How to move from traceability standards to actual adoption

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GS1

- Not for profit

- Develop standards for the supply chain

  - Identify products, locations & actors

  - Capture data

  - Share data

- Platform for collaborative agreement between partners

- User-driven and user-governed

- More than 1 million users in 150 countries

- 6 billion transactions a day

GS1 is the most widely used
supply chain standards system in the world.

Working with International Organisations

World Health
Organization

International
Organisation for
Standardization

European
Committee for
Standardization

United Nations

•World Customs Organization

North Atlantic Treaty
Organization

Summary

1. Address all traceability principles
2. Use an industry approach to drive adoption
3. Distinguish the What and the How
4. Encourage self & third party assessments
5. Build collective knowledge and collaborate towards an integrated approach
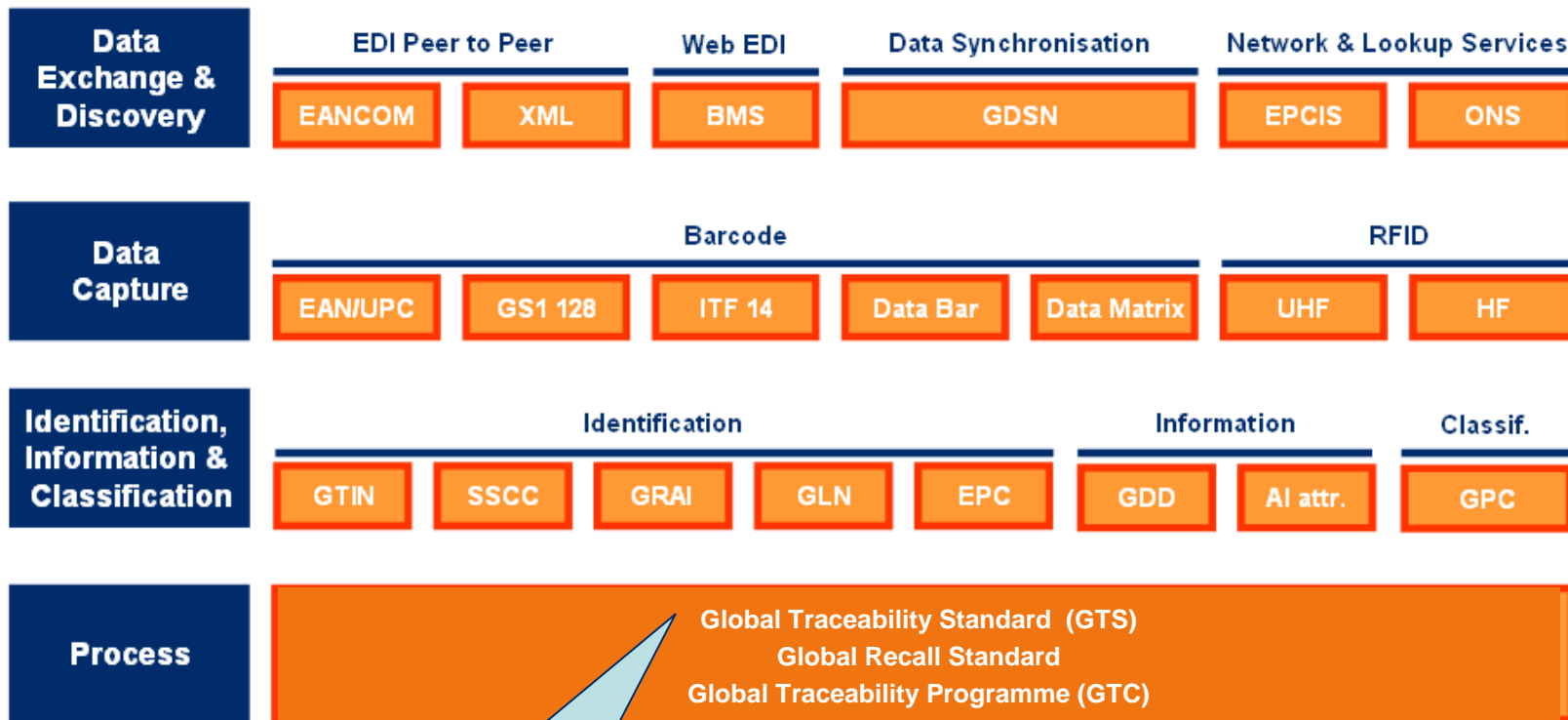
1. Adress all traceability principles

Adress all traceability principles

- Identification of products

- Products labelling

- Data recording and sharing
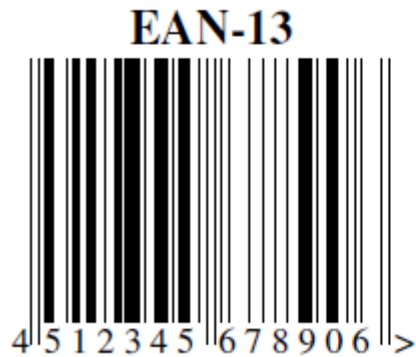
- Manage links between inputs & outputs

GS1 suite of traceability standards

Data Exchange & Discovery	EDI Peer to Peer		Web EDI	Data Synchronisation	Network & Lookup Services	
	EANCOM	XML	BMS	GDSN	EPCIS	ONS

Data Capture	Barcode					RFID	
	EAN/UPC	GS1 128	ITF 14	Data Bar	Data Matrix	UHF	HF

Identification, Information & Classification	Identification					Information		Classif.
	GTIN	SSCC	GRAI	GLN	EPC	GDD	AI attr.	GPC

Process	Global Traceability Standard (GTS) Global Recall Standard Global Traceability Programme (GTC)

Incl. data to record & managing links

GS1 Barcodes and Product Code on consumer units

EAN-13

Barcode

Code

4 512345 678906 >

The symbol that represents the code and enables automatic data capture

The GTIN is the key that uniquely identifies the product and enables access to more information.

PL 10
home
by somogyi
working lamp
montagelampe · szerelőlámpa

CE

PAP/PVC

230 V~50 Hz
E27 · 60 W

5 998312 767191

SOMOGYI ELEKTRONIC®

8

Global Trade Item Number (GTIN)

EAN-13

4 5 1 2 3 4 5 6 7 8 9 0 6 >

GS1 Company Prefix												Item Reference	Check Digit
N_1	N_2	N_3	N_4	N_5	N_6	N_7	N_8	N_9	N_{10}	N_{11}	N_{12}		N_{13}
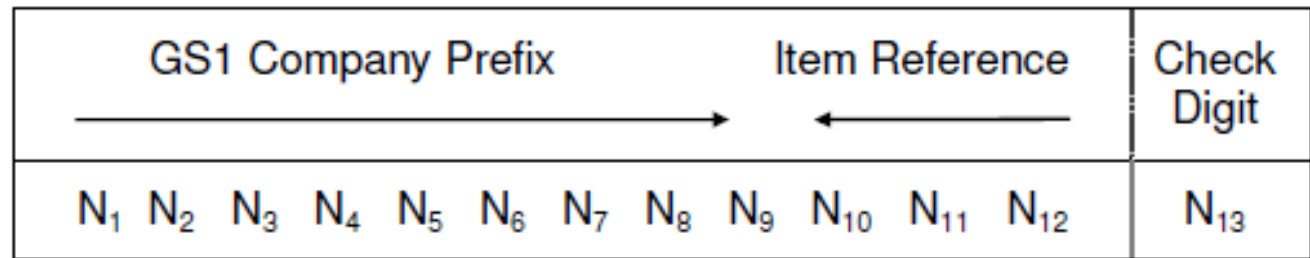
GS1 country prefix

The GTIN is used to identify the product by trading partners in all business transactions (at point of sale, to order, invoice, for logistics…) and across countries.

Business Process: MANUFACTURER

What: GTIN   **Who**: GLN   **Where**: GLN   **Why**: Business Process   **When**

Receiving

Internal Logistic Production

Despatch
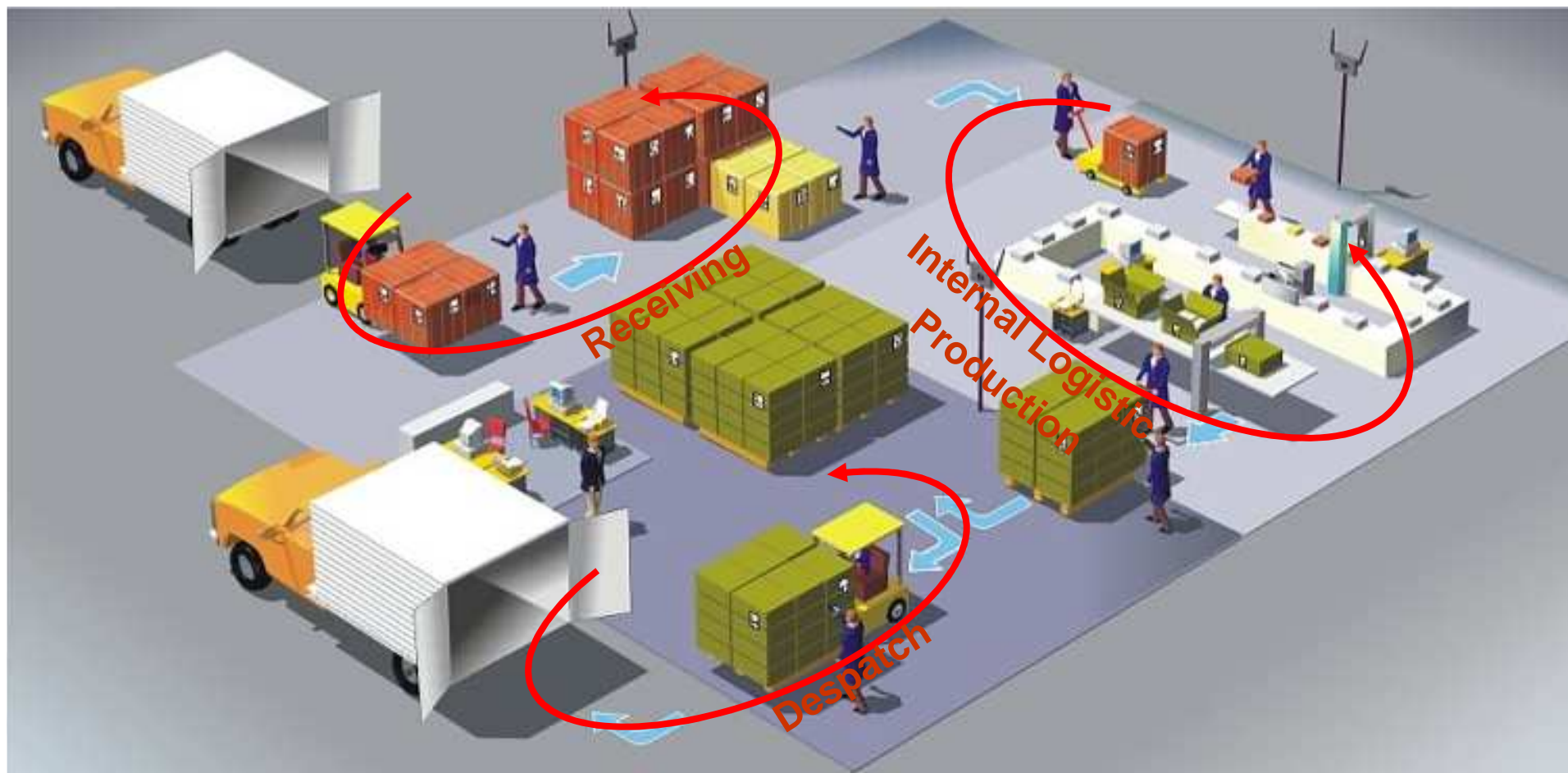
GS1 Keys to reach information

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Traceability Data

Depends on product type

Master Data

Transactional Data

Public Information

Parties & Location Information	Trade Item Information	Shipment Information	Logistic Unit Information	Batch / Lot or serialised trade item Information
(GLN, Address, Contact...)	(GTIN, name, classification, dimension, weight...)	(Despatch Advice Number, date of Despatch/Receipt, Ship from/to, transporter identification...)	(SSCC, content description...)	(Batch / Lot or serial number, quantity, best before date...)

Depends on contractual relationship

Private Information

Product details as planned, for example:
- Product specifications,
- Process of production,
- Components,
- Origin of raw materials,
- ...

Actual product details, for example:
- Quality records,
- Results of analysis,
- Batch / Lot number of raw materials,
- Identification of interchangeable components that have been used

✓ **Master Data:** permanent/lasting nature, relatively constant across time, not subject to frequent change, accessed/used by multiple business processes and system applications, neutral/relationship dependent

✓ **Transactional Data**: created during the physical flow of goods, can only be collected when events occur.
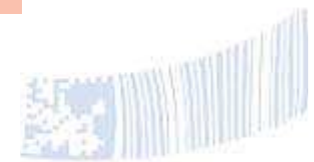
2. Use an industry approach to drive adoption

Use an industry approach to facilitate & drive adoption

Adoption →

INDUSTRY	Regulations	Standards	Guidelines	Implementation
Product Identification				
Labeling & data capture				
Data recording & sharing				
Full traceability (process)				

Full chain traceability

Use an industry approach to facilitate & drive adoption - examples
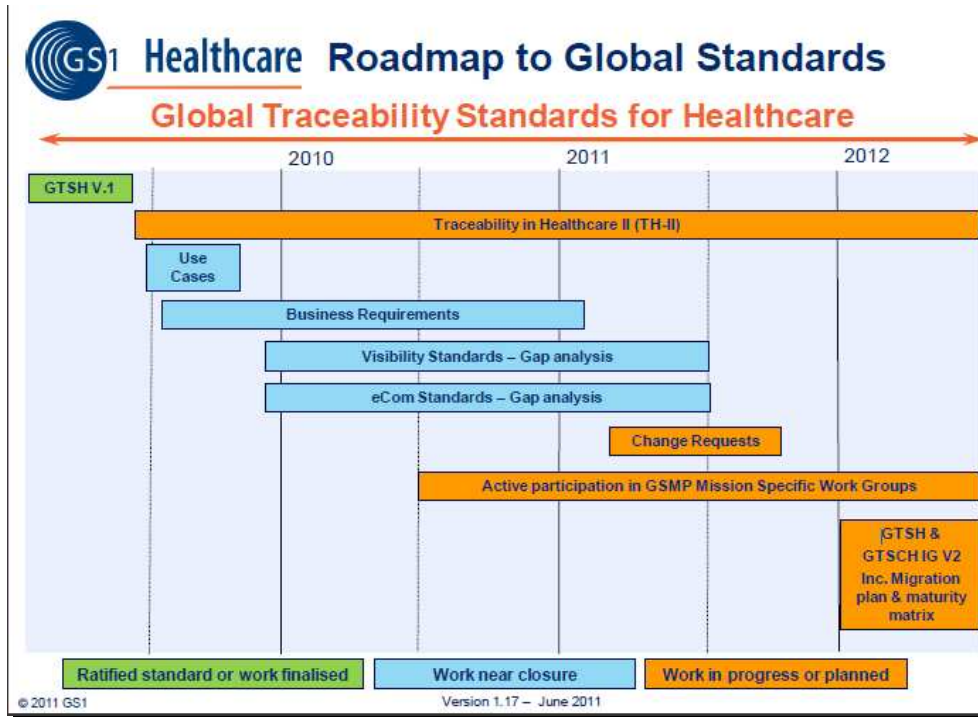
3. Distinguish the What and the How

Distinguish the What & the How

What ?

- Regulations
- Business requirements & related standards
- …

How ?

- Technical standards
- Industry guidelines
- Good practices
- …

Business Operators and Solution Providers

GFSI Schemes: Traceability Reqs

HACCP	BRC	IFS	SQF
7.9 The Organisation shall establish and apply a traceability system that enables the identification of product lots and their relation to batches of raw materials, processing and delivery records. The traceability system shall be able to identify incoming material from immediate suppliers and the initial distribution route of the end product. Traceability records shall be maintained for a defined period for system assessment to enable the handing of potentially unsafe products and in the event of product withdrawal. Records shall be in accordance with statutory and regulatory requirements and may, for example, be based on the end product lot identification.	**2.13** The company shall have a system which has the ability to trace and follow all raw materials (including primary packaging materials) from source through all stages of processing and distribution of the finished products to the customer. **2.13.1.** The system shall be regularly tested to ensure traceability can be determined from raw material to finished product and vice versa **2.13.2.** Where there is a requirement to ensure identity preservation within the supply chain, e.g. to use a logo or make claim to a product characteristic or attribute, appropriate control and testing procedures shall be in place. **2.13.3.** Where rework or any reworking operation is performed, traceability shall be maintained.	**4.16.1.** A traceability system shall be in place which enables the identification of product lots and their relation to batches of raw materials, packaging in direct contact with food, packaging intended or expected to be in direct contact with food. The traceability system shall incorporate all relevant processing and distribution records. **4.16.2.** The traceability system shall be tested, documented and, where appropriate, adapted at defined intervals to verify traceability in both directions of flow (from delivered products to raw material, and vice versa), including quantity checking. **4.16.3.** The traceability system shall be ensured at all stages, including work in progress, post treatment and rework. **4.16.4.** The lot labelling of semi-finished products or finished products, to ensure clear traceability of goods, shall be made at the time when the goods are directly packed. Where goods are labelled at a later time, the temporarily stored goods shall have been provided with a specific lot labelling. The shelf life (e.g. best before date) of the labelled goods shall be calculated from the original production date.	**4.6.1.** Finished product shall be clearly identified to the customer specification and/or regulatory requirements. The product identification system shall be documented. Product identification records shall be maintained. **4.6.2.** Finished product shall be traceable to the customer. The product trace procedure shall be documented with responsibilities defined. It shall provide for the identification of raw materials and other inputs that may have an impact on finished product quality and safety. Raw materials and other inputs shall be traceable through the process to the finished product. Records of product dispatch and destination shall be maintained.

# Distinguish the What & the How : example in the Food Sector

What

How
Provides interoperability

BRC
IFS
GlobalGAP
HACCP
SQF
TR

ISO 22005

FSSC
EU 178/2002
US Bioterrorism Act
US Produce Traceability Initiative (PTI)
TR

GS1
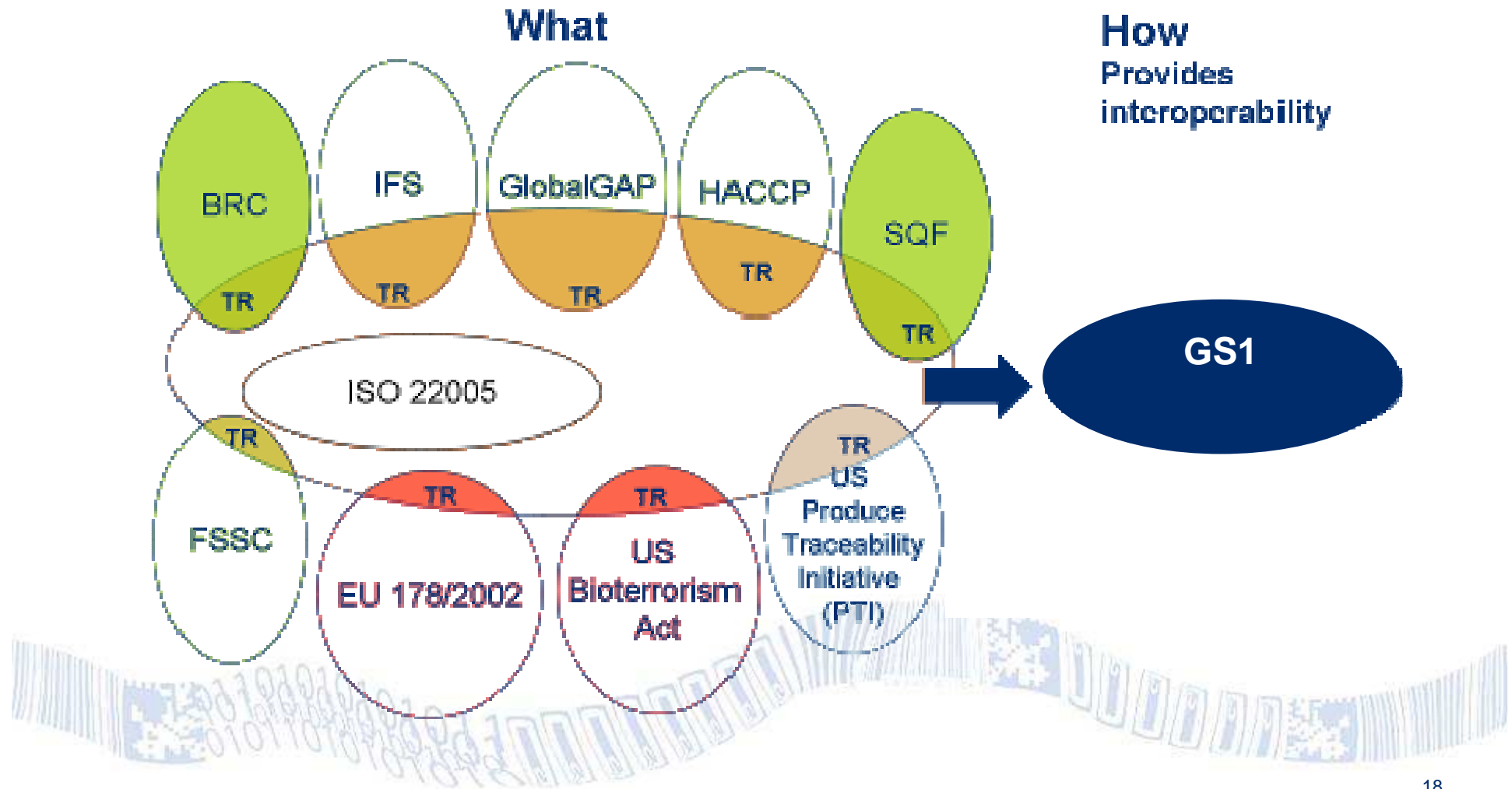
4. Encourage self & third party assessments

Encourage self and third party assessments – GS1 Global Traceability Programme (GTC)

GS1 GTC
Control Points & Compliance Criteria - FOOD
Issue 3, Jun-2010
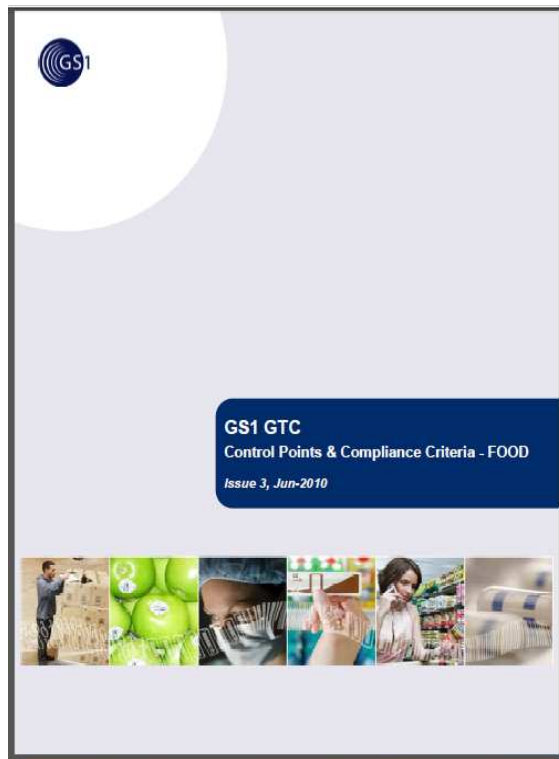
Objective of this programme:

- Help implementation of Traceability best practices and GS1 standards

How

- On site assessments (review traceability systems in place)
- By trained and accredited auditors
- Based on the standard GTC checklist and GTS

Encourage self and third party assessments – GS1 checklist

2. Control Points

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
1.	**CHOICE OF OBJECTIVES**		
1.1.	Does the Organisation know the Traceability regulations of the countries to which its trade items are delivered? (GTS: BRU28)	The Organisation must have a copy of the applicable traceability regulations for all countries to which its trade items are delivered.	Recommended
1.2.	Does the Organisation know the traceability standards and the implementation guidance (global or country specific) to which its trade items are delivered?	The Organisation must have a copy of the traceability standards and implementation guidance (global or country specific) applicable to countries which its trade items are sold	Recommended
1.3.	Does the Organisation know the traceability requirements of all its trading partners to which its trade items are sold? (GTS: BRU28)	The Organisation must have a copy of the applicable traceability requirements for all trading partners to which its trade items are sold.	Mandatory (conditional)
1.4.	Has the Organisation defined in a document updated at least annually the objectives and scope of its Traceability System and has designated a person responsible for it?	The Organisation must have appointed a person responsible for the Traceability System and must have clearly defined the objectives and scope of the Traceability System in a document revised annually and available for all employees. No N/A.	Mandatory
1.5.	Does the Organisation's management team know the objectives and scope of the Traceability System?	The Organisation's management team must confirm their knowledge of the defined objectives and scope of the Traceability System. No N/A.	Mandatory
2.	**PRODUCT DEFINITIONS**		
2.1.	Are all trade items, distributed by the Organisation, identified with a GS1 identification key and a description in a	A Master Data record with a GS1 identification key and a description must exist for all trade items distributed by the	Mandatory

- Consists of 12 sections:
  -Objectives
  -Product definition
  -Supply Chain Placement
  -Establishment of Procedures
  -Flow of Materials
  -Information Requirements
  -Documentation Requirements
  -Structure & Responsibilities
  -Training
  -Supply Chain Coordination
  -Monitoring
  -Internal and External Audits

- 105 Control points

31 GTC pilots around the world in 2009

Aguas Danone — **Argentina**

Eurofarma — **Brasil**

Carrefour City — **Belgium**

CCU
TPTE CCU
Icestar
Friofort
Gesex — **Chile**
Champion
Agrocommerce
Nestlé
Salmofood
Munning
Syngenta
Viña Indomita
Bbraun
Telefonica

Fabrica Nacional de Chocolates — **Colombia**
Confidential

Musgrave Retail (Supervalu) — **Ireland**
Partner Ireland

Carnes Viba — **México**
San Miguel de Proyectos Agro

Old Fashioned Food — **New Zealand**

Central Peruana de Cafetaleros
Alicorp
Bodega Sotelo
Agricultura 3 generaciones — **Perú**
Biondi y Cía de Tacna
Marcahuasi
Denial — **Thailand**

BetAgro — **USA**

Kraft Food

Summary of GS1 GTC status

KPIs	2010/2011 (current)
Students trained to date	**152**
Countries trained	**44**
Accredited auditors to date	25
Assessments performed to date (known)	86
GS1 countries involved in GTC	**46**

5. Build collective knowledge & collaboration towards an integrated approach

Build collective knowledge and collaborate towards an integrated approach

Compliance *Traceability* | **Value *Traceability***

While compliance and risk reduction aspects can be critical, they do not encourage investments beyond the required minimum

risk reduction	branding & marketing
compliance	supply chain optimization

Differentiation
↓
Traceability
↓
Optimization
↓
Carbon Ftp.
↓
Delivering….
↓
Lower costs
↓
Increase rev.
↓
Asset Opt.
↓
Reduce Risk

FOCUS: stay in business

FOCUS: increase value
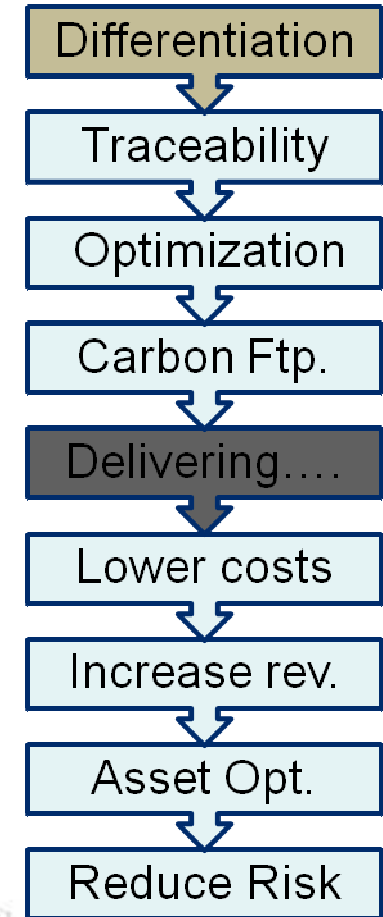
Examples

- EU DG Sanco Informal Product Traceability Expert Group

- Using GS1 Gepir (registry of GS1 members) for helping to enter more complete RAPEX notifications

Demo Gepir

Demo Gepir

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![GS1 logo] **Demo Gepir**

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Conclusion

- It works in many places
- It can work in many more

Deploying traceability for native producers: Peru

- GS1 Peru oversaw a project and provided technical assistance in Arequipa, Peru
- The project benefitted **615** aromatic herb producers
- GS1 Peru also used traceability guidelines and templates to identify each point of their supply chain
- Benefit: **80%** time savings when extracting upstream information
- GS1 Peru oversaw a similar traceability and logistics best practices project in Piura for organic coffee and brown sugar

Traceability leading to global recognition: Croatia

- GS1 Croatia worked with Koestlin to develop and implement the National Electronic Catalog (eCROKAT)
- Today, it is used in trade and synchronisation of master data with business partners

Benefits:

- Koestlin has a robust traceability system and effective control over the use of raw materials and packaging
- GS1 GTC programme helps them be competitive and globally recognised in many markets across the world

Traceability in fresh foods: Egypt

- GS1 Egypt helped Al Shams to develop an automated traceability system ensuring a good traceability system from the packing house until its final destination
- Used GTS to determine data requirements for each traceability actor

Benefits:
- Strengthen position as one of the highest quality citrus producers in the Mediterranean
- Reduced customer complaints by 75%
- Compliance with the Egyptian traceability agency requirements, EU and other international standards
- Return on investment was achieve in two exporting seasons

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