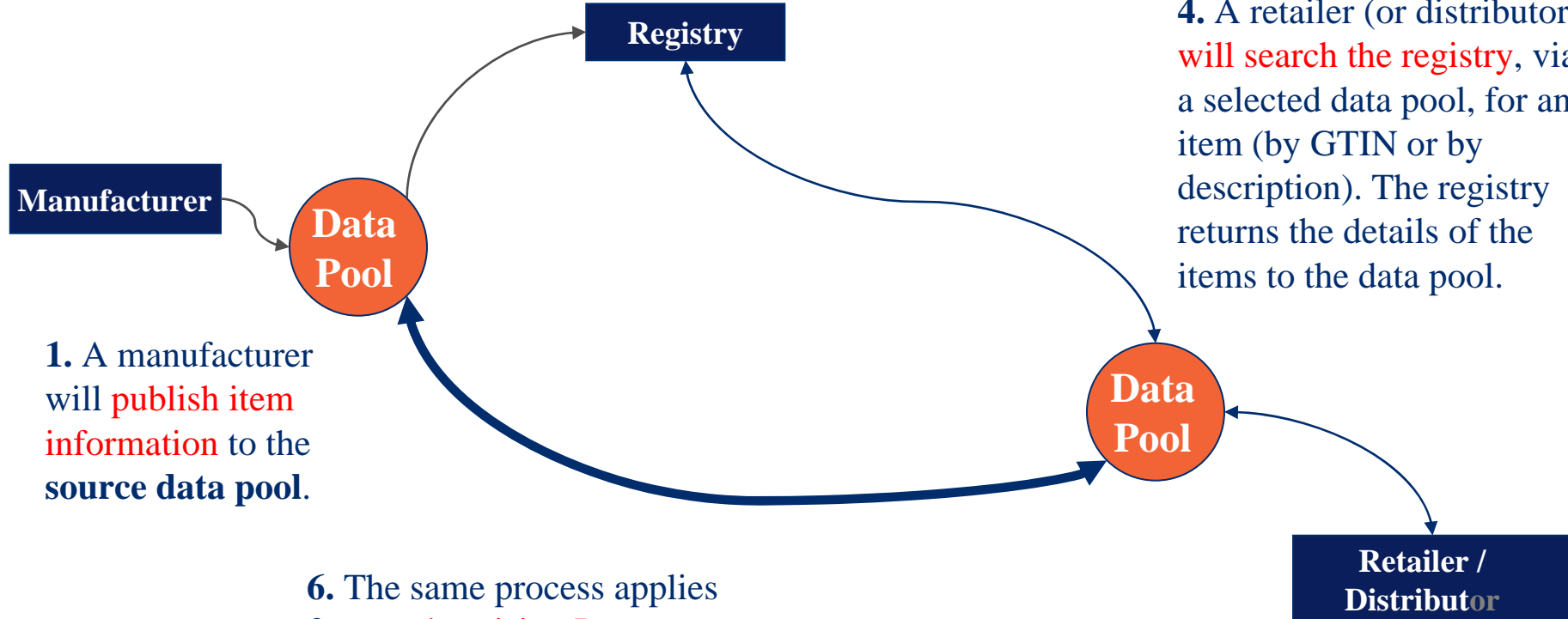
Datapool/GDSN



2. The data pool sends very basic information about the item to the Global Registry.

3. The registry holds this basic information about all items and the location of each items' source data pool.

4. A retailer (or distributor) will search the registry, via a selected data pool, for an item (by GTIN or by description). The registry returns the details of the items to the data pool.



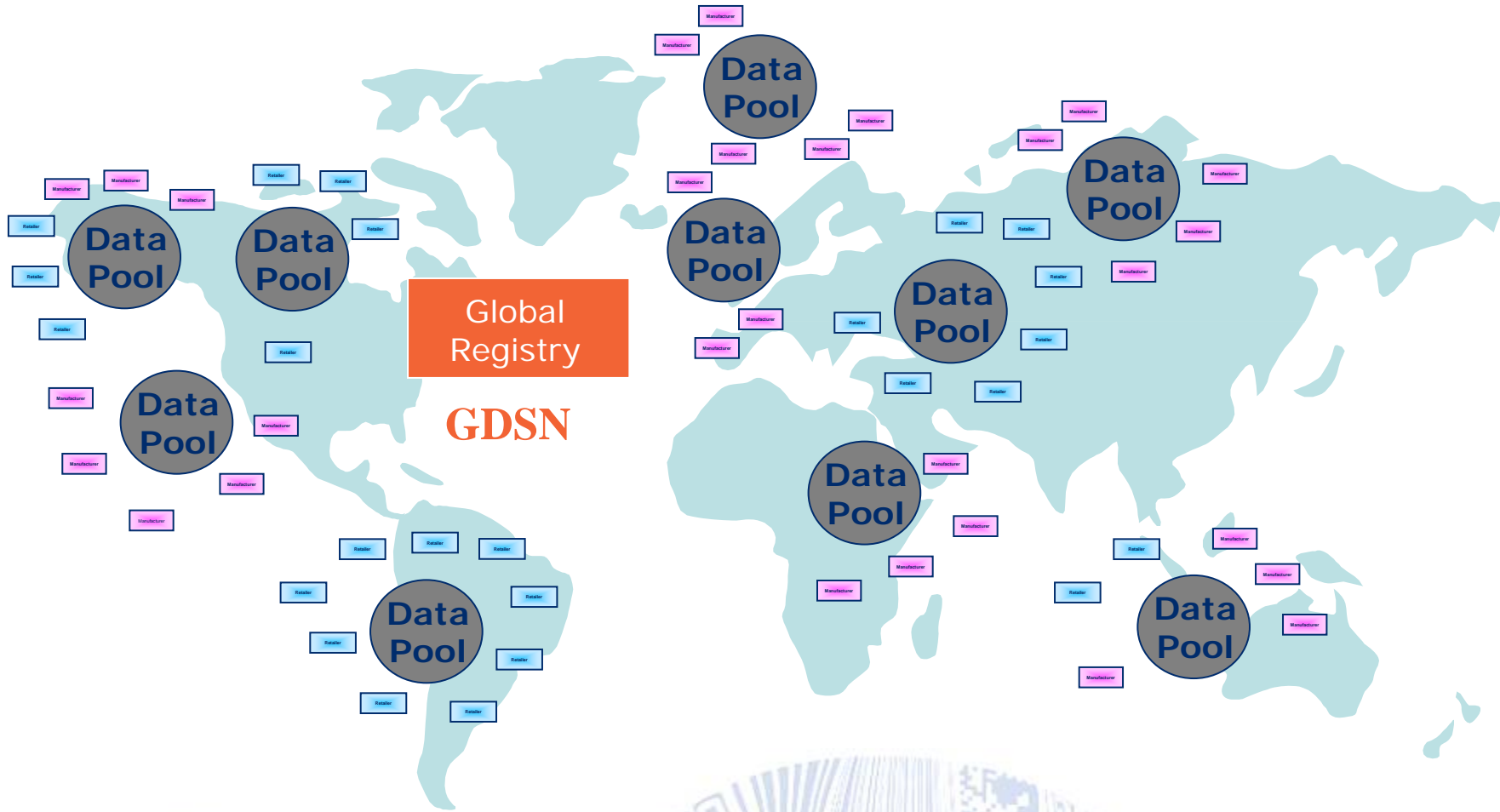
1. A manufacturer will publish item information to the source data pool.

6. The same process applies for synchronising Party information, published by manufacturer or retailer, based on the GLN

5. The trading partners synchronise the item information between their respective data pools.



A Global Solution to a Global Problem



These problems are being experienced globally, not just locally.



RFID/EPC Network



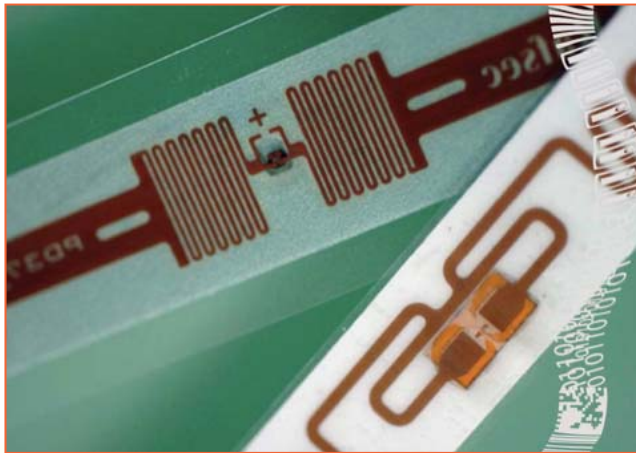


RFID/EPC

Translation...

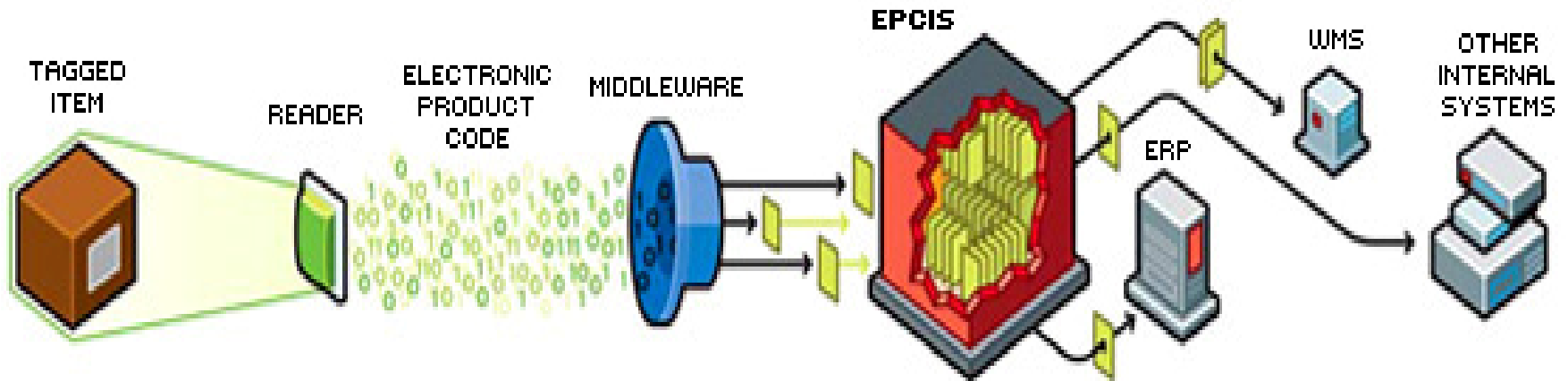
“This Chip will **Change** your Life”

RFID/EPC is a transformational technology. It will enable business process **change**.



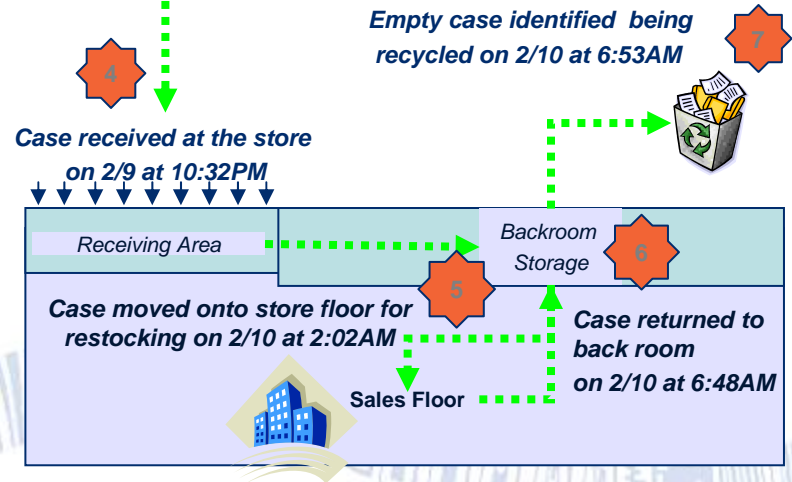
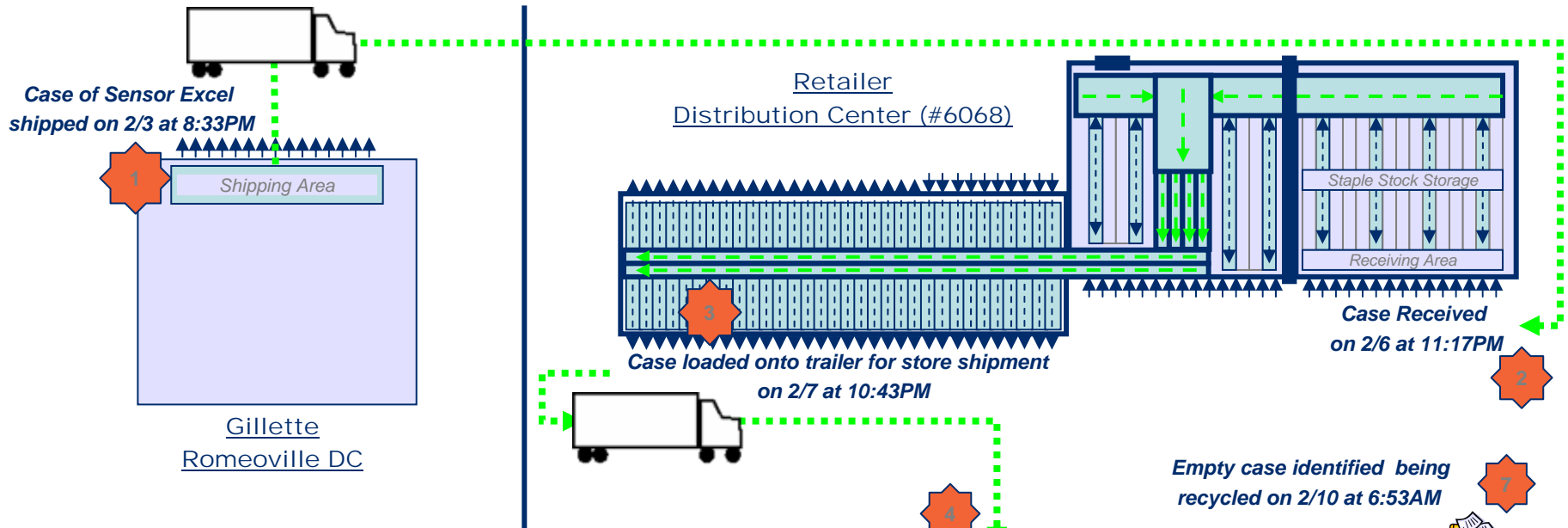


The EPCglobal Network





EPC read points in the Supply Chain



	EPC Read Points	Step Time	Cum Time
1	Shipment from Gillette DC	2/3 @8:33PM	-
2	Receipt at Wal*Mart DC	+3 days 3 hrs	3 days 3 hrs
3	DC Loading onto Trailer & Shipment	+23 hours	4 days 2 hrs
4	Receipt at Retailer Store	+2 days	6 days 2 hrs
5	Move to Store Floor for Restocking	+3 hours	6 days 5 hrs
6	Return of Case to Back Room	+5 hours	6 days 10 hrs
7	Case Recycled	+7 minutes	-



GS1 & Traceability

Global Traceability Conformance Programme





GTC: Global Traceability Conformance Programme

GS1
developed a
GTC to
support their
efforts

Companies that manufacture consumer products **invest considerable resources** to:

- establish the value of their brands and **meet the needs of customers,**
- comply with **Regulations**
- **achieve efficiency** in the supply chain.





Objectives





Objectives

Traceability assessment and Audit

- Measures conformance to GS1 standards and provides management with **actionable reports** aimed at **facilitating improvement**.

• ...





Objectives

Traceability assessment and Audit

- Measure performance to GS1 standards and provide evidence of compliance
- Audit aimed at

Brand Protection and Risk Management

- Reduce the impact of product recall and withdrawals due to **better visibility on the product flow** using GS1 standards....





Objectives

Traceability assessment and Audit

Measures conformance to GS1 standards and provides management with actionable reports aimed at facilitating

...

Brand Protection and Risk Management

Responsive Supply Chain

Standardised information exchanges between stakeholders in the chain **improves efficiency and transparency**, while increasing consumer confidence.

als due to
dards





Objectives

Traceability assessment and Audit

Measures conformance to GS1 standards and provides aimed at

Brand Protection and Risk Management

Responsive Supply Chain

Standardized information exchange between stakeholders in transparency, v

als
S1

Compliance

Provides **compliance with regulations** and with traceability requirements of HACCP, BRC and IFS. Fulfills traceability requirements of main food regulations such as EC 178-2000, 2002 Bioterrorism Act - FDA, Food Sanitation Law in Japan among others

- ...



Objectives

Traceability assessment and Audit

Measures conformance to GS1 standards and provides... aimed

Brand Protection and Risk Management

Responsive Supply Chain

Standardized information exchange between stakeholders in the chain trans

Compliance

Technical Support & training

The GS1 system of standards is the most widely used supply chain standards system in the world. GS1 has the expertise and the standards are documented

<http://www.gs1.org/services/gsmpl> and for traceability website: www.gs1.org/traceability

•...

rawals
g GS1

s and
CP, BRC
nts of
3-2000,
nitation



Objectives

Traceability assessment and Audit

Measures conformance to GS1 standards and provides
aimed

Brand Protection and Risk Management

Responsive Supply Chain

For Efficient Traceability

Technical Support & training

The GS1 system of standards is the most widely used supply chain standards system in the world. GS1 has the expertise and the standards are documented

<http://www.gs1.org/services/gsmf/> and for traceability website: www.gs1.org/traceability

•...



GS1 Global Traceability Conformance (GTC)

A Programme developed to :

- Review & assess **company's readiness to introduce** a traceability system
- Evaluate **company's capability** to perform traceability in accordance with customers requirements, regulations, best practices, and global standards.

Through:

- **A rigorous methodology**, technical criteria and tools: The GTC check list
- Based on the **GS1 Global Traceability Standard (GTS)**
- Compliant with **ISO 22005** and additional requirements (BRC, SQF, IFS, HACCP...)



Used for :

- Traceability assessment
- Assistance to solve problems detected
- **Auditing**
- Possibility to award a **GS1 Seal**



The GS1 assessment: Measuring companies health



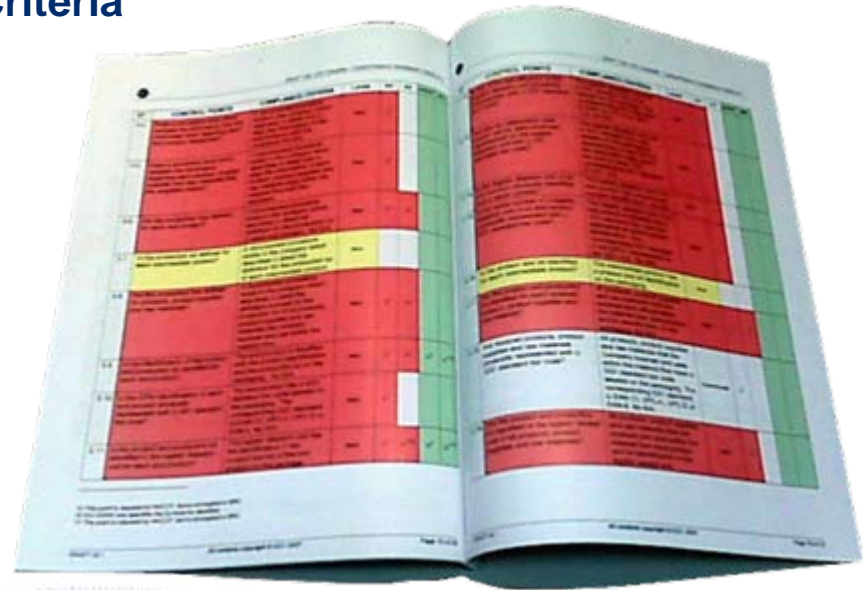
- **Measure their traceability** level of implementation
- **Measure conformance** to GS1 standards and others
- **Offers an objective view**, impossible to achieve through audits conducted by internal staff
- Provides management with **actionable reports** aimed at facilitating improvement
- Attain ultimate **quality** assurance and business optimization.



GS1 Global Traceability Conformance

The Programme Framework

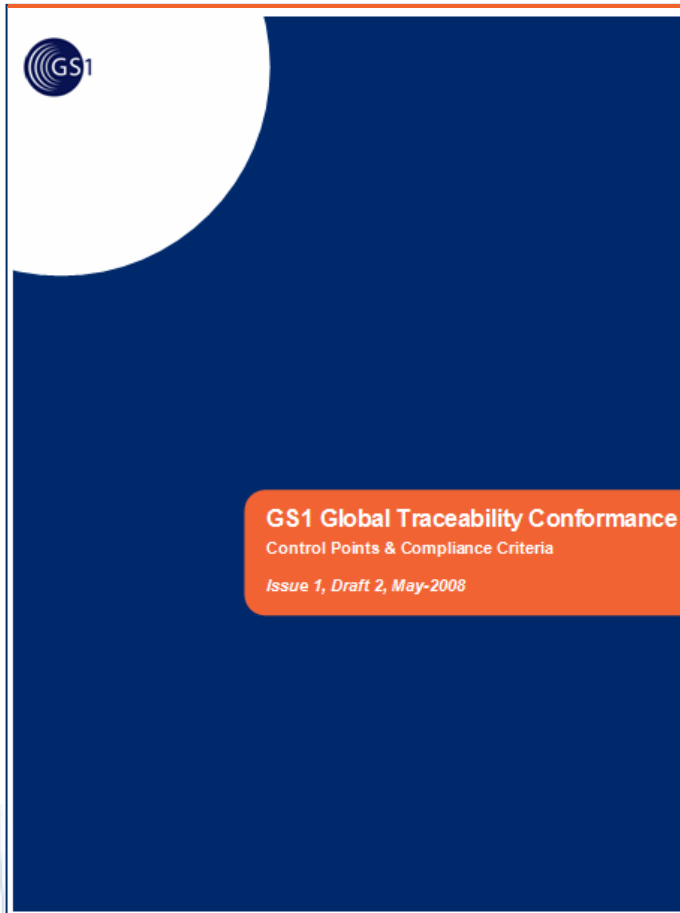
- **GS1 Global Traceability Standard (GTS)**
- **GTS Traceability Implementation Guidelines**
- **GS1 GTC Control Points & Compliance Criteria**
- **GS1 GTC Operations Manual**
- **GS1 GTC Audit Material**
 - GS1 GTC Assessment Checklist
 - Audit Plan
 - Audit Report
 - Non-Compliance Report
- **GS1 GTC Seal**
- **GS1 GTC Legal Agreements**





GS1 GTC Control Points & Compliance Criteria

The Control Points diagnose:



Identification (how traceable items are identified and coded)

Procedures (how the traceability is declared and documented)

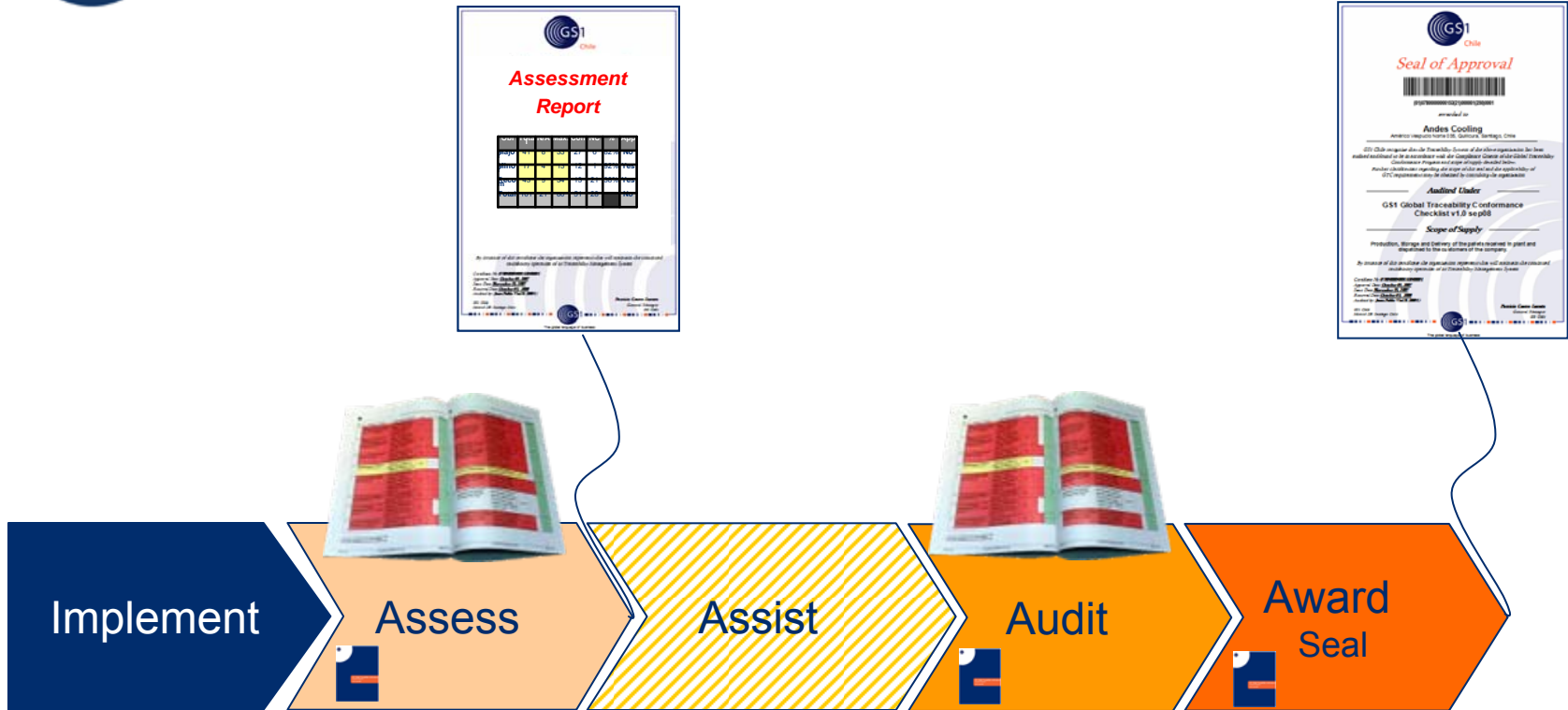
Operations (how the traceability works)

Information (what information is being used and given)





GS1 Traceability Implementation Path



 Regulated by GS1
GTC Operations
Manual



The GS1 assessment: helping companies with their trading partners

- **Measure the traceability** level of their business partners
- Work with business partners to **improve the level of traceability** and information given
- **Solve problems with labeling** usage upstream and downstream
- **Improve information exchange** between stakeholders in the chain increase efficiency. Availability, planning etc.
- **Improve transparency** increase consumer confidence

**Help
Businesses
assess their
Traceability
Systems**



The GS1 GTC: Testimonials



Unilever: GS1 GTC and Seal would be a great help for Unilever in terms of aligning suppliers with the same implementation level of GS1 system

Syngenta: is interested to test the GTC in some of their plants in Europe.

L'Oreal: is interested to test the GTC in some of their plants in France and study the possibility to merge their own checklist with the GTC checklist.

BASF is developing a conformance programme for sustainability, ecofriendly and traceability with other companies and would agree to partnership with GS1 and integrate GS1 GTC as the conformance checklist for traceability.



Thank You !





Jim Bracken

E: jim.bracken@gs1ie.org

Contact Details

The Nutley Building
Merrion Road
Dublin 4

T. +353 1 208 0676

F. +353 1 208 0670

E. info@gs1ie.org

W. www.gs1ie.org

