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Application reference number GS1AU/FSANZ/P1017

Dear Sir/Madam,

It is my pleasure to provide this submission to Food Standards Australia and New Zealand for **Proposal P1017 - Call for submissions on criteria for *Listeria monocytogenes* in ready-to-eat foods.**

About GS1 Australia

GS1 is a global, not for profit, industry based organisation. GS1 Administers the GS1 System of standards – a global system that enable organisations of all sizes, across any sector, in any economy to uniquely identify items, locations, shipments and assets, automatically capture data about these items through barcodes and RFID technology and share this information with trading partners up and down their supply chain, regulators and other stakeholders.

The aim of the GS1 System is to improve the visibility and traceability of products not only within an organisation, but through an entire supply chain (both local and global) through a common set of standards.

GS1 Australia locally administers the GS1 System and has supported our 17,000 members across 18 sectors improve their supply chain visibility and traceability using GS1 Standards for the last 35 years.

GS1 Australia has a long history of working closely with the Australian Food & Beverage sector. This industry sector's early adoption of GS1 barcoding standards for the purposes of product identification, point of sale scanning, stock receipting etc, has evolved over time to include GS1net (used in the creation and exchange between trading partners of product master data) and GoScan, a consumer facing mobile phone application which enables consumers to scan and identify products and download product-related data directly from the brand owner.

GS1 Australia has also worked with key industry participants and regulatory agencies in identifying, facilitating and developing industry related solutions. One of these industry based solutions, GS1 Recallnet Food & Beverage, developed with the input and support of FSANZ and is now the Australian Food & Beverage sector's leading edge solution to the issue of product recalls and withdrawals.



About the Food & Beverage Sector

The Australian Food & Beverage sector continues to evolve to meet consumers' needs. Consumers today are much more knowledgeable and demanding about the foods they purchase. The increased focus by consumers on food safety raises the need to identify and adopt business practices and standards that will aid the Australian Food & Beverage sector in its ability to track and trace locally produced products and ingredients throughout the supply chain.

This ability to track and trace, also applies to products and ingredients which are imported by Australian companies from various overseas countries, many of whom have vastly different regulatory standards than Australia. As a result, for traceability systems to be successful and widely implemented by the Australian Food & Beverage sector, they must satisfy not only local requirements but also be compatible and interoperable in the global market.

The GS1 Global Traceability Standard

Over many years, GS1 has worked in a global effort to develop a GS1 Global Traceability Standard (GTS).

The GTS provides a single traceability process to comply with all regulatory and quality requirements. It ensures interoperability between trading partners, allowing for efficient recall or tracing of raw materials from point of origin through to finished goods and at all other points along the supply chain. It is a business process standard describing the traceability process independently from the choice of enabling technologies.

The GTS defines minimum requirements for companies of all sizes across industry sectors and corresponding GS1 Standards used within information management tools.

The GTS makes traceability systems possible on a global scale, for both small and large organisations, all along the supply chain, no matter how many companies are involved, no matter what enabling technologies (barcodes, RFID, EDI, Internet...) are chosen.

Further details relating to GS1 GTS is included in the supporting documentation.

About the GS1 Global Traceability Standard

In order to assist organisations with the implementation of the GS1 Global Traceability Standard within specific industry sectors, GS1 has developed a number of sector specific implementation guidelines, including a GS1 Global Traceability Conformance (GTC) assessment against GTS standards.

Two guidelines are specific to the food and beverage sector.

GS1 GTC Control Points & Compliance Criteria – Food

GS1 Traceability for Fresh Fruits and Vegetables – Implementation Guide

The scope of these guidelines establishes both minimum traceability requirements and best practices in the sharing of information between trading partners.



Topics include:

- Traceability practices from the primary producers through to processing, logistics and to the point of consumer sale;
- All levels of the product hierarchy including pallets, cartons and consumer items; and
- Supply chain segments, both domestic and international, including primary producers, processors, wholesalers, distributors, and retailers.

Further details relating to both GS1 GTC's is included in the supporting documentation.

About GS1 Recallnet

In addition to our supply chain traceability standards, we also provide targeted industry sectors with a range of industry solutions, designed to address specific business needs identified by industry participants. One of these industry solutions – GS1 Recallnet Food & Beverage, provides companies participating in a product recall event in the Australian Food & Beverage sector with an electronic portal in which to initiate and receive information relating to the product recall or withdrawal event, including mandatory regulatory reporting requirements, which in this case relates to FSANZ.

Summary

In relation to P1017 - Call for submissions on criteria for *Listeria monocytogenes* in ready-to-eat foods, GS1 Australia would like to suggest that consideration be given by FSANZ to the role of Global Standards for Traceability ensuring that industry is provided with practical guidance on the implementation of a traceability system which is standards based, and globally compatible. Particularly in the case of products falling within the classification referred to under P1017, this should ensure an added degree of protection for consumers and for these products originating not only from local Australian sources, but from overseas sources as well.

Similarly, we believe that consideration should be given to the role that GS1 Recallnet Food & Beverage can play in the management of recalls in the Australian Food & Beverage sector and throughout the entire supply chain, linking primary producers, packers, retailers and FSANZ in a common platform, for greater efficiency in recall management.

Regards,

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Traceability for Fresh Fruits and Vegetables Implementation Guide

Issue 2, May-2010



Document Summary

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1. Introduction

1.1. Purpose and Scope of this Document

Traceability is a business process that enables trading partners to follow products as they move from field through to retail store or food service operator. Each Traceability Partner must be able to identify the direct source (supplier) and direct recipient (customer) of product.

The first priority of traceability is to protect the consumer through faster and more precise identification of implicated product. This is critical if the product must be withdrawn from the supply chain.

This document serves as a best practice guide to implementing traceability in the Fresh Fruit and Vegetable (Produce) Industry. The best practices recommended are based on GS1 global standards for supply chain management and product identification. These standards were developed by industry to optimize business practices across supply chains world-wide. More information about GS1 appears in Appendix A

What is the scope of this guideline?

- Applies to fresh fruit and vegetables for human consumption.
- Traceability practices from grower to retail store or foodservice operator (i.e. external traceability).
- Applies to all levels of product and shipping containers, including pallets, cases and consumer items.

1.2. How do I Use the Document?

Step 1: If traceability or GS1 standards are new to your company, read the section entitled “Getting Started” in section 6.1.

Step 2: Read section 1.3 to determine your company’s role(s) in the supply chain.

Step 3: Read section 1.4 to understand key traceability definitions and principles.

Step 4: Review guidelines specific for your role(s) as outlined in sections 2 through 5.

Step 5: Begin implementation using the reference documents/appendices as assistance. Users should ensure they understand specific government and/or industry requirements, or trading practices within the target markets they serve (e.g. document retention, origin/provenance, identification, e-commerce requirements).

1.3. Who can use this Document?

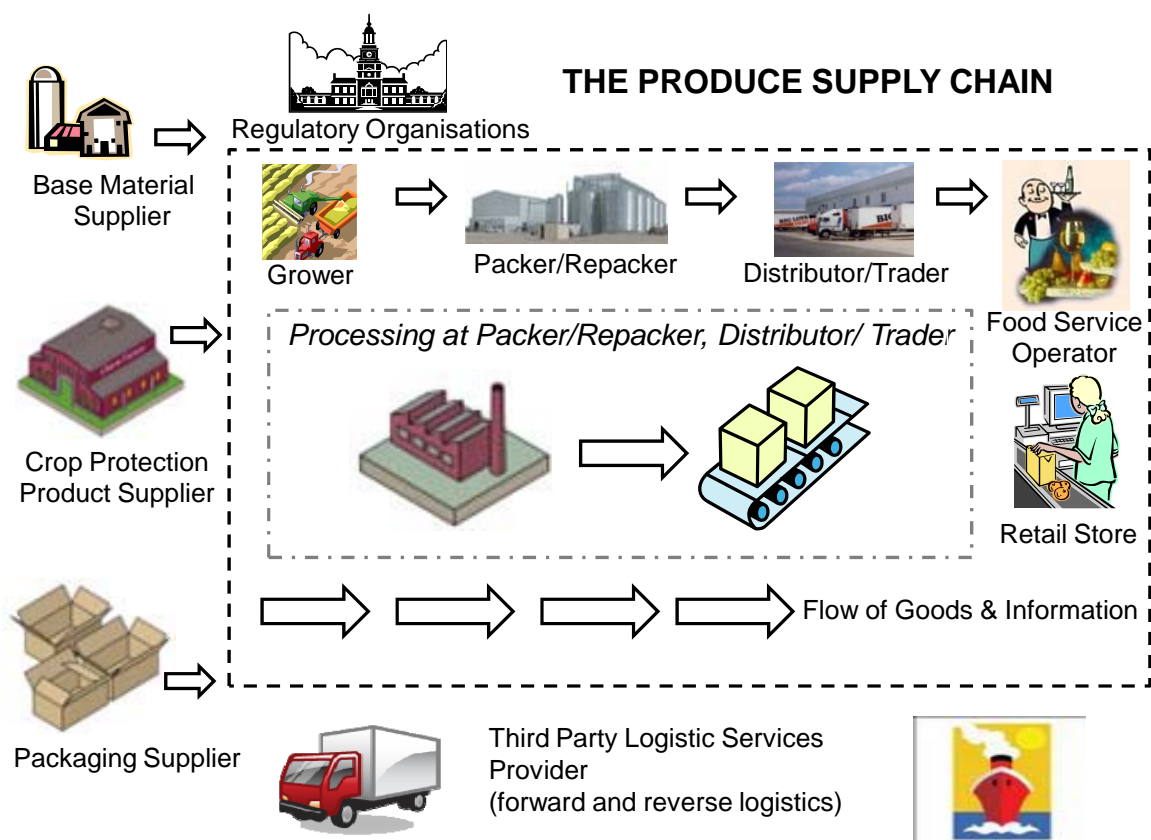
This is a practical guide that is intended for those responsible for implementing traceability in their company’s operations and supply chain. The document provides a guide for fresh produce growers, packers, exporters/importers, and distributors as well as their customers and suppliers. Individual organisations may perform any combinations of these roles.

Figures1 and 2 describe the typical roles performed in produce supply chains.

Figure 1-1 Typical Roles in the Produce Supply Chain

Role	Activities	Alias / Examples	Applicable Section
Primary Role (in scope)			
Grower	Grow, Harvest, Store, Sell, Ship		2
Packer/Re-packer	Aggregate, Pack, Sell, Ship	Agricultural Cooperative / Pack House	3
Distributor/Trader	Store, Sell, Ship	Retail or Foodservice Distribution Centre / Import and Export Warehouses / Wholesale / Terminal Markets / Auction / Broker	4
Retail Store	Store, Sell to Consumer		5
Food Service Operator	Store, Prepare, Sell to Consumer		5
Secondary (outside of scope)			
Third Party Logistics Service Provider	Transport, Store	Truck / Rail / Ship / Air	
Supplier of Packing Material		Suppliers of packing material (crates, bags, boxes, labels, bins, clamshells, etc.)	
Supplier of farm inputs		Suppliers of crop protection means, artificial manure, energy, etc.	
Supplier of seed / plants		Suppliers of seeds and plants	
Regulatory Organisations		Customs, Inspection Agencies, etc.	

Figure 1-2 The Produce Supply Chain



1.4. Key Traceability Definitions and Principles

1.4.1. Traceability Definitions

- **Traceability** is the ability to trace the history, application or location of that which is under consideration. [ISO 9001: 2000]
- **External Traceability** is the business processes that occur between trading partners and the information/data exchanged to execute traceability.
- **Internal Traceability** is the proprietary data and business processes a company uses within its own span of operations to execute traceability.

1.4.2. GS1 Traceability Standard

GS1 standards are the common language of business and provide the framework required to support the traceability (business) process. This industry best practice implementation guideline is based on the GS1 Global Traceability Standard (GTS). Developed by industry, the standard defines the globally-accepted method for uniquely identifying:

- Trading parties (your suppliers, your own company, your customers, 3rd party carriers)
- Trading locations (can be any physical location such as a warehouse, packing line, storage facility, receiving dock or store)

- The products your company uses or creates
- The logistics units your company receives or ships
- Inbound and outbound shipments

The GS1 Global Traceability Standard also defines the essential pieces of information that have to be collected, recorded and shared to ensure one step up, one step down traceability. The standard is applicable to companies of all size and geography.

While the GS1 Global Traceability Standard may be implemented independently from any specific technology, best business practices require adoption of bar coding on cases and/or pallets. Businesses are further encouraged to adopt electronic messaging to exchange essential business information. These technologies will be explored in the sections that follow.

GS1 is a not-for-profit standards organisation with member affiliates in every country. Together with local/national produce trade associations they are important resources that are able to help your company understand the most effective way to implement traceability with your trading partners. They can also help your company to connect with technology providers that serve the produce industry.

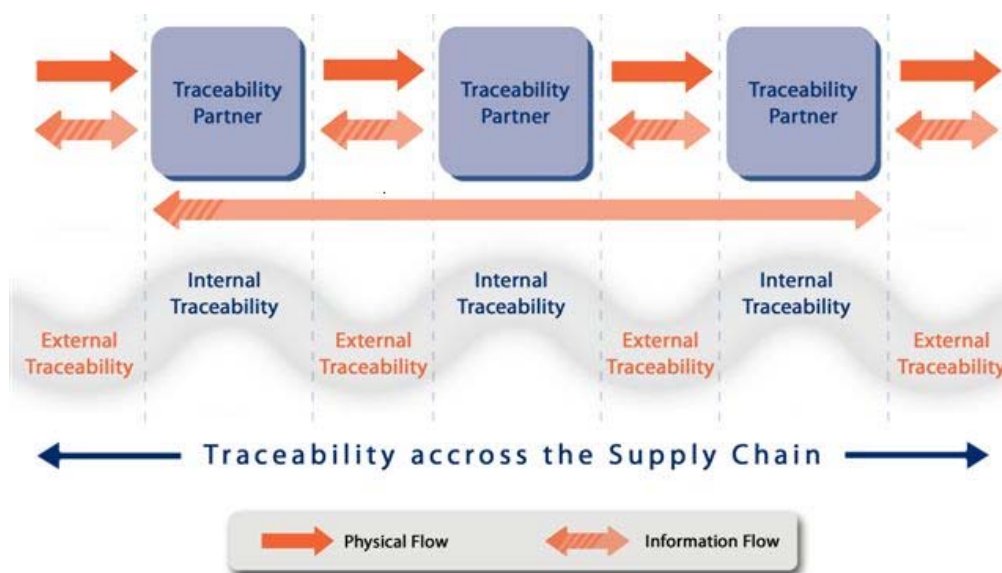
Information on how to obtain a copy of the Global Traceability Standard appears in Appendix A

1.4.3. Traceability Principles

- A company must determine what needs to be traced. This is commonly referred to as the “traceable item.” A traceable item can be:
 - a product or traded item (e.g. case/carton, consumer item)
 - a Logistic Unit (e.g. bin, container)
 - a shipment or movement of a product or trade item

There must be agreement between trading partners on what the traceable item is. This ensures that both partners are tracking the same thing. Otherwise the chain will be broken. Each Trading Partner must define at least one level of traceable item for each shipment.

- All traceable items must be uniquely identified and this information is shared between all affected supply chain partners.
- At a minimum, the identification of products for the purpose of traceability requires:
 - The assignment of a unique GS1 Global Trade Item Number (GTIN)
 - The assignment of a batch / lot.
- When a product is reconfigured and/or re-packed, the new product must be assigned a new unique product identification (i.e. GTIN). A linkage must be maintained between the new product and its original inputs.
- When a Logistic Unit is reconfigured, the new Logistic Unit must be assigned a new unique identification (i.e. SSCC). A linkage must be maintained between the new Logistic Unit and its original input.
- All supply chain parties must systematically link the physical flow of products with the flow of information about them. Traceable item identification numbers must be communicated on related business documents.

Figure 1-3 Traceability across the supply chain

Note: A traceability partner can be a grower, packer/repacker, distributor/trader, retail store or foodservice operator.

- Each Traceability Partner (company) must be able to identify the direct source (supplier) and direct recipient (customer) of traceable items. This is the "one step up, one step down" principle. This requires that supply chain partners collect, record/store and share minimum pieces of information for traceability which are described in the sections which follow.
- All supply chain parties require both internal and external traceability. (Implementation of internal traceability must ensure that the necessary linkages between inputs and outputs are maintained.)
- Any asset (e.g. returnable pallet) which needs to be traced forward or traced back must be uniquely identified.
- Labels showing the traceable item identification number must remain on the packaging until the traceable item is consumed or destroyed (by the next trading partner). This principle applies even when the traceable item is part of a larger packaging hierarchy.

1.4.4. Recall Preparedness

Any trading party may initiate a trace or recall request. Efficient trace or recall requests require that the suspect items are identified using their unique identification numbers.

To ensure preparedness in the event of an incident, every company should have a traceability team in place and practice/simulate recalls to test the traceability system in place.

2. Implementation Guideline for Growers

This section is intended for Growers who are **NOT** packing product (i.e. their only role is that of a primary producer). Growers who pack product should also refer to Section 3. If you only perform the grower role, the traceable item is always the Logistic Unit.

2.1. Capturing Production Inputs

To enable traceability, growers must maintain records of essential information related to the production of the product (e.g. crop protection materials including date of application, seed information, fertilizers, packaging material, harvesting crew, and water source). This information is critical to your company's body of internal traceability information.

2.2. How Does my Company Uniquely Identify Logistics Units and Grower information?

Each Logistic Unit destined for a packing facility must be uniquely identified. Examples of logistics units include bins, totes, containers, trailers.

To uniquely identify logistics units or to participate in electronic commerce, the best practice is to use the GS1 Serialized Shipping Container Code number (SSCC). This number is based on your GS1 Company Prefix number (supplied to you through your local GS1 Member Organisation), thus ensuring global uniqueness.

Over time, your company will exhaust its pool of available GS1 SSCC numbers. It is important that you manage the re-use of SSCC numbers so as not to conflict with the logistics units already in the supply chain. An industry best practice is to restrict the use of SSCC numbers for a period of no less than one year.

Additional information about GS1 SSCC assignment appears in Appendix A.

What additional grower/harvest information is required?

To assist packers in assigning batch / lot at the pack house, growers should include on their Logistic Unit tag/label, in human-readable format, all relevant grower/harvest information. The information included should enable the creation of a meaningful batch / lot and could include the harvest crew, field or plot of harvest, date of harvest, etc.

What information must appear on the Logistic Unit label?

Each logistics label should provide the following data in human-readable format:

- Unique Logistic Unit identification (e.g. SSCC)
- Commodity name and, where applicable, variety name
- Your company's unique identification (see section 2.3)
- Additional grower/harvest information

2.3. How Is my Company Identified Uniquely?

The best practice is to use the GS1 Global Location Number (GLN). GLN is a standard that can be used to uniquely identify your company and its premises. GLN's can be allocated either by a GS1 Member Organisation or by your company using your GS1 Company Prefix.

Additional information about GLN assignment appears in Appendix A

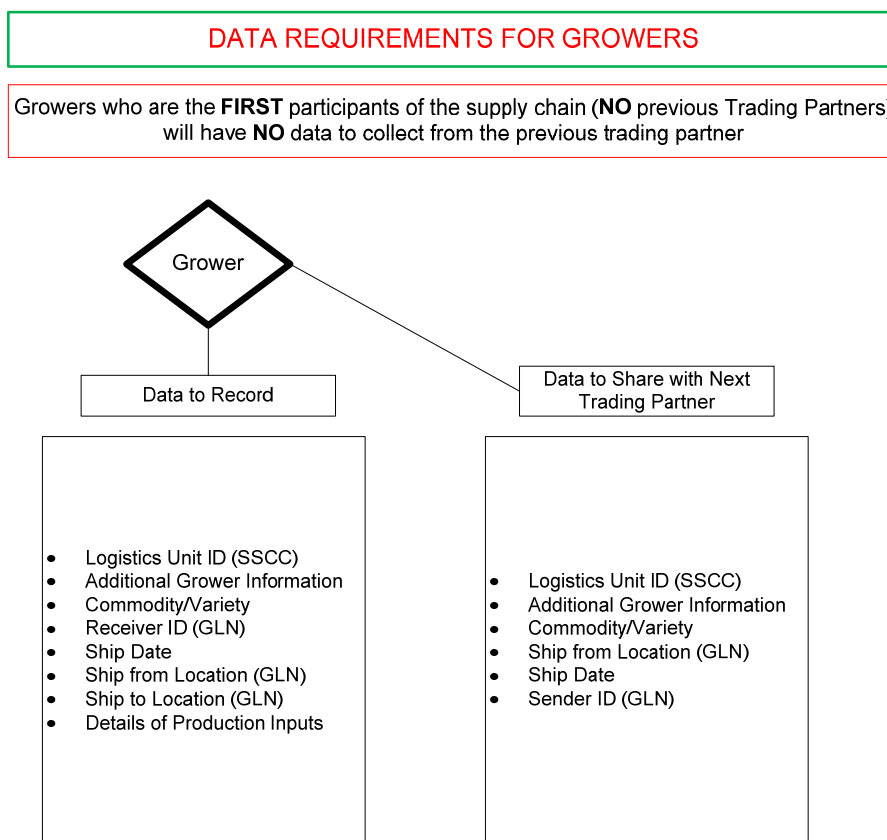
2.4. What Traceability Information Does My Company Need to Record and Share?

To ensure that the traceability link is maintained, the following data must be recorded and shared. This represents the minimum data set required to ensure traceability between you and your trading partners.

- Logistic Unit identification (SSCC)
- Commodity name and, where applicable, variety name
- Receiver Identification (GLN)
- Ship from location identification (i.e. GLN of shipping location)
- Ship to location identification (i.e. GLN of receiving location/trading partner)
- Ship Date
- Grower records details related to growing/production (e.g. field, seeds, details of production inputs)
- Additional grower information (e.g. harvest crew, date of harvest) to enable batch / lotassignment by the trading partner (packer)
- Sender Identification (GLN))

Data attribute definitions are provided in the Glossary (Appendix B).

The accompanying chart, Data Requirements for Growers, further illustrates the minimum data required to maintain traceability.



2.5. Other Traceability Best Practices for Growers

1. Assign SSCC number to Logistic Unit
 - a. Affix labels bearing the SSCC number to corresponding Logistic Unit
 - b. The SSCC numbers are shown in bar code format using GS1-128 symbology
2. If transmitting product information electronically, use standard EDI EANCOM® messages to convey shipment details. Send EDI (EANCOM®) Despatch Advice to receiver:
 - a. Link Logistic Unit (SSCC) to packing reference information (this may be the purchase order, shipment, packing run number or harvest work order)
 - b. Link packing reference to shipment

2.5.1. Data retention

All companies are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls. It is recommended that your company establish your internal data retention policy based on the following considerations:

1. Government or market requirements
2. How long your product may exist (somewhere) in the supply chain
3. The need to retrieve data in the event of an epidemiological trace-back which may, or may not, implicate your product.

2.6. Business Scenario for Growers

2.6.1. Grower delivers bulk to pack house or cooperative

Who are the trading parties?

ABC Farms grows, harvests, and transports raw product to other companies (pack houses and/or cooperatives) which, in turn, receive, sort, grade and pack raw product received in bulk from ABC Farms into “finished product” configurations.

What needs to be traced?

ABC Farms is responsible for recording and maintaining information that will enable batch / lot assignment during the packing process. ABC Farms are also responsible for providing this information to its trading partners as product is delivered.

How do they accomplish this?

ABC Farms harvests their product and transports the raw product in bins or field boxes to their trading partners. As product is harvested, ABC records information related to each day's activity based on commodity, harvest date, field being harvested (i.e. Ranch/Plot, Unit/Block) and harvesting crew. A human-readable “field tag” is generally applied to the bin or field boxes as they are filled. The “field tag” generally includes information as outlined above. To enable greater granularity during the batch / lot assignment, additional information could include specifics on the actual truck load of raw product being transported to their trading partner.

ABC Farms is responsible for conveying the day's activity/harvest information, (as stipulated in section 2.2) along with the number of units (bins or field boxes), to the trading partner that will be receiving the product. Although this information is contained on “field tags” affixed to each bin or field box, it should also be conveyed via a “receiving” or “trip” ticket containing all the information and that is given to the driver of the vehicle transporting the raw product to ABC's trading partner.

3. Implementation Guideline for Packers/Repackers

3.1. Capturing Production Inputs

Logistics units coming from Growers:

Growers deliver product in bulk using various containers or logistics units for transport. Common examples of logistics units include totes, bins and trailers. Each Logistic Unit must be individually traceable. For this reason, each Logistic Unit carries a tag or label that shows a unique identification number. This is a GS1 Serial Shipping Container Code (SSCC) number and is assigned by the Grower. Use of the SSCC number ensures not only distinct identification from any of the Grower's other shipping containers but also guarantees uniqueness across all growing companies providing product. The tag or label provides other important information including:

- Commodity name and, where applicable, variety name
- Additional grower/harvest information
- The grower's unique company identification (GLN)

Product coming from Packers:

Product sourced from other packers is identified using the GS1 Global Trade Item Number (GTIN). The assignment of GTINs for each product traded (i.e. all product configurations) is the responsibility of the brand owner and must be recorded in the re-packer's internal systems prior to being re-packed and traded. Use of the GS1 GTIN ensures unique product identification across all of the supplier's product configurations.

Traceability is accomplished by associating each GTIN with its batch / lot. GTIN and batch / lot information is shown on individual case labels.

Other sources of supply:

To enable traceability, packers/repackers must also maintain records of other product inputs (e.g. packaging material, packing line information, etc.). This information is equally critical to your company's body of internal traceability information.

3.2. How is my Company Identified Uniquely?

The best business practice is to assign a GS1 Global Location Number (GLN) to your company and then share that number with suppliers and customers. GLNs can be allocated either by a GS1 Member Organisation or by your company using your GS1 Company Prefix.

Individual GLN's can be assigned to represent your company as well as any individual trading subsidiaries. GLN's can also be used to identify important production, storage, shipping or receiving locations in your company.

Additional information about GLN assignment appears in Appendix A.

3.3. How Does my Company Identify Products in the Supply Chain?

The best practice is to assign a GS1 Global Trade Item Number (GTIN) for each traded item.

What is a Global Trade Item Number?

A Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your product, the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability.

How is a GTIN assigned to the traded items my company produces?

Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN. If the company is the brand owner, the first step is to approach your local GS1 Member Organization and apply for a GS1 Company Prefix. A brand owner typically owns the label for the product that is sold; this may also include non-branded packaging. The GS1 Company Prefix will be globally unique for each organisation and it will be used to create the GTINs assigned to the organisation's trade items. Your company then assigns a GTIN to each of your products and each product and packaging configuration.

If your company is not the brand owner, you must use the brand owner's GTIN.

Where can I learn more about GTIN assignment?

See Appendix A.

3.4. How Does my Company Identify Products that Must Be Traced?

The best practice is to identify traceable products (packages/cases) by their GTIN and the associated production batch / lot. Where a package contains pre-packaged inner packages, each inner should be assigned and marked with a unique GTIN.

How does my company identify production batches/lots?

All packers/repackers must assign a batch / lot to products they create. The batch / lot itself can vary from one company to another, depending on the precision desired. For example, a batch / lot can represent a day's production or the product produced from an individual packing line. Packer/re-pack batch / lot must be internally linked to the original grower/harvest information.

It is important to remember that your batch / lot relates to the scope of products that may be implicated in a recall and needs to be considered during assignment.

3.5. How Does my Company Uniquely Identify Logistics units?

For packers and repackers, outbound logistics units are typically pallets or containers. When your company's traceable item is one or more logistics units, the best business practice is to assign a GS1 Serial Shipping Container Code (SSCC) to each Logistic Unit. Each SSCC number that is assigned is unique to the individual Logistic Unit and is based on your company's GS1 Company Prefix number. This ensures uniqueness world-wide.

Over time your company will exhaust its pool of available SSCC numbers. For this reason, it is important that your company manage the re-use of SSCC numbers so as not to conflict with logistics units already in the supply chain. The best practice is to restrict the re-issue of SSCC numbers for a period of no less than one year.

Additional information about SSCC assignment appears in Appendix A.

3.6. Best Practice for Case and Logistic Unit Labels

Guidelines for Case Labels:

Case labels provide a means to identify product to other trading partners. The label shows the product identification (i.e. the GTIN) and associated batch / lot in an easy-to-read human-readable form and should also, as a best practice, provide case information using GS1-compliant bar codes. This ensures cases can be identified quickly and accurately at any subsequent point in the supply chain, anywhere in the world. Case bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to produce GS1-128 bar codes and provide guidance on label placement.

You should note that where your company's case product is sold to consumers in the case (i.e. the case is sold at retail point-of-sale), a second bar code symbology must be used to enable front end / point-of-sale scanning. Your local GS1 Member Organisation can also provide assistance on using a bar code that can be scanned at point-of-sale.

When the traceable item is the Logistic Unit (i.e. each Logistic Unit needs to be uniquely identified and tracked), refer to the guidelines below for Logistic Unit labels.

Figure 3-1 shows examples of GS1-128 case labels uniquely identifying a traded product.

Figure 3-1 Examples of GS1-128 case labels



(01) 10614141000415 where (01) = AI 01 (GTIN)

(10) 02228ABC where (10) = Batch / Lot

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

Guidelines for Logistic Unit labels:

When the traceable item is the Logistic Unit, labels provide a means to identify that shipping container (or pallet) to other trading partners. The label shows the Logistic Unit identification (i.e. the SSCC number) in an easy to read human-readable form. Additional information may be shown on the pallet label.

Your local GS1 Member Organisation can help your company to understand global standards for logistics labels.

The best practice is to provide pallet information using GS1-compliant bar codes. This ensures pallets can be identified quickly and accurately at any subsequent point in the supply chain, anywhere in the

world. Pallet bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to produce GS1-128 bar codes and provide guidance on label placement.

Figure 3-2 shows an example of a GS1-128 pallet label uniquely identifying a Logistic Unit.

Figure 3-2 Example of a GS1-128 pallet label

Premier Supplier		
From 1234 Niagara Street		
Buffalo, NY 44556		
To Primo Retailer		
Store 1528		
758 Springfield Street		
Santa Fe, NM 45458		
Carrier		
Speed Transport Ltd		
Delivery Date (YYYY-MM-DD)	Order number	Gross Weight (kg)
2007-05-22	AC 239	430
SSCC		
034531200000002527		
		
(00) 034531200000002527		

(00) 034531200000002527 where (00) = AI 00 (SSCC)

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

3.7. What Traceability Information Does My Company Need to Collect, Record and Share?

To ensure that the traceability link is maintained, the following data must be collected, recorded and shared. The following represents the minimum data required to ensure traceability between your suppliers (i.e. growers) and your customers.

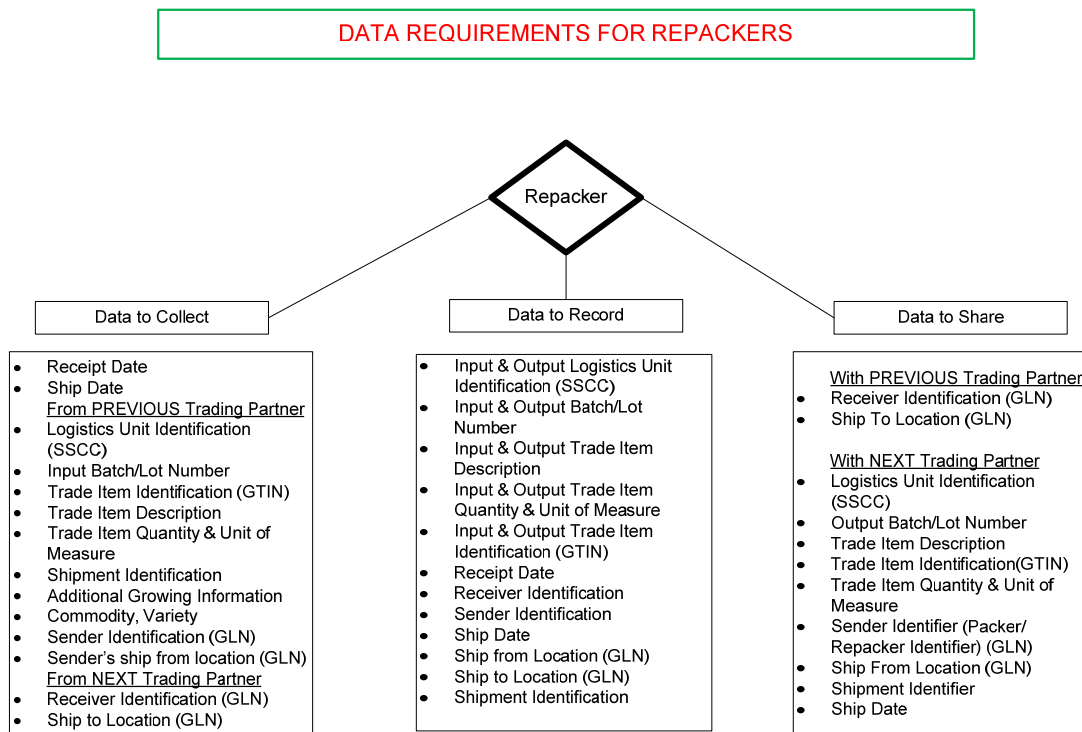
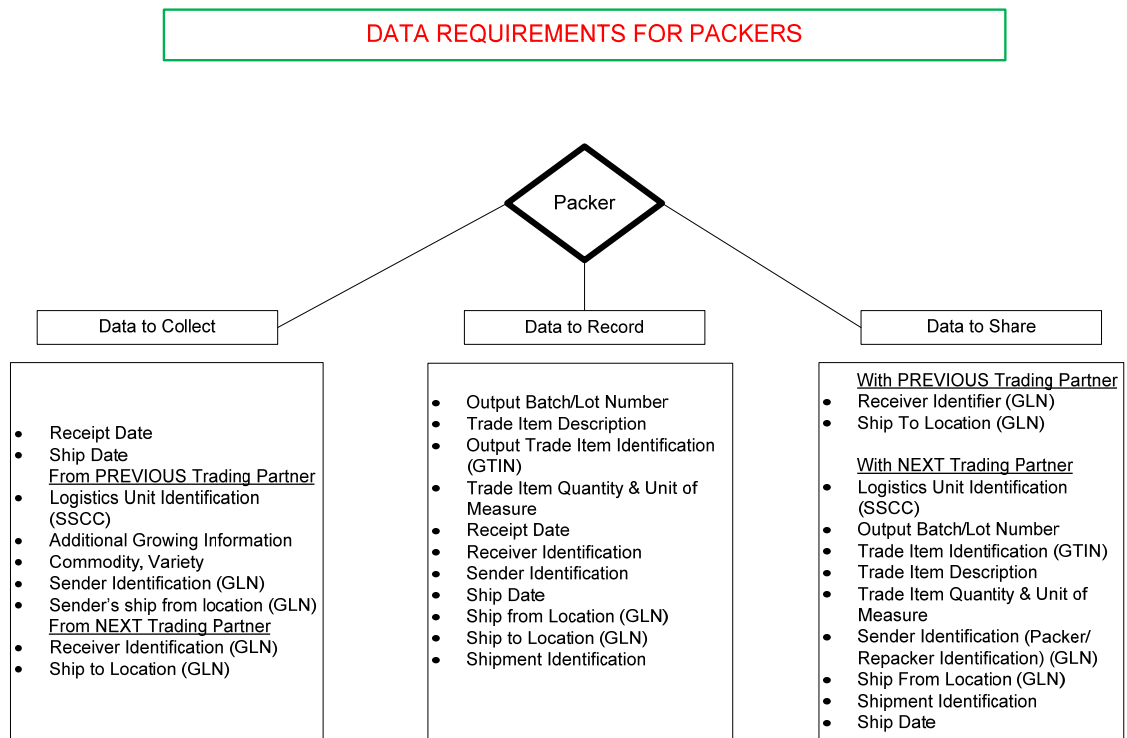
- When your company is a packer:
- When the grower's inbound Logistic Unit is the inbound traceable item
 - Logistic Unit identification (SSCC)
 - Commodity name and, where applicable, variety name
 - Ship from location identification (i.e. GLN of shipping location)
 - Receipt date
 - Grower/harvest information
 - Ship date

- Sender Identification (GLN)
- When your company's (outbound) product (package/case) is the traceable item
 - Trade item identification (GTIN)
 - Trade item description
 - Batch / Lot
 - Trade item quantity and unit of measure
 - Ship from location identification (i.e. GLN of the shipping location)
 - Ship to location identification (i.e. GLN of the receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
- When your company's (outbound) Logistic Unit is the traceable item
 - Logistic Unit identification (SSCC)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship Date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
- When your company's (outbound) shipment is the traceable item
 - Unique shipment identification (e.g. may be the bill of lading number)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
- When your company is a repacker:
- When the Packer's (inbound) product (package/case) is the traceable item
 - Trade item identification (GTIN)
 - Trade item description
 - Batch / Lot
 - Trade item quantity and unit of measure
 - Ship from location identification (i.e. GLN of the shipping location)
 - Ship date
 - Sender Identification (GLN)
 - Receipt date
- When the Packer's (inbound) Logistic Unit is the traceable item
 - Logistic Unit identification (SSCC)

- ☐ Ship from location identification (i.e. GLN of shipping location)
- ☐ Receipt date
- ☐ Ship date
- ☐ Sender Identification (GLN)
- ☒ When the Packer's (inbound) shipment is the traceable item
 - ☐ Unique shipment identification (e.g. may be the bill of lading number)
 - ☐ Ship from location identification (i.e. GLN of shipping location)
 - ☐ Ship to location identification (i.e. GLN of receiving location/trading partner)
 - ☐ Ship date
 - ☐ Sender Identification (GLN)
 - ☐ Receiver Identification (GLN)
 - ☐ Receipt date
- ☒ When your company's (outbound) product (package/case) is the traceable item
 - ☐ Trade item identification (GTIN)
 - ☐ Trade item description
 - ☐ Batch / Lot
 - ☐ Trade item quantity and unit of measure
 - ☐ Ship from location identification (i.e. GLN of the shipping location)
 - ☐ Ship to location identification (i.e. GLN of the receiving location/trading partner)
 - ☐ Ship date
 - ☐ Receiver Identification (GLN)
 - ☐ Sender Identification (GLN)
- ☒ When your company's (outbound) logistics item is the traceable item
 - ☐ Logistic Unit identification (SSCC)
 - ☐ Ship from location identification (i.e. GLN of shipping location)
 - ☐ Ship to location identification (i.e. GLN of receiving location/trading partner)
 - ☐ Ship date
 - ☐ Sender Identification (GLN)
 - ☐ Receiver Identification (GLN)
- ☒ When your company's (outbound) shipment is the traceable item
 - ☐ Unique shipment identification (e.g. may be the bill of lading number)
 - ☐ Ship from location identification (i.e. GLN of shipping location)
 - ☐ Ship to location identification (i.e. GLN of receiving location/trading partner)
 - ☐ Ship date
 - ☐ Sender Identification (GLN)
 - ☐ Receiver Identification (GLN)

Data attribute definitions are provided in the Glossary (Appendix B).

The accompanying chart, Data Requirements for Packers further illustrates the minimum data required to maintain traceability:



3.8. Other Traceability Best Practices for Packers/Repackers

- Where the brand of the product belongs to your company or the product is not branded at all:
 - Assign GTINs for prepackaged consumer units or loose produce
 - Assign GTINs for all case configurations
 - Label product using the appropriate GS1 Data Carrier
- Where the brand of the product belongs to another trading partner (e.g. private label of a retailer):
 - Use brand owner's GTINs for prepackaged consumer units or loose produce
 - Label product using the appropriate GS1 Data Carrier
 - Use brand owner's GTINs for all case configurations
- For cases initially being packed and configured, also store:
 - Purchase order number for product received
 - Transporter of inbound product
- For cases being repacked and/or reconfigured:
 - Scan SSCC number from each inbound Logistic Unit (e.g. pallet) for automated receipt
 - Store GTIN and corresponding batch / lot in system
 - Link original GTIN and corresponding batch / lot (for each original product inputted to the newly created item) with GTIN from newly created case and corresponding batch / lot and store this link in your computer systems
 - Assign GTINs for all new case configurations
 - Encode both the newly created GTIN and corresponding batch / lot in a GS1 data carrier, e.g. a GS1-128 bar code
 - Assign a SSCC number to each Logistic Unit
 - Link case GTINs and corresponding batch / lot residing in that Logistic Unit to the SSCC number
 - Affix pallet tags bearing the SSCC numbers that are unique to each Logistic Unit. Also store:
 - Purchase Order Number associated with an outbound product
 - Transporter of outbound product
 - Send (EANCOM[®]) Despatch Advice[®] to receiver
 - Link item to case GTIN and case batch / lot
 - Link case GTIN and corresponding batch / lot to Logistic Unit SSCC
 - Link Logistic Unit SSCC to Purchase Order
 - Link purchase order, if necessary, to shipment
 - Link SSCC number with corresponding GTIN and batch information as well as purchase order information to shipment details. This should include:
 - Ship to Location Identification (GLN) and Address
 - Purchase Order number
 - Transporter
 - Ship from location Identification (GLN) and Address

- Trade Item Quantity and Unit of Measure
- Ship Date
- Expected Delivery Date *by Buyer*

Data retention:

All companies are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

It is recommended that your company establish your internal data retention policy based on the following considerations:

- Government or market requirements
- How long your product may exist (somewhere) in the supply chain
- The need to retrieve data in the event of an epidemiological trace-back which may, or may not, implicate your product.

3.9. Business Scenarios for Packers/Repackers

3.9.1. Packer Scenario: Field Packed Product

Who are the trading parties?

ABC Farms grows product for XYZ Packing Company who is responsible for performing the following activities with the product:

- Harvesting
- Sorting/grading
- Field packing
- Transporting
- Cooling
- Storing

XYZ Packing Company packs all of ABC Farms product in cases with XYZ's brand.

What needs to be traced?

Since ABC is only growing and field packing the product, XYZ Packing Company is responsible for recording and maintaining GTIN and related batch / lot information about raw product used to create cases of product in XYZ's brand.

How do they accomplish this?

XYZ Packing Company harvests, sorts/grades and packs product in a field. They assign a unique batch / lot to each day's activity based on commodity, harvest/pack date, field being harvested (i.e. Ranch/Plot, Unit/Block) and harvesting crew. Finer batch / lot granularity could be obtained by assigning a unique batch / lot based, not only on the above attributes, but also on a truck load of packed product being transported to the cooling/storage facility.

As product is packed, a case label containing XYZ's GTIN and the batch / lot in bar code and human-readable format is applied to each case before being palletized. XYZ also affixes an internal pallet tag to each completed pallet for internal inventory control purposes.

Each load of product being transported from the field should also have batch / lot information conveyed via a “receiving” or “trip” ticket that is given to the driver of the vehicle transporting the packed product to XYZ’s facility.

Once product arrives at the cooling/storage facility the “receiving” or “trip” ticket should be verified against actual product received and each case or pallet of product should be recorded in XYZ’s Warehouse Management System (WMS).

During all phases of product movement within the cooling/storage facility (pre-cooling, put away, staging, shipment, etc), internal records are maintained by GTIN and batch / lot at the case or pallet level. This process assures that XYZ Packing can accurately track product by batch / lot from field to shipment in the event of a recall incident.

3.9.2. Packer Scenario 2: Shed (Packinghouse) Packed Product

Who are the trading parties?

Ideal Packers is a produce packing company that operates a packinghouse where product is received from various growers, including ABC Farms, who deliver raw product to Ideal’s facilities where the following activities are performed on the product:

- Sorting/grading
- Packing (under Ideal Packers’ Brand)
- Cooling
- Storing
- Selling
- Shipping

What needs to be traced?

All raw product supplied by growers to Ideal Packers must be properly identified according to the guidelines outlined in section 2 “Implementation Guidelines for Growers”. Ideal Packers must maintain records pertaining to all inbound raw product. Ideal Packers must also maintain information pertaining to packed (finished) product with linkage to raw product information (commodity, variety and additional growing information) supplied by growers.

How do they accomplish this?

Product is harvested in the field and placed in bins which are brought by truck to Ideal Packers’ packing shed. These logistics units serve as the traceable unit between ABC Farms and Ideal Packers. A human-readable “field tag” is applied to the bin or pallets of field boxes. The “field tag” generally includes the commodity name, variety name, name or number of the field, date, and possibly the harvest crew.

When the truck arrives at the pack shed, the product is moved to a holding area until it is to be packed (generally fairly quickly, but could be held in a cold room overnight, or for months like apples in a controlled atmosphere storage). A receiving ticket is generated noting the SSCC number, commodity and variety received, grower/harvest information, quantity, date, time, and truck.

When it is time to pack the produce, the raw product is retrieved from the holding area and brought to a packing area where the product is placed onto the packing line. Before packing begins, Ideal Farms assigns a batch / lot to the production run. When different product (commodity/variety) or product from a new field is brought to the packing line, there is a pause to let the product from the previous production run finish being packed and a new batch / lot is assigned to the next production run. After the product is graded and packed into cartons, a label is applied to the carton containing human-

readable information about the product. The label also contains a GS1-128 bar code that includes Ideal Packers' GTIN for the item and the batch / lot.

Once the pallet is ready to ship to a customer, Ideal Packers must make sure that a pallet tag with an SSCC has been created and affixed to each pallet being shipped. The SSCC pallet tag number will be linked to internal pallet information within Ideal Packers' systems.

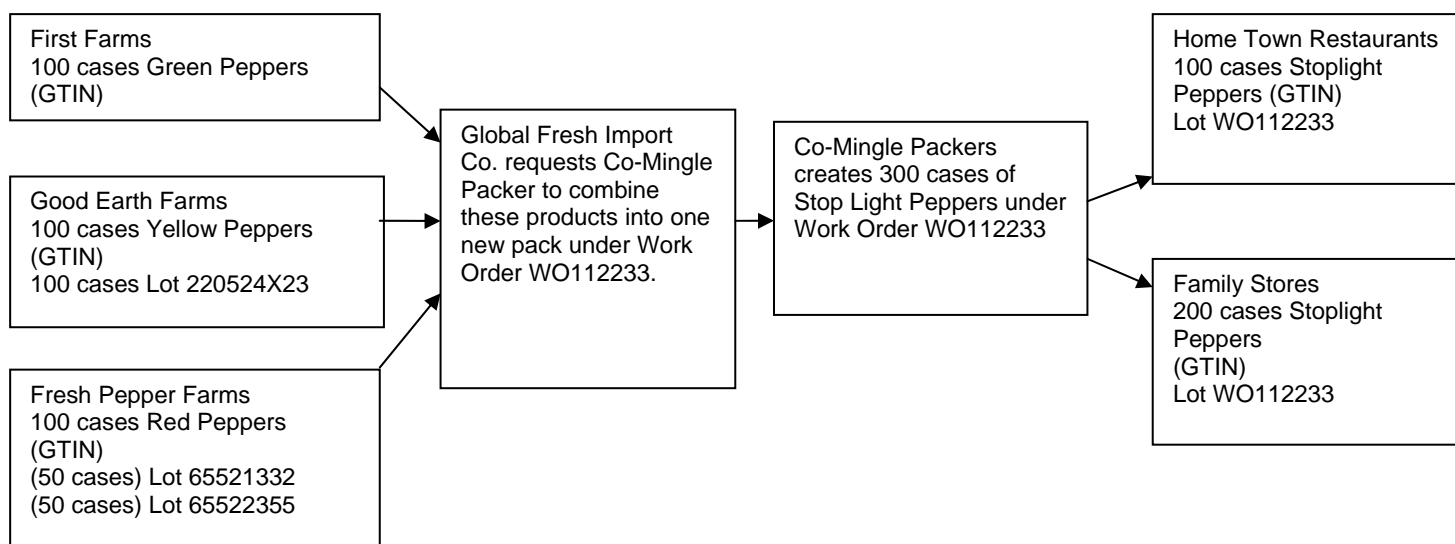
Ideal Packers sends an EDI (EANCOM®) Despatch Advice to the customer identifying the pallets (SSCC) on the shipment and the product (including GTIN and batch / lot) on each pallet.

3.9.3. Re-Packer Scenario 1: Re-Pack of previously packed product

Who are the trading parties?

Co-Mingle Packers is a produce packing company that operates a re-pack facility where product is received from grower suppliers, through the services of Global Fresh Import Company, an importer who delivers packed product to Co-Mingle Packers' facilities. The product Co-Mingle Packer receives will be from multiple growers and contain multiple batch / lot which will be commingled into the same package to be delivered to Co-Mingle Packers' customers.

Diagram of the re-packing process:



What needs to be traced?

Co-Mingle Packers will combine product with multiple GTINs and batch / lot into a new package where a new GTIN and batch / lot will be assigned. Each batch of product repacked will need to have a unique reference number assigned to track the input product to the output product. Co-Mingle Packers must record all the GTINs, batch / lot and quantities of the source product to this reference number. The reference number will be assigned as the batch / lot to the output product created from the re-pack.

How do they accomplish this?

Global Fresh Import Company sources product from many growers and sells this product to customers, the product received from growers is already packed into standard packaging ready for delivery to the customer. When Global Fresh Import Co. is requested to pack product into specialty packs for the customer, a work order is created for Co-Mingle Packers. Global Fresh Import Co. will deliver product to Co-Mingle Packers prior to the re-pack service being required.

When it is time to pack the produce, Co-Mingle Packers will scan the Work Order Number, pallet SSCC number and each GS1 case label to record the GTIN and batch / lot information for each case of product used as source product. As each case is created in the new pack, a GS1 case label is printed with the new GTIN and batch / lot. The GTIN will be the brand owner's GTIN and the batch / lot will be the Work Order Number. The Work Order Number is the control number for traceability to reference the GTIN and batch / lot combinations that were commingled. In the event of a recall, if any of the source products were identified as implicated then all the output product would now need to be considered implicated as well.

The labelled cartons are stacked on pallets for storage prior to being shipped. Once a pallet is complete, a new SSCC pallet tag is attached to the pallet. All the GS1 case labels are scanned and recorded against the new SSCC pallet tag. Co-Mingle Packers sends an electronic EDI (EANCOM®) Despatch Advice message to their customers identifying the pallets (SSCC) on the shipment and the product (including GTIN and batch / lot) on each pallet.

4. Implementation Guideline for Distributors/Traders

4.1. Capturing Traceability Inputs

Distributors/traders must capture product information from their supplier companies. These products are identified using a GS1 Global Trade Item Number (GTIN). The assignment of GTINs for each product traded (i.e. all product configurations) is the responsibility of the brand owner and must be recorded in the distributor/trader's internal systems prior to product being traded. Use of the GS1 GTIN ensures unique product identification across all of a supplier's product configurations and uniqueness across all sources of supply.

Traceability is accomplished by associating each GTIN with its batch / lot. GTIN and batch/lot information is displayed on individual case labels. This information will need to be captured, stored, and communicated to the food service operator/retailer.

Distributors/traders may also need to capture information about inbound logistics units, these are typically pallets. Pallets are identified at the time that they are created by the packer and are individually identified using a GS1 Serial Shipping Container Code (SSCC). This number is assigned by the packer/shipper and appears on individual Logistic Unit labels. The pallet label provides other important information that must be collected and recorded. To enable traceability, distributor/traders must also maintain records of other product inputs (e.g. packaging material) for their own use. This information is equally critical to a company's body of internal traceability information.

4.2. How is my Company Identified Uniquely?

The best business practice is to assign a GS1 Global Location Number (GLN) to your company and then share that number with suppliers and customers. Like the GTIN, a GLN is based on your GS1 Company Prefix Number, thus ensuring global uniqueness. GLN's can be allocated either by a GS1 Member Organisation or by your company using your GS1 Company Prefix.

Individual GLN's can be assigned to represent your company as well as any individual trading subsidiaries. GLN's can also be used to identify important production, storage, shipping or receiving locations in your company.

Additional information about GLN assignment appears in Appendix A.

4.3. How Does my Company Identify Products in the Supply Chain?

Where distributors/traders simply re-sell product from their packer/re-packer suppliers (i.e. products are **not** re-configured into other traded units), they must use the GS1 GTINs assigned by the packer/re-packer suppliers to inbound products.

Where distributors re-configure product from suppliers, the best practice is to assign a new GS1 GTIN for each new product. Please refer to Section 3 (for Packers/Repackers)

What is a Global Trade Item Number?

A Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your product, the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability.

How is a GTIN assigned to the traded items my company produces?

Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN. If your company is the brand owner, the first step is to approach your local GS1 Member Organization and apply for a GS1 Company Prefix. The GS1 Company Prefix will be globally unique for each organisation and it will be used to create the GTINs assigned to the organisation's trade items. Your company then assigns a GTIN to each one of your products and every packaging configuration.

If your company is not the brand owner, then you must use the brand owner's GTIN.

Where can I learn more about GTIN assignment?

See Appendix A.

4.4. How Does my Company Identify Product That Must be Traced?

The best practice is to identify individual products by their GTIN and the associated production batch / lot.

4.5. How does my company identify production batches/lots?

All distributors/traders must assign a batch / lot to products they create. The batch / lot itself can vary from one company to another, depending on the precision desired. For example, a batch / lot can represent a day's production or the product produced from an individual packing line.

It is important to remember that your batch / lot relates to the scope of products that may be implicated in a recall and needs to be considered during assignment.

4.6. How Does my Company Uniquely Identify Logistics units?

For distributors/traders, outbound logistics units are typically pallets or containers. When your company's traceable item is one or more logistics units, the best business practice is to assign a GS1 Serial Shipping Container Code (SSCC) to each Logistic Unit. Each SSCC number that is assigned is unique to the individual Logistic Unit and is based on your company's GS1 Company Prefix number. This ensures global uniqueness.

Over time your company will exhaust its pool of available SSCC numbers. For this reason, it is important that your company manage the re-use of SSCC numbers so as not to conflict with logistics units already in the supply chain. The best practice is to restrict the re-issue of SSCC numbers for a period of no less than one year.

Additional information about SSCC assignment appears in Appendix A.

4.7. Best Practices for Case and Logistic Unit Labels

Guidelines for Case Labels

When the traceable item is the product, case labels provide a means to identify that product to other trading partners. The label shows the product identification (i.e. the GTIN) and associated batch / lot in an easy-to-read human-readable form and, as best practice, should also be provided using GS1-compliant bar codes. This ensures cases can be identified quickly and accurately at any subsequent point in the supply chain, anywhere in the world. Case bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to produce GS1-128 bar codes and provide guidance on label placement.

You should note that where your company's case product is sold to consumers in the case (i.e. the case is sold at retail point-of-sale), then a second bar code symbology will have to be used to enable front end and point-of -sale scanning. Your local GS1 Member Organisation can also provide assistance on using a bar code that can be scanned at point-of-sale. When the traceable item is the Logistic Unit (i.e. each Logistic Unit needs to be uniquely identified and tracked), refer to the guidelines below for Logistic Unit labels.

Figure 4-1 shows examples of GS1-128 case labels uniquely identifying a traded product.

Figure 4-1 examples of GS1-128 case labels



(01) 10614141000415 where (01) = AI 01 (GTIN)

(10) 02228ABC where (10) = Batch / lot

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

Guidelines for Logistic Unit labels:

When the traceable item is the Logistic Unit, labels provide a means to identify that shipping container to other trading partners. The label shows the Logistic Unit identification (i.e. the SSCC number) in an easy to read (human-readable) form. Additional information may be shown on the pallet label. This is usually determined by customer-specific relationships.

The best practice is to provide pallet information using GS1-compliant bar codes. This ensures pallets can be identified quickly and accurately at any subsequent point in the supply chain, anywhere in the world. Pallet bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to produce GS1-128 bar codes and provide guidance on label placement.

Figure 4-2 shows an example of a GS1-128 pallet label uniquely identifying a Logistic Unit.

Figure 4-2 Example of a GS1-128 pallet label

Premier Supplier		
From	1234 Niagara Street Buffalo, NY 44556	
To		
Primo Retailer		
Store 1528		
758 Springfield Street		
Santa Fe, NM 45458		
Carrier		
Speed Transport Ltd		
Delivery Date (YYYY-MM-DD)	Order number	Gross Weight (kg)
2007-05-22	AC 239	430
SSCC		
034531200000002527		
		
(00) 034531200000002527		

(00) 034531200000002527 where (00) = AI 00 (SSCC)

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

4.8. What Traceability Information Does My Company Need to Collect, Record and Share

To ensure that the traceability link is maintained, the following data must be collected, recorded and shared. The following represents the minimum data required to ensure traceability between your suppliers (i.e. Packers/Repackers) and your customers.

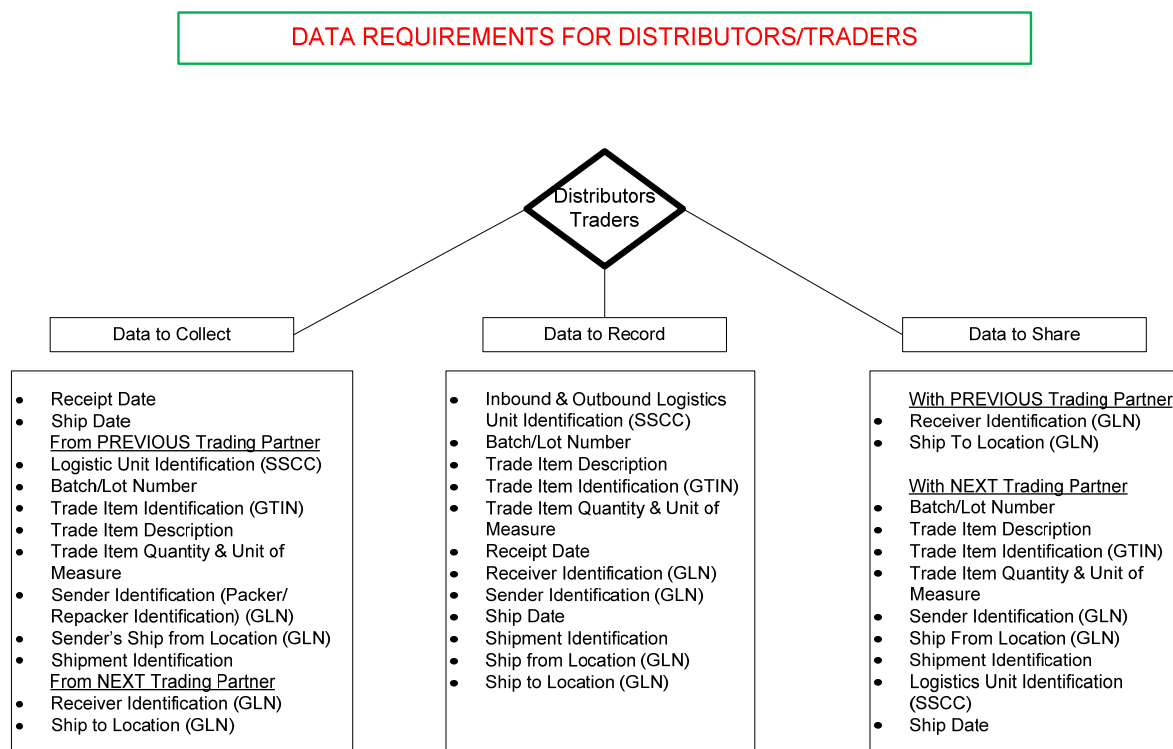
- When the packers/repacker's (inbound) product (package/case) is the traceable item
 - Trade item identification (GTIN)
 - Trade item description
 - Batch / lot
 - Trade item quantity and unit of measure
 - Ship from location identifier (i.e. shipping location)
 - Ship date
 - Sender Identification (GLN)
 - Receipt date

- When the packer/repacker's (inbound) Logistic Unit is the traceable item
 - Logistic Unit identification (SSCC)
 - Ship from location identification (i.e. GLN of shipping location)
 - Receipt date
 - Sender Identification (GLN)
 - Ship date
- When the packer/repackers (inbound) shipment is the traceable item
 - Unique shipment identification (e.g. may be the bill of lading number)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
 - Receipt date
- When your company's (outbound) product (package/case) is the traceable item
 - Trade item identification (GTIN)
 - Trade item description
 - Batch / lot
 - Trade item quantity and unit of measure
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
- When your company's (outbound) Logistic Unit is the traceable item
 - Logistic Unit identification (SSCC)
 - Ship from location identification (i.e. GLN of a shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)
 - Receiver Identification (GLN)
- When your company's (outbound) shipment is the traceable item
 - Unique shipment identification (e.g. may be the bill of lading number)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship to location identification (i.e. GLN of receiving location/trading partner)
 - Ship date
 - Sender Identification (GLN)

□ Receiver Identification (GLN)

Data attribute definitions are provided in the Glossary (Appendix B).

The accompanying chart further illustrates the minimum data required to maintain traceability.



4.9. Other Traceability Best Practices for Distributor/Trader

- Where the brand of the product belongs to another trading partner (e.g. private label of a retailer):
 - Use brand owner's GTIN's for prepackaged consumer units or loose produce
 - Label product using a GS1 label and symbology that can be used at point-of-sale
 - Ask for GTINs for all case configurations
- Where the brand of the product belongs to your company please refer to the packing section in 3.0
- Link SSCC number with corresponding GTIN, batch / lot and purchase order information to the outbound shipment details. This should include:
 - Ship to Identification (GLN) and location
 - Purchase Order number
 - Ship-From (GLN) Name
 - Ship-From (GLN) Address
 - Quantity
 - Ship Date
 - Expected Delivery Date by Buyer

Data Retention:

All companies are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

It is recommended that your company establish your internal data retention policy based on the following considerations:

- Government or market requirements
- How long your product may exist (somewhere) in the supply chain
- The need to retrieve data in the event of an epidemiological trace-back which may, or may not, implicate your product.

4.10. Business Scenarios for Distributors/Traders

4.10.1. Distributor Scenario: Distributor receives imported product from a grower/exporter

Who are the trading parties?

The Best Distribution Company is a re-seller of produce that is sourced from growers/exporters.

What needs to be traced?

The Best Distribution Company traces product from suppliers at the Logistic Unit (pallet) level. Best Distribution also traces logistics units on outbound distribution.

When the product arrives at Best Distribution, it is unloaded and verified against the information previously received. The grower/exporter is expected to place a pallet tag with a SSCC on each pallet which is scanned and verified by Best Distribution.

If the grower/exporter does not place pallet tags on the shipment, Best Distribution does so, using a SSCC it assigns. Likewise, if the grower/exporter does not identify a batch / lot for each case, a unique number such as the shipment identification from the grower/shipper documentation is assigned as a batch / lot.

The product is stored pending sale and shipment to a customer.

Once the pallet is ready to ship to a customer, Best Distribution scans and records the outbound pallet SSCC for each pallet on a shipment/order so they can identify exactly what is on the shipment and the product begins its journey to the next stage in the supply chain.

Best Distribution sends an EDI (EANCOM®) Despatch Advice message to the customer identifying the pallets on the shipment (using SSCC) and the product on each pallet (using GTIN and batch / lot).

4.10.2. Distributor Scenario: Distributor receives and re-distributes produce from packers /others distributors/ traders (including cooperatives, brokers, auctions)

Who are the trading parties?

Always Fresh Produce is a large distributor of fresh fruit and vegetables that markets products under the brand names of major packers and under their own "Always Fresh" brand. Always Fresh performs multiple roles within the supply-chain process and has accountability for the receipt and shipment of products that will include traceability data.

The roles that Always Fresh can play in the supply-chain include:

- The receiver of product from the source of goods which can include a field, packing house, or production facility. Consequently, Always Fresh may perform the role of packer, re-packer or distributor/trader.
- The receiver of product from another distributor in the supply-chain. Always Fresh performs the role of distributor/trader.
- A supplier of product to an end customer such as a retail store, restaurant, or other points of consumption.
- A supplier of product to a distribution point that ships the product to a retail store, restaurant, or other points of consumption.
- Receiver of product that is returned or rejected from a supplied entity.

What needs to be traced?

Always Fresh is responsible for the capture, retention and communication of traceability data for the product that is managed. Always Fresh and its trading partners are tracking at the product level.

How do they accomplish this?

The tasks involved with receipt of products include the following:

- At the point of receipt, Always Fresh is responsible for receiving each item ordered with the associated GTIN, batch/lot, quantity received, and date. This information reflects the initial point of control. This data must be captured and stored within a data management system. Always Fresh will expect that the batch / lot information provided by growers can be linked back to the field, packing house, or production of the product.
- If the item received from the source of goods includes multiple batch/lots for the same GTIN, each GTIN and associated batch / lot must be captured and recorded along with the quantity received.
- If the product is received due to a rejection or return, the information for the GTIN, batch/lot, quantity, and receipt date must be captured and recorded. If the product from this scenario is received and destroyed, the information is still captured and recorded.

The tasks involved with the management of product within Always Fresh's facility:

- Following the receipt of products into the facility, Always Fresh will be responsible for the retention of data associated to each GTIN and batch / lot within their facility.
- At the point of picking, it is recommended that Always Fresh captures each GTIN and batch / lot information for the products staged to ship.

The tasks involved with the shipment and transfer of goods from Always Fresh to the receiving entity include:

- At the point of product shipment Always Fresh provides the receiving entity with the GTIN, original batch / lot from source, and quantity for each item shipped.
- This information should be provided in an electronic format EDI (EANCOM[®]) Despatch Advice message to support the receiving entities receipt.

5. Implementation Guideline for Foodservice Operators/Retail Stores

5.1. Capturing Traceability Data

Foodservice operators and retail stores must capture product information from their supplier companies. These products are identified using a GS1 Global Trade Item Number (GTIN). The assignment of GTINs for each product traded (i.e. all product configurations) is the responsibility of the brand owner and must be recorded in the foodservice operator/retailer's internal systems prior to product being traded. Use of the GS1 GTIN ensures unique product identification across all of a supplier's product configurations and uniqueness across all sources of supply.

When the trading relationship requires that the inbound product is traceable, this is accomplished by associating each GTIN with its batch / lot. GTIN and batch / lot information is displayed on individual case labels.

Foodservice operators and retail stores may also need to capture information about inbound logistics units, these are typically pallets. Pallets are identified at the time that they are created by the supplier and are individually identified using a GS1 Serial Shipping Container Code (SSCC). This number is assigned by the supplier/shipper and appears on individual Logistic Unit labels. The pallet label provides other important information that must be collected and recorded.

Foodservice operators and retail stores may also need to capture information about outbound shipments to stores, these are typically cases. Cases are identified at the time that they are created by the supplier and are individually identified using GTIN and batch / lot. This number is assigned by the supplier/shipper or the retailer/foodservice operator and appears on individual case labels. The case label provides a reference that can be traced to the original source. Each order that is shipped to a store should have the linkage between the order, GTIN, batch / lot, and quantity shipped. The retailer/foodservice operator may also create new logistics units and this information must be captured as well.

To enable traceability, foodservice operators/retail stores must also maintain records of other product inputs (e.g. packaging material) for their own use. This information is equally critical to your company's body of internal traceability information.

5.2. How is my Company Identified Uniquely?

The best business practice is to assign a GS1 Global Location Number (GLN) to your company and then share that number with the source of supply. Like the GTIN, a GLN ensures global uniqueness. GLN's can be allocated either by a GS1 Member Organisation or by your company using your GS1 Company Prefix.

Individual GLN's can be assigned to represent your company as well as any individual trading subsidiaries. GLN's can also be used to identify important storage, shipping or receiving locations in your company.

Additional information about GLN assignment appears in Appendix A.

5.3. How Does my Company Identify Products in the Supply Chain?

The best practice is to use the GS1 Global Trade Item Number (GTIN) to identify each traded item.

What is a Global Trade Item Number?

A Global Trade Item Number (GTIN) is a standardized and globally unique way to identify items traded in the supply chain. Where there is a requirement to accurately order, invoice, price or receive your

product then the GTIN is the basic enabler. The GTIN provides a common language to support multiple business practices, including traceability.

How is a GTIN assigned to the traded items my company produces?

Where product is sold under a brand name, the brand owner is responsible for assigning the GTIN. If your company is the brand owner, the first step is to approach your local GS1 Member Organization and apply for a GS1 Company Prefix. The GS1 Company Prefix will be globally unique for each organisation and it will be used to create the GTINs assigned to the organisation's trade items. Your company then assigns a GTIN to each one of your products and every packaging configuration. Your company is responsible for communicating GTIN's to your packers.

If your company is not the brand owner, then you must use the brand owner's GTIN.

Where brand is owned by your supplier, the supplier is responsible for assigning GTINs to each configuration of the traded item.

Where can I learn more about GTIN assignment?

See Appendix A.

5.4 How Does my Company Identify Produce that Must be Traced?

The best practice is to identify individual products by their GTIN and associated production batch / lot. The batch / lot is determined by the trading party that created the individual trade item.

5.4. How Do my Trading Partners Uniquely Identify Logistics units?

For foodservice operators and retail stores, inbound logistics units are typically pallets or containers. Where there is a need to trace at the Logistic Unit level, the best business practice is to use the GS1 Serial Shipping Container Code (SSCC) that your source of supply assigned to each Logistic Unit. Each SSCC number is unique to the individual Logistic Unit and is based on your supplier's GS1 Prefix number. This ensures global uniqueness.

Additional information about SSCC assignment appears in Appendix A.

5.5. Best Practices for Case and Logistic Unit Labels

Guidelines for Case Labels:

When the traceable item is the inbound product, case labels provide a means to identify that product. The label shows the product identification (i.e. the GTIN) and associated batch / lot in an easy to read (human-readable) form and, as a best practice, should also be provided using GS1-compliant bar codes. This ensures cases can be identified quickly and accurately throughout the supply chain, anywhere in the world. Case bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to scan GS1-128 bar codes.

You should note that where the case product is sold to consumers in the case (i.e. the case is sold at retail point-of-sale), then a second bar code symbology will have to be used to enable front end and Point-of-sale scanning. Your local GS1 Member Organisation can also provide assistance on scanning a bar code that can be scanned at point-of-sale.

When the inbound traceable item is the Logistic Unit (i.e. each Logistic Unit needs to be uniquely identified and tracked), refer to the guidelines below for Logistic Unit labels.

Figure 5-1 shows examples of GS1-128 case labels uniquely identifying a traded product.

Figure 5-1 Examples of GS1-128 case labels



(01) 10614141000415 where (01) = AI 01 (GTIN)

(10) 022208ABC where (10) = Batch / lot

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

Guidelines for Logistic Unit labels:

When the inbound traceable item is the Logistic Unit, labels provide a means to identify that shipping container. The label shows the Logistic Unit identification (i.e. the SSCC number) in an easy to read (human-readable) form. Additional information may be shown on the pallet label. This is usually determined through your company's relationship with your suppliers.

The best practice is to provide pallet information using GS1-compliant bar codes. This ensures pallets can be identified quickly and accurately throughout the supply chain, anywhere in the world. Pallet bar codes (i.e. symbols) conform to a symbology called GS1-128. Your local GS1 Member Organisation can help your company understand how to scan GS1-128 bar codes.

Figure 5-2 shows an example of a GS1-128 pallet label uniquely identifying a Logistic Unit.

Figure 5-2 Examples of GS1-128 case labels



(00) 034531200000002527 where (00) = AI 00 (SSCC)

Where can I learn more about creating GS1-compliant bar codes?

See Appendix A.

5.6. What Traceability Information Does My Company Need to Collect and Record

To ensure that the traceability link is maintained, the following data must be collected and recorded. The following represents the minimum data required to ensure traceability with your source of supply.

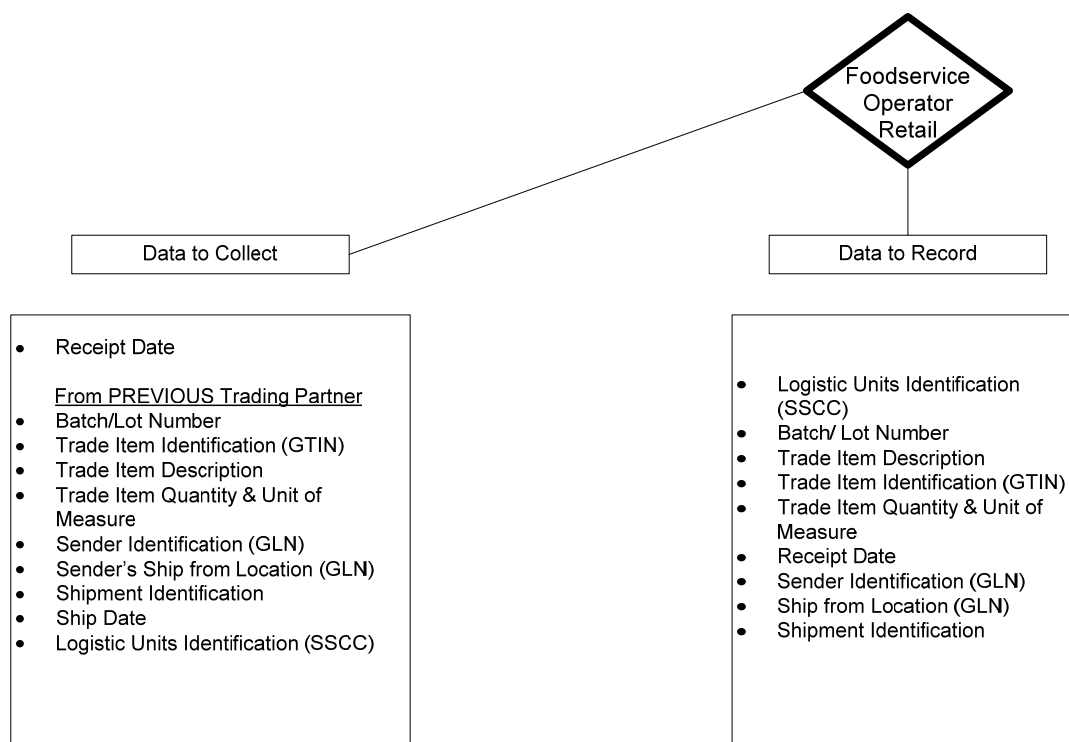
- When the supplier's product (package/case) is the traceable item:
 - Trade item identification (GTIN)
 - Trade item description
 - Batch / lot
 - Trade item quantity and unit of measure
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship date
 - Receipt date
 - Sender Identification (GLN)
- When the supplier's Logistic Unit is the traceable item
 - Logistic Unit identification (SSCC)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship date

- Receipt date
- Sender Identification (GLN)
- When the supplier's shipment is the traceable item
 - Unique shipment identification (e.g. may be the bill of lading number)
 - Ship from location identification (i.e. GLN of shipping location)
 - Ship date
 - Sender Identification (GLN)
 - Receipt date

Data attribute definitions are provided in the Glossary (Appendix B).

The accompanying chart further illustrates the minimum data required to maintain traceability.

DATA REQUIREMENTS FOR FOODSERVICE OPERATORS/RETAILERS



5.7. Other Traceability Best Practices for Foodservice Operators and Retail Stores

1. Scan case bar code for each case received
2. Store GTIN and corresponding batch / lot
3. Receive EDI (EANCOM®) Despatch Advice in order to understand the supplier's shipment in advance of reception. **Supplier** will:
 - a. Identify each case product using the Product Identification (GTIN) and batch / lot
 - b. Relate each individual case to a Logistic Unit
 - c. Identify each Logistic Unit with a (serialized) SSCC number
 - d. Identify the shipment, including:
 - i. Unique shipment identification (e.g. bill of lading number)
 - ii. Supplier's ship from location
 - iii. Buyer's receiving location

Data Retention:

All companies are expected to maintain records that will facilitate timely and accurate traceability and support any product recalls.

It is recommended that your company establish your internal data retention policy based on the following considerations:

- Government or market requirements
- How long your product may exist (somewhere) in the supply chain
- The need to retrieve data in the event of an epidemiological trace-back which may, or may not, implicate your product.

5.8. Business Scenarios for Foodservice Operator /Retail Stores

5.8.1. Foodservice operator receives product direct-to-store

Who are the trading parties?

Home Town Restaurants is a small regional restaurant operator. Home Town does not operate a central receiving facility and requires that all suppliers deliver direct to each of Home Town's restaurant locations.

Always Fresh Produce is a large distributor of fresh fruit and vegetables that markets produce under the brand names of major packers and under their own "Always Fresh" brand.

What needs to be traced?

Home Town Restaurants issues a purchase order to Always Fresh on a weekly basis who, in turn deliver to each restaurant location within 24-48 hours.

Always Fresh traces the outbound movement of product and the logistics units used to ship them.

How do they accomplish this?

- Home Town communicates an electronic purchase order message (i.e. using EANCOM®) ORDERS to identify the product (GTIN) and quantity required as well as the restaurant distribution.
- Always Fresh processes the order and builds a single shipment with multiple delivery (drop) locations. Product is aggregated and palletized by delivery location.
- Where product is sold under a packer's own brand, Always Fresh records the outbound movement of the packer's GTIN. Each product case displays the GTIN and batch / lot in bar coded form.
- At the time of picking, each product (case) GTIN is scanned (i.e. both the GTIN and batch / lot) and later associated with a specific customer delivery location.
- A pallet will be built for each Home Town delivery location. Each pallet is designated a unique GS1 SSCC number.
- A pallet label is attached to each outbound pallet showing the SSCC number as well as:
 - Shipper information (Company identification, ship from location, GLN of sender)
 - Consignee information (Company identification, ship to location, GLN of receiver)
- All pallet information is linked to a master shipment record, using the bill of lading number as the master shipment identification.
- Always Fresh transmits an electronic packing slip transaction (i.e. using the EANCOM Despatch Advice message). This document defines the contents of the shipment destined for each of Home Town's restaurant locations. This enables Home Town to reconcile the inbound shipment to outstanding purchase orders and to record all inbound GTINs and their batch / lot.
- As each pallet is delivered to its Home Town store location, the pallet SSCC number is scanned. This enables Home Town to automatically confirm delivery and to update store inventory records.
- In the event of a product recall, Home Town's automated records are able to verify which product batches were delivered to any of their restaurant locations.

5.8.2. Retailer receives product into a central distribution centre

Who are the trading parties?

The Best Produce Company is a regional vegetable supplier serving a large number of customers from a central warehouse. Best Produce's brands have a reputation for product freshness and the Best Produce Company is recognized for operational efficiency. This efficiency has come in part through investment in automated systems and the ability to exchange electronic (EDI) messages with key customers.

Fine Foods is a mid-sized grocery retailer operating a chain of 25 full-line stores. All fruits and vegetables are received centrally through Fine Food's single Distribution Centre.

What needs to be traced?

To ensure traceability between Best Produce and Fine Foods, both companies record the movement of products (GTIN and batch/lot) and logistics units. The efficiency of the order-to-cash process used by both trading partners greatly simplifies the task of traceability.

How do they accomplish this?

Each week, Fine Foods sends an electronic purchase order (EANCOM®) to Best Produce specifying its product requirements for the next 7 day period. Each product is identified using Best Produce's GTINs. Fresh produce shipped to Fine Food's distribution centre is received, inspected and put away for later re-distribution to their stores.

Upon receiving an order from Fine Foods, it is recorded in Best Produce's sales system and a shipping order is relayed to the warehouse. As each case of fresh product is picked and staged for shipping, Best Produce updates their shipping records with product information, including GTIN being shipped, the associated batch / lot(s) and quantity. Each case bears a shipping label showing the GTIN and Batch / lot in both bar coded and human-readable formats. This enables each case to be scanned as it is loaded to an outbound pallet. Once the pallet is complete, it is assigned a unique identification number (SSCC) which is printed on a GS1-compliant logistics (pallet) label together with ship-from and ship-to details. The pallet label is then scanned and an electronic record is created linking the product information with the unique logistics units (SSCC) number.

The information captured by Best Produce's shipping system enables the creation of electronic manifest (EDI EANCOM® Despatch Advice) which can be sent to Fine Foods as soon as the truck is loaded. The Despatch Advice groups shipping data by each (retailer) purchase order number and shows all GTINs being shipped and associated batch / lot shipping quantity and the pallet SSCC number(s) containing that product.

At Fine Foods, the EDI (EANCOM®) Despatch Advice is used for multiple purposes. It assists the scheduling of distribution centre resources, validating ordered merchandise and adjusting in-transit quantities. The Despatch Advice also contains the logistics and product information needed for traceability.

As logistics units are received into fine Food's distribution centre, each pallet label is scanned to confirm receipt. The pallet identification number (SSCC) is cross-referenced to the in-transit information taken from Best Produce's Despatch Advice. This provides Fine Foods with an immediate record of GTINs on the pallet and their associated batch / lot. In the event of a product recall, both Best Produce and Fine Foods have records showing all products exchanged (GTIN and batch / lot) and the movement of each impacted Logistic Unit.

A. Reference Documents

A.1 Getting Started

This section will provide further information about the GS1 Global system of Standards.

You are encouraged to follow-up by contacting your local member organization. A listing of local Member Organisations can be found at www.gs1.org.

In this section you will find:

- Introduction to GS1
- GS1 Global Trade Item Number (GTIN) Assignment Further Explained
- GS1 Global Location Number (GLN) Further Explained
- GS1 Serial Shipping Container Code (SSCC) Further Explained
- Enabling Technology Explained
- Other Useful Resources

A.1.1. GS1 Global Location Number (GLN) Further Explained

The GS1 Global Location Number (GLN) makes possible the unique identification of physical locations or legal entities.

A trade relationship may involve several companies; suppliers, customers and possibly a logistic service provider. In each company, several departments may be involved.

Structure of a GLN: A GLN includes 3 components; prefix, location reference and check digit. GLNs can also be obtained by contacting your local GS1 Member Organisation.

GS1 Company Prefix is the globally unique number assigned to a company by a national GS1 Member Organisation.

Location Reference is a number assigned by the holder of the GS1 Company Prefix. The Location Reference varies in length as a function of the GS1 Company Prefix Length. The combined length of the Company Prefix and Location Reference is always 12 digits.

Check Digit is a calculated one digit number used to ensure data integrity.

The GLN is always stored in its entirety. All 13 digits

Example of a GLN in a GS1-128 bar code



The GS1 Application Identifier (414) indicates that the GS1 Application Identifier data field contains the Global Location Number (GLN) of a physical location.

The GS1 Company Prefix may be of variable length.

The Serial Reference varies in length as a function of the GS1 Company Prefix length.

The Check Digit is a calculated one digit number used to ensure data integrity.

A.1.2. GS1 Further Explained

GS1 is a global standards organization active in over 100 countries. GS1 is dedicated to the design and implementation of global standards for use in the supply chain. These standards provide a framework that allows products, services and information about them to move efficiently and securely for the benefit of businesses and the improvement of people's lives, everyday, everywhere.

GS1 standards bring together companies representing all parts of the supply chain – manufacturers, growers, distributors, retailers, hospitals, transporters, customs organizations, software developers, local and international regulatory authorities and more. GS1 standards are used by huge multinational chains and by small corner shops; by world famous brands and by individual craftsmen.

GS1 standards make traceability systems possible on a global scale – no matter how many companies are involved or how many borders are crossed as food and food ingredients travel from one end of the supply chain all the way to the consumer.

GS1 standards can play a vital role in product recalls. Because they are global, reaching from one end of the supply chain to the other, they ensure immediate access to accurate product information, which enables swift, comprehensive recalls.

The GS1 Global Traceability Conformance Program (GTC) will enable companies to have their traceability capabilities recognized by leading companies around the world. Traceability assessments are conducted by GS1 to ensure that the companies implement correctly the GS1 standards. This can help determine if the company complies with the defined GS1 Global Traceability Standard and/or industry extensions.

Companies could use GS1 GTC program to:

- Measure their traceability level.
- Provide management with actionable reports.

- Attain ultimate quality assurance and business optimization.
- Have traceability capabilities recognized globally.
- Provide compliance with ISO-22005.
- Provides compliance with HACCP, BRC and IFS.
- Allows to full traceability requirements of international food regulations such as EC 178-2000,
- 2002 Bio-Terrorism Act, FDA Food/Sanitation Law of Japan.

Contact your GS1 Member Organisation to determine whether this program is offered in your country.

A.1.3. GS1 Global Trade Item Number (GTIN) Assignment Further Explained

To implement truly effective traceability that is global in scope requires the ability to uniquely identify products and locations with a global standard.

GS1 provides you with this ability through the use of GS1 keys such as a GTIN, GLN and SSCC.

This document provides a brief introduction to those keys.

GTIN

The Global Trade Item Number (GTIN) is the foundation of the GS1 System for uniquely identifying trade items, which includes both products and services that are sold, delivered, and invoiced at any point in the supply chain. GTINs provide unique identification worldwide. The GTIN is encountered most frequently at point-of-sale and on cases and pallets of products in a distribution/warehouse environment.

Companies can be confident that a GTIN will uniquely identify their products as they move through the global supply chain to the ultimate end user. This global identification system of GS1 ensures that the GTIN placed in a bar code is the same information contained in the corresponding electronic documents processed between trading partners.

Key Benefits of the GTIN

- Facilitates the global flow of trade items (products and services) and associated information used in electronic commerce
- Uniquely identifies trade items at all levels of packaging (item, case, and pallet)
- Delivers trade item data in a consistent format and structure
- Simplifies supply chain management
- Employs the globally accepted GS1 System whose language is standardized, understood and used by multiple industries

Why is the GTIN Useful?

Uniqueness: The GTIN identifies an item uniquely. The rules for assigning GTINs ensure that every variation of an item (product or service) is allocated a single reference number that is globally unique.

Non-significance: The GTIN numbering structure does not contain any meaningful information in itself. A GTIN is a simple pointer to database information that can be directly used in any company and in any country.

Multi-sector: GTINs are unique across all business sectors. This means that a healthcare product, a grocery product, or an apparel product are all identified in a compatible manner.

International: GTINs are unique worldwide. A GTIN can be assigned anywhere in the world and can be used anywhere in the world.

Data Integrity: The Check Digit ensures the integrity of data passing through the system.

Source Numbering: The GTIN is assigned by the brand owner of the product. Once assigned, all trading partners and internal users can use the GTIN. The same GTIN can be used to identify a series of identical items.

Automatic Data Capture: One of the key benefits of the GTIN is that it can be encoded in many automatic data capture technologies (such as a bar code or electronic product code used in Radio Frequency Identification (RFID) tags. Machine reading allows the information flow to be linked to the physical flow of trade items through the supply chain

GTINs are typically 8 digits, 12 digits, 13 digits, or 14 digits in length. It is recommended that a GTIN be represented in software applications as 14 digits by right justifying and zero filling left, as appropriate.

These GTINs can be represented in a bar code and each provides unique numbers when right justified and used in a 14-digit database field:

GTIN-8

- • Seven digits containing a GS1 Company Prefix and the Item Reference Digits assigned by your local GS1 Member Organisation.
- • One digit representing the Check Digit

If you require an individual GTIN-8, contact your local GS1 Member Organisation to see if your product meets the GTIN-8 allocation criteria.

GTIN-12

- • Eleven digits containing a U.P.C. Company Prefix and the Item Reference assigned by your company
- • One digit representing the Check Digit

GTIN-13

- • Twelve digits containing a GS1 Company Prefix and the Item Reference assigned by your company
- • One digit representing the Check Digit

GTIN-14

- • When constructing a GTIN 14 for the identification of packaging, such as cases for fixed weight product, the first digit (with a value of 1 through 8) is an indicator digit. The next 12 digits reflect the GTIN on the consumer item in the case. The last digit is a recalculated check digit.
- • Twelve digits the GS1 Company Prefix and the Item Reference assigned by your company
- • One digit representing the Check Digit

GS1 Company Prefix – The globally unique number assigned to a company by a GS1 Member Organization. GS1 Company Prefixes are assigned to companies in varying lengths.

Item Reference – The number assigned by a holder of the GS1 Company Prefix to uniquely identify a trade item. The Item Reference varies in length as a function of the Company Prefix length.

Check Digit – A calculated one-digit number used to ensure data integrity.

The following illustrates the uses of a GTIN in a bar code



GTIN-8 symbology

GTIN-8 data structure

Used for point-of-sale identification of pre-packaged, fixed weight/count consumer product. Only assigned by GS1 MO's for use on space restricted products. Not a zero-suppressed number.



UPC-A symbology

GTIN-12 data structure

Used for point-of-sale identification of pre-packaged, fixed weight/count, consumer product



EAN-13 symbology

GTIN-13 data structure

Used for point-of-sale identification of pre-packaged, fixed weight/count, consumer product



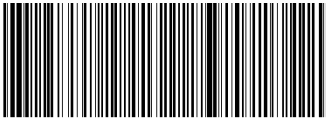
GS1 DataBar symbology (stacked omnidirectional)

GTIN -14 Data structure

Used for point-of-sale identification of loose, variable weight, consumer product

Data Structure holds up to 14 digits. (GS1 has restricted the use of of GS1 DataBar at point-of-sale to only include GTIN-12 or GTIN-13). GS1 DataBar is a new barcode symbology that has been introduced for bilateral use between trading partners beginning in 2010. The global sunrise date for retailers to be able to scan GS1 DataBar is 2014.

There are seven variations of the DataBar symbology. The example shown is the most common related to the identification of loose produce such as apples, bananas, etc. The variations GS1 DataBar Expanded and GS1 DataBar Expanded Stacked can encode additional information such as net weight or price.



(01) 3 0614141 000013 (13) 050101 (10) A1B2C3

The GTIN number is 30614141000013

The batch number is A1B2C3

The expiry date is 050101 (YY/MM/DD)

GS1-128 symbology

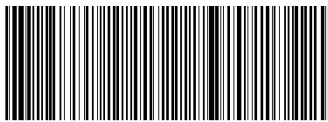
Data Structure

Used for trade item identification throughout the supply chain but NOT at point-of-sale.

A.1.4. How to Create a Quality GS1-Compliant Bar Code

Use of GS1 Application Identifiers (AI's):

The GS1-128 symbology allows for the encoding of secondary information. This is done through the use of application identifiers. In the example below the application identifiers is encased in parentheses. The identification (01) indicates that what follows is a GTIN. The identification (13) indicates that what follows is the pack date expressed in the format YYMMDD. The identification (10) indicates the batch / lot.



(01) 3061414100013 (13) 050101 (10) A1B2C3

GS1-128 symbology
Data Structure
Used for trade item identification throughout the supply chain but NOT at point-of-sale.

(01) 306141410013 where (01) = AI 01 (GTIN)

(17) 050101 where (13) = AI 13 = (Pack Date)

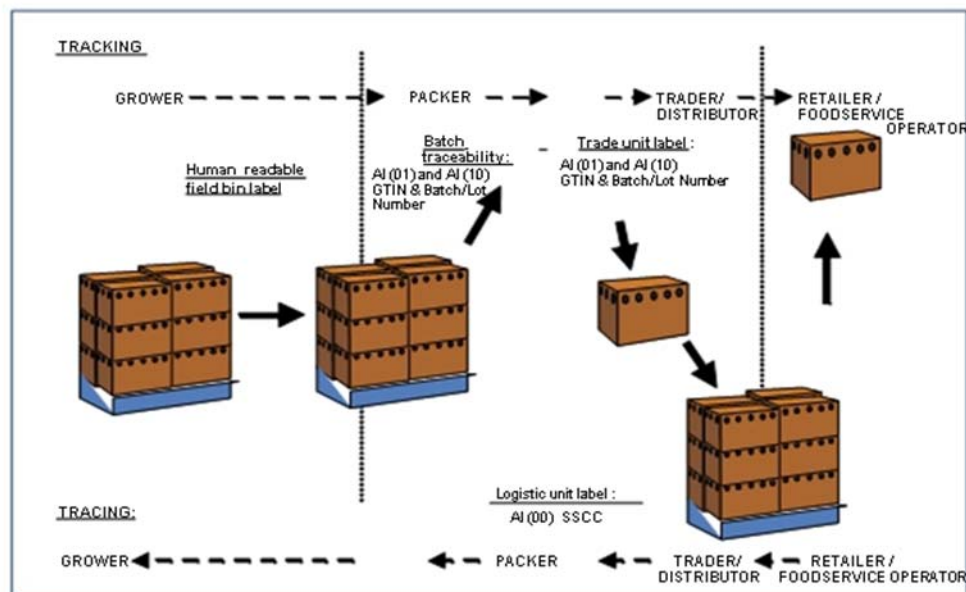
(10) A1B2C3 where (10) = Batch / lot



Note: Note that the parentheses are not encoded in the bar code. For complete technical specifications on the use of GS1 bar code symbologies consult the GS1 General Specifications or contact your local GS1 Member Organisation

Figure 5-3 illustrates how the use of GS1 Application Identifiers (AI's) can be applied to product and Logistic Unit labels across the supply chain.

Figure 5-3 Use of GS1 Application Identifiers through the produce supply chain



Ten Steps to Bar Code Implementation:

The following provides a 10 step model to ensuring that your Company produces quality bar codes. Additional assistance can be found by contacting your package/printer supplier or your local GS1 Member Organisation.

Step 1: Obtain a GS1 Company Prefix

Step 2: Assign Numbers

Step 3: Select a Bar Code printing Method

Step 4: Select a "Primary" Scanning Environment

Step 5: Select a Data Carrier

Step 6: Pick a Bar Code Size

Step 7: Format the Bar Code Text

Step 8: Pick a Bar Code Colour

Step 9: Pick the Bar Code Placement

Step 10: Build a Bar Code Quality Plan

Step 1: Obtain a GS1 Company Prefix

Before a company can begin using bar codes, they must create the numbers that go inside the bar code. These numbers are called GS1 Identification Keys. The first step in building a GS1 Key is to obtain a GS1 Company Prefix from a GS1 Member Organisation. GS1 Company Prefixes are used to identify over 1 million companies today and form the foundation of uniquely identifying everything in the supply chain. To obtain a GS1 Company Prefix contact the GS1 Member Organisation in your country.

Step 2: Assign Numbers

After receiving a GS1 Company Prefix, a company is ready to begin assigning identification numbers to their trade items (products or services), themselves (as a legal entity), locations, logistics units, individual company assets, returnable assets (returnable pallets, kegs, tubs), and service relationships.

The process is fairly simple. Your local GS1 Member Organisation can provide you with specific information about how many numbers you can assign based on the length of your GS1 Company Prefix.

Step 3: Select a Bar Code Printing Company

To begin, you should decide what you are bar coding and if the bar code will carry static or dynamic information inside it. An example of static information would be simply a product identification number (GTIN) on a box of pre-packaged salad. An example of dynamic information would be printing serial numbers on product labels.

If your bar code has static information and you need a large volume of labels then you will likely ask a printing company to print your labels. If you need a small volume of labels or need to print labels with dynamic information you will likely need an on-demand printer like a laser printer in your office or thermal transfer printer in your warehouse. Knowing how you will print your bar code is an important question to answer in developing a good bar code implementation plan. Again, your local GS1 Member Organisation is there to assist you in making the right selection and many Member Organisations can also help you find a printer in your local area.

Step 4: Select a "Primary" Scanning Environment

The specifications for bar code type, size, placement, and quality all depend on where the bar code will be scanned. There are three basic scanner environment scenarios for trade items:

1. Product package scanned at the retail point-of-sale (POS)
2. Product package scanned in a general distribution
3. Product package scanned at POS but also scanned in distribution

By knowing where your bar code will be scanned you can establish the right specifications for its production. You can find more information in the GS1 General Specifications; available from your local GS1 Member Organisation.

Step 5: Select a Bar Code

Selecting the right bar code is critical to the success of your bar code implementation plan, but here are some high level tips:

- If you bar code a trade item that will be scanned at the retail point-of-sale (POS), you must use a GS1 data carrier. Label loose produce with appropriate GS1 bar code symbol intended for point-of-sale.
- If you are printing a bar code with variable information like batch / lot, you will use a symbol called GS1-128.

Step 6: Pick a Bar Code Size

After the correct bar code symbol is specified together with the information to encode in it, the design stage begins. The size of the symbol within the design will depend on the symbol specified, where the symbol will be used, and how the symbol will be printed.

Step 7: Format the Bar Code Text

The text beneath a bar code is important because if the bar code is damaged or of poor quality to begin with, then the text is used as a back-up.

Step 8: Pick a Bar Code Colour

The optimum colour combination for a bar code symbol is black bars with a white background. If you want to use other colours, the following may help you in choosing satisfactory ones:

- GS1 Bar Code Symbols require dark colours for bars (e.g., black, dark blue, dark brown, or dark green).
- The bars should always consist of a single line colour and should never be printed by multiple imaging tools (e.g., plate, screen, and cylinder).
- GS1 Bar Code Symbols require light backgrounds (e.g., white) which are to the left and right of the bar code
- In addition to light backgrounds, "reddish" colours may also be used. If you have ever been in a darkroom with red lighting and tried to read red copy, you know it can virtually disappear. This is also true of similar colours such as orange, pink, peach, and light yellows. Given the fact that most bar code scanners use a red light source, you can quickly see why these colours may be suitable for backgrounds, but should be avoided for bars.
- In many cases the symbol background is not printed. It is the colour of the substrate that is being printed. If the symbol background is printed beneath the bars, the background should be printed as solid line colours.
- If you use multiple layers of ink to increase the background opacity, each layer should be printed as a solid.

- If you use a fine screen to deliver more ink to the substrate, be sure there are no voids in the print caused by the screen not adequately filling in.

Again, by staying with black bars and white spaces, you have selected the optimal combination, but other colour combinations can be used. Consult an experienced printer or your GS1 Member Organisation for additional guidance.

Step 9: Pick the Bar Code Placement

When discussing symbol location we are referring to the symbol placement on the design. For symbol replacement guidelines refer to GS1 numbering and bar coding guidelines. In addition the packaging process should be considered. You should consult the packaging engineer to make sure the symbol will not be obscured or damaged (e.g., over a carton edge, beneath a carton fold, beneath a package flap, or covered by another packaging layer).

Step 10: Build a Bar Code Quality Plan

GS1 members may choose to perform their own quality control of bar code production but today many GS1 Member Organisation offer bar code quality verification services.

A.1.1. GS1 Serial Shipping Container Code (SSCC) Further Explained

There are many reasons to use the Serial Shipping Container Code (SSCC) but the most compelling would be the primary benefit of speeding up your products through the process of shipping and receiving. When used in conjunction with the Despatch Advice, the SSCC allows entire cases or pallets of produce to be scanned and quickly processed through distribution centres and other receiving locations.

The SSCC's a critical element when electronically exchanging information about the movement and location of logistics units. A Logistic Unit is defined as any composition established for transport and/or storage, which needs to be tracked through the supply chain (cartons or pallets). Data exchange and the tracking of logistics units is an application of the GS1 System. This can be accomplished through the use of the SSCC.

The SSCC is the "license plate" to identify specific information about cartons, pallets or even trailer loads of products. The SSCC moves products from one trading partner to another quickly and efficiently. More importantly, the costs associated with moving and receiving products are greatly reduced.

Key Benefits of the SSCC:

- Identifies logistics units with a number that is unique worldwide.
- Links bar coded information on a Logistic Unit and the information that is communicated between trading partners via electronic business transactions such as EDI.
- Employs the globally accepted GS1 System whose language is standardized, understood, and used by multiple industries.
- Applies to the entire supply chain, from raw materials, growers, packers, repackers, distributors and retailers.
- Applies to both intra and inter-company transactions.
- Encompasses a common vendor numbering schema that uses the GS1 Company Prefix so that the number cannot be duplicated.

Structure of the SSCC

An SSCC includes 4 components; Extension Digit, GS1 Company Prefix, Serial Reference and Check Digit.

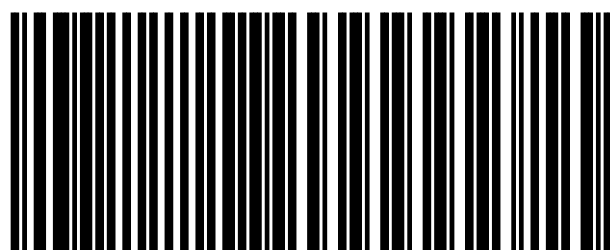
The GS1 Company Prefix may be of variable length.

The Serial Reference varies in length as a function of the GS1 Company Prefix length.

The Check Digit is a calculated one digit number used to ensure data integrity.

The SSCC should be stored or encoded in its entirety - all 18 digits.

Example of a SSCC in a GS1-128 bar code



(00)	0	0801234	999999999	7
└──┘		└──┘		└──┘
Application	Extension	GS1	Serial	Check
Identification	Digit	Company	Reference	Digit
		Prefix		

SSCC with 7 digit Company Prefix

A.2 Enabling Technology Explained

The electronic exchange of information is an accepted practice in business and while the produce industry and other fresh food industries may not use it as frequently as other consumer goods industries, its usage and acceptance in produce is expected to increase. GS1 has two official electronic commerce standards. The most established with regards to geographic spread and number of implementations is EANCOM. GS1 XML is a more recent technology that is increasing in popularity.

Also approaching is the acceptance, development and implementation of data synchronization in the produce industry. The GS1 Global Data Synchronization Network or GDSN® enables companies who do business with each other to always have the same information in their systems. Any changes made by one company are automatically and immediately available to all of the other companies who do business with them. Accurate, detailed and up-to-date product information helps both companies and consumers. Brand owners can get new products out to the market faster and more smoothly. Retailers have less administrative work and fewer mistakes in orders and shipments and supermarket shoppers will be able to buy the products they want, instead of seeing an empty shelf. GS1's Global Data Synchronization Network enables supply chain partners to continuously synchronize information improving efficiency in their supply chains, and to provide better service to the consumer.

GTIN information is conveniently represented by bar codes. The following describes another carrier technology that is being increasingly used to communicate identity information.

Radio-Frequency Identification (RFID) is an automated identification method using RFID tags. RFID tags can be passive, active, or semi-passive. Passive tags have no internal power supply but can be read from a few meters away by another powered device. Active tags have an internal power supply

allowing the tag to generate a message to other devices. The range of active tags is hundreds of meters as opposed to a few meters and may include temperature sensors. Semi-passive tags (also called semi-active tags) are similar to active tags in that they have their own power source, but the battery only powers the microchip and does not power the broadcasting of a signal. Semi-passive tags are more sensitive than passive tags, have a longer battery powered life cycle than active tags, and can perform some 'active' functions (such as temperature logging) under its own power. A key strength of RFID is that these tags can be read without requiring line of sight reading. RFID can provide instantaneous invalidation of incorrect code and is capable of polling large numbers simultaneously. RFID is not human-readable and can ultimately be read and counterfeited without contact.

A.3 Other Useful Resources

Document or Resource	Purpose	Contact
GS1 Traceability Standard – What you need to know	A summary of the GS1 Global Traceability Standard.	GS1: www.gs1.org
GS1 Global Traceability Conformance Programme	An overview of the GS1 global conformance program and how User companies can participate.	GS1: www.gs1.org
GS1 General Specifications	Detailed instruction on how to apply the GS1 system of identification keys and GS1 Application Identifiers for bar coding.	GS1: www.gs1.org

Regional and Local Resources

Additional implementation resources may be available to your company. Please contact your local GS1 Member Organization or trade association.

A.4 Frequently Asked Questions

Why is a company's internal traceability system not enough?

Most companies have their own proprietary internal traceability system that enables them to track product while inside their own four walls. However, most companies do not collect, record or share the traceability information their trading partners require and, therefore, the process breaks down once it leaves their four walls. The other reality is that not every company will use the same traceability system. In order for trading partners to track product up and down the supply chain, companies need to augment (not replace) their internal traceability systems with standardized key information that serves as a link between trading partners' internal traceability systems. The GTIN and batch / lot, at minimum, serve as key pieces of data on each case of produce and are also needed to be stored in each trading partner's databases in order for tracking and tracing to occur quickly.

Why is it important to have the GTIN and batch / lot shown on each case?

The GTIN and its associated batch / lot are, at minimum, the information needed by the packer, repacker, or shipper to trace the product back to the source. The more information contained in the batch / lot, the more specific the trace back will be and therefore the minimal amount of product implicated. GTIN and batch / lot should be provided in human-readable and machine-readable (bar code) form. In the event of a recall, the human-readable will allow people to physically identify the case in question and remove it from their operation.

Why is it important to have the SSCC and Batch / lot on each Logistic Unit?

The SSCC number and associated batch / lot information are needed by the packer, re-packer, grower or shipper to trace the product back to the source. The more production information represented by the batch / lot, the more specific a trace back will be and therefore will minimize product implicated.

Why is it important to have the GTIN and batch / lot encoded in a GS1-128 bar code?

This allows for the automated capture of this information and eliminates the need for trading partners to manually enter the shipping/receiving data for each case.

The GS1-128 bar code is the most widely accepted bar code in today's food supply chain, one that most retailers/foodservice organizations already have the capability to read and one that has plenty of storage capacity for including both the GTIN and the batch / lot.

Why is it important to record this information?

If a recall occurs citing a specific GTIN and its associated batch / lot, you can now use these two fields to look into your internal traceability system and find the date that specific GTIN combination came into your facility and left your facility. You can then investigate further into your internal traceability system to research what happened in the associated time frame.

Having this information in databases, rather than on paper, allows you to isolate the product in question within minutes. This enables you to quickly determine each handler of the product, when the product was in the possession of each handler and what happened to that product while in each handler's possession.

What is the advantage of one-step-up, one-step-down traceability?

It is critical that each company be able to track where they got product from and where it was shipped. Basic traceability practices are already imbedded in common business processes such as procurement, receiving, storage, manufacturer and distribution. This makes the one-step-up, one-step-down model easy to implement with your company's suppliers and your customers.

What is the advantage of using the Electronic Despatch Advice?

As companies scan and record inbound case information (example, the GTIN and batch / lot) the use of the Electronic Despatch Advice provides a means to expedite the receiving process. The enhanced shipping/receiving process leverages the use of the GS1 Serial Shipping Container Code (SSCC) to identify each pallet uniquely. Information about this pallet can now be communicated both on the pallet (using a GS1-128 bar code) and through an electronic message (using EDI EANCOM[®]). As the electronic message can be exchanged in advance of the physical receiving of goods, the receiver is able to understand the association of each case to a specific pallet. This process is further described below.

STEP 1:

Assign a unique SSCC number to each pallet

Encode the SSCC number into a GS1-128 bar code

Print the bar code on to a pallet label

STEP 2:

Scan GTIN's from every case belonging to that pallet and link to the pallet SSCC number

STEP 3:

Apply pallet label to pallet

STEP 4:

Send Despatch Advice to trading partner using an electronic message (EANCOM[®])

Transmit Despatch Advice to receiver as soon as shipment is ready for transport

STEP 5:

Receiver receives Despatch Advice and records SSCC number and it's corresponding information

STEP 6:

Receiver unloads shipment

Receiver scans pallet tag and retrieves SSCC number

Receiver searches internal system for record of inbound SSCC number

Once SSCC number is found, contents of pallet automatically linked to the shipment (GTIN's, batch / lot, quantities)

B. Glossary

Term	Definition
Actor	An actor is a role that a user plays with respect to a system.
GS1 Application Identifier	The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.
Batch / Lot	The batch or lot number associates an item with information the manufacturer considers relevant for traceability of the trade item. The data may refer to the trade item itself or to items contained in it.
Consumer Unit	The package size of a product or products agreed by trading partners as the size sold at the retail point of sale.
Data Carrier	A means to represent data in a machine readable form; used to enable automatic reading of the Element Strings.
Event	An Event has four dimensions: - What: what physical objects were involved (GTIN) - When: when the Event took place (timestamp) - Where: where the Event took place (Location identifier (GLN)) - Why: what business step was being carried out
External Traceability	External Traceability takes place when instances of a Traceable Item are physically handed over from one Traceability partner (Traceable Item source) to another Traceability partner (Traceable Item recipient).
GLN (Global Location Number)	The GS1 Identification Key used to identify physical locations or legal entities. The key comprises a GS1 Company Prefix, Location Reference, and Check Digit.
GTIN (Global Trade Item Number)	The GS1 Identification Key used to identify trade items. The key comprises a GS1 Company Prefix, an Item Reference and Check Digit.
Global Returnable Asset Identifier (GRAI)	The GS1 Identification Key used to identify an Individual Asset. The key comprises a GS1 Company Prefix and Individual Asset Reference..
GS1 System	The specifications, standards, and guidelines administered by GS1.
Identification	Refer to GLN and GTIN
Identification Carrier	Mark / tag / label / accompanying document sometimes called "passport" or "identity card" or "Pedigree" in some industry sectors
Internal Process	A series of actions, changes or function(s) within an organisation or an organisation that brings about a result.
Internal Traceability	Internal Traceability takes place when a Traceability partner receives one or several instances of traceable items as inputs that are subjected to internal processes, before one or several instances of traceable items are output.
Link	Recording the information necessary to establish the relationship to other relevant information.

Term	Definition
Location	A place where a traceable item is or could be located [ISO/CD 22519]. A place of production, handling, storage and/or sale.
Logistic Unit	An item of any composition established for transport and/or storage that needs to be managed through the supply chain. It is identified with an SSCC.
Master Data	Within the context of Data Synchronisation, any data that is applicable across multiple business transactions. Master Data describes each Item or Party involved in Supply Chain Processes. A Global Trade Item Number (GTIN) or a Global Location Number (GLN) uniquely identifies each data set. Master Data can be divided into neutral and relationship dependent data
Party	A Party (or) Location is any legal or physical entity involved at any point in any supply chain and upon which there is a need to retrieve pre-defined information. A Party is uniquely identified by a Global Location Number (GLN).
Process	In a GS1 context this refers to a business process. This is a series of actions, or functions that transform an input into an output to assist in meeting an organisation's objectives. Inputs and outputs may be data, physical entities or a mixture of both, examples being order to cash, collaborative planning, warehouse management and cross-docking.
Product Description	GS1 Global definition: A piece of information reflecting a characteristic related to an identification number [e.g., an expiration date or a product description related to a GTIN®].
Quantity	A precise number of articles, pieces or units. Used in conjunction with Unit of Measure.
Receipt Date	GS1 Global definition: Date/time upon which the goods were received by a given party.
Record	Act of creating a permanent piece of information constituting an account of something that has occurred.
Serial Shipping Container Code (SSCC)	The GS1 Identification Key used to identify logistics units. The key comprises an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit.
SGTIN (Serialized Global Trade Identification Number)	SGTIN is a method of identifying items at the unit or retail level as well as at the case and carton levels. It is composed of a GS1 assigned Company Prefix & Item Reference (GTIN), combined with a Serial Number. Where GS1 bar codes have traditionally been used, the SGTIN specification combined with an EPC tag can give visibility beyond the Item Reference right down to the exact serial number of the item ..
Share	Act of exchanging information about an entity or traceable item with another Trading Partner.
Ship Date	Date on which goods should be shipped or despatched by the Supplier.
Ship from Location	Identification of the party from where goods will be or have been shipped.
Term	Definition
Ship to Location	Identification of the party to where goods will be or have been shipped.
Shipment	A grouping of logistics and transport units assembled and identified by the seller (sender) of the goods travelling under one despatch advice and/or Bill of Lading to one customer (recipient).
Shipment Reference Number	The reference number assigned to a shipment.
Traceability	[ISO 9001: 2000] Traceability is the ability to trace the history, application or location of that which is under consideration.

Term	Definition
Traceability Data	Any information about the history, application or location of a traceable item, either Master Data or Transactional Data.
Traceable Item	A physical object that may or may not be a trade item, where there may be a need to retrieve information about its history, application, or location. The level at which the traceable item is defined is dependent on the industry and degree of control required (for example within a product packaging or logistical hierarchy). It could be tracked, traced, recalled or withdrawn. It could exist in multiple locations at the same time (for example, if identified at the trade item and batch level). A traceable item may be related to another traceable item. It is the choice of the Traceability Partner which identification level (e.g. GTIN or Lot/Batch or serial level) to use for the traceable item. See also definition for process
Trace Request	A formal inquiry about the history, application, or location of a traceable item. A request can trigger subsequent trace requests up or down the supply chain in order to fulfil the original request
Tracing (Tracing Back)	The ability to identify the origin, attributes, or history of a particular traceable item located within the supply chain by reference to records held. "Tracking back" and "tracking forward" are the preferred terms used in this document.
Tracking (Tracking Forward)	The ability to follow the path of a traceable item through the supply chain as it moves between parties.
Trade Item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Trading Partner	Any Supply Chain Partner that has a direct impact on the flow of goods through the supply chain. Examples include Third Party Logistics Provider, Manufacturer, Retailer, and Grower.
Transformation	A change to the nature of a traceable item that changes the identity and/or the characteristics of the traceable item. The act of changing the item such as combining ingredients to make a finished product or case picking to create a new pallet. Transformation can be production, aggregation, grouping, splitting, mixing, compounding, packing and repacking traceable items.
Transporter	The Traceability Partner that receives, carries, and delivers one or more traceable items from one point to another without transforming the traceable item(s). Typically only has possession, custody, or control of a traceable item, but may have ownership.
Unit of Measure	The unit of measure relating to a specific quantity. Reference to a unit of measure code that optionally applies to the quantities value. Example of units of measure include pound, metre, kilo.



The GS1 Traceability Standard: What you need to know





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The GS1 Traceability Standard: What You Need to Know

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Executive Summary

Traceability is the ability to identify the past or current location of an item, as well as to know an item's history.

The most well known use of traceability is locating defective or unsafe foods, pharmaceuticals or other products, in order to remove them promptly from shelves. In some cases, being able to quickly and easily recall an item (or a group of items) can save lives. Speedy recall also greatly reduces the potential negative economic impact, and preserves consumers' trust in the quality of their favorite brands and their confidence in the systems that are designed to protect their safety.

There is however more to traceability than just recall. For example, traceability systems can validate the presence or absence of attributes important to consumers, such as organic farming methods, kosher foods, non-allergenic cosmetics, or sugar-free products. Traceability has become a tool in fighting product counterfeiting and protecting brands. Recently, it has also become a regulatory requirement in some countries in the fight against bioterrorism.

Implementing a traceability system within a supply chain requires all parties involved to systematically link the physical flow of materials and products with the flow of information about them. This requires a holistic view of the supply chain, which is best attained by deploying a common business language.

While businesses recognise the value of traceability, they do not want multiple, potentially conflicting traceability systems, and they do not want to increase costs unnecessarily. Businesses also recognise that an individual company is only one partner in the supply chain, and that a chain is only as strong as its weakest link. In short, businesses want a traceability system that can easily be adopted by just about everyone in the supply chain.

The **GS1 Traceability Standard** meets this criterion. It defines business rules and minimum requirements to be followed when designing and implementing a traceability system. GS1 standards (*such as GS1 BarCodes, GS1 EPC, GS1 eCom business messaging, and more*) enable the easy implementation of this GS1 Traceability Standard.

This document provides basic information about

- participants in the traceability process, both parties and roles
- definitions of traceable items
- GS1 global unique identifiers to use on each type of traceable item
- sub-processes and steps of the traceability process



GS1 in a Nutshell

GS1 is a neutral, not-for-profit organisation dedicated to the design and implementation of global standards, technologies and solutions to improve the efficiency of supply and demand chains by adding useful information to any exchange of goods or services.

It was formed from the joining together of EAN International and UCC, the Uniform Code Council, and is today the most widely used supply chain standards system in the world.

GS1 has more than 30 years experience and is present in over 145 countries. More than a million companies representing all points in the supply and demand chain and executing over five billion transactions every day drive the organisation's activities.

It operates in more than 20 sectors, including fast-moving consumer goods, healthcare, transport and logistics, and defense. GS1 works with small and mid-sized firms, as well as many of the world's largest corporations.

GS1's integrated system of standards is the foundation for accurate identification and communication of information regarding products, assets, services and locations.

GS1's **products** include:

- **GS1 BarCodes**: global standards for rapid and automatic identification of items and assets, or their location
- **GS1 eCom**, global standards for electronic business messaging and the rapid and accurate exchange of data between businesses
- **GS1 GDSN**, a standardised global environment for data synchronization between business partners
- **GS1 EPCglobal**, global standards for RFID-based identification of items and assets.

GS1 also offers **solutions**, which combine a number of GS1 products, such as:

- **GS1 Traceability**, for tracking and tracing items such as food or pharmaceuticals through the supply chain.
- **GS1 Patient Safety**, to ensure prevention of medical errors and counterfeiting across the healthcare supply chain.

Furthermore, GS1 offers a wide range of **services** to help businesses implement and use its standards, including training, certification, technical support and implementation advice.

GS1's 104 **Member Organisations** are national associations that provide tools and support to companies in that country. GS1 Member Organisations, for example, allocate the unique numbers that are the very basis for the GS1 System of standards.

For more information, visit www.gs1.org

Understanding Traceability

Traceability is the ability to trace the history, application or location of that which is under consideration.

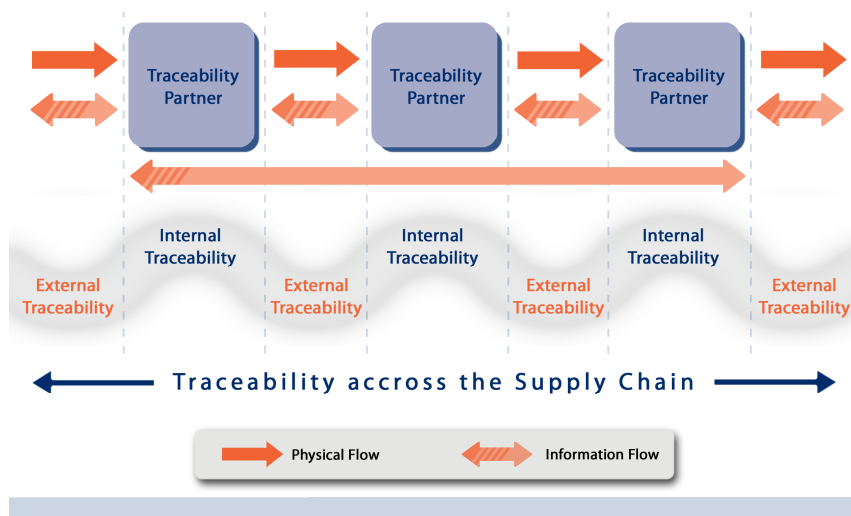
The GS1 Traceability Standard is a business process standard, which:

- defines the traceability process
- defines minimum traceability requirements for all sectors and all types of products
- identifies existing GS1 standards

The principles of traceability can apply to any industry served by GS1.

Traceability Across the Supply Chain

Traceability management across the supply chain involves the association of a flow of information with the physical flow of traceable items (*see Figure 1.*) Each actor must perform different roles within the supply chain, but all actors must follow the basic agreed-to steps of the traceability process.

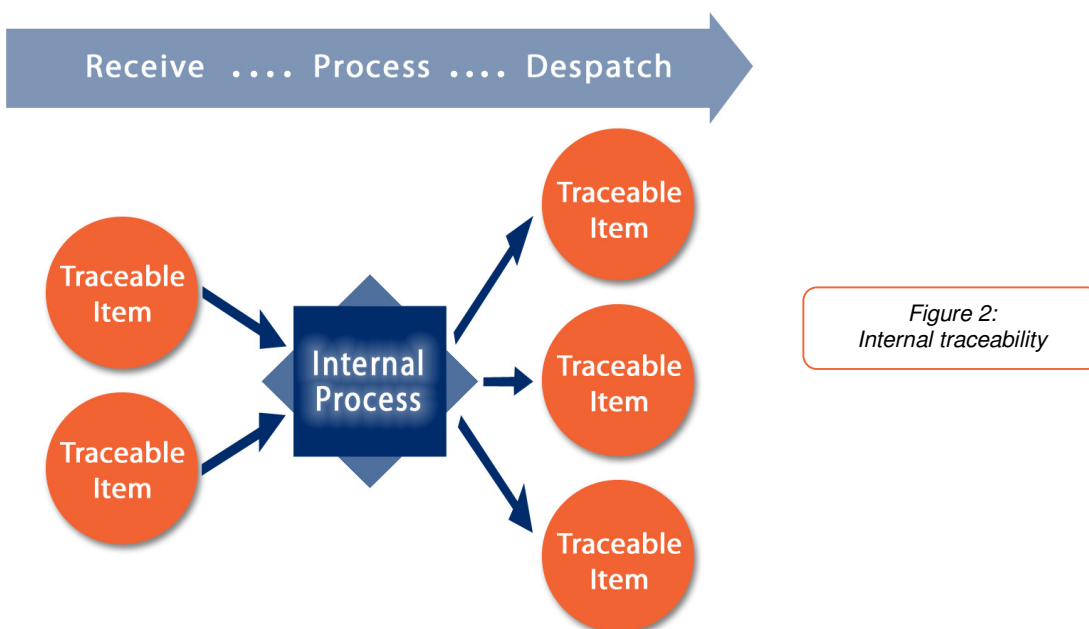


*Figure 1:
Traceability across
the supply chain*

In order to achieve traceability across the supply chain, all traceability partners must achieve **internal** and **external** traceability.

Internal Traceability

Internal traceability takes place when a Traceability Partner receives one or several instances of traceable items as inputs that are subjected to internal processes, before one or more instances of traceable items are output (see Figure 2.)



An internal process is one or more sub-processes performed by the same party, or without a significant involvement of other trading partners.

At a minimum, the internal process must consist of one of the four following sub-processes:

- movement
- transformation
- storage
- destruction

Every Traceability Partner has a responsibility to maintain data that links input into a transformation process with the output, and that links the original and final location after movement.

This standard recommends the use of GS1 global standards to capture the data that links inputs during a product's internal life cycle.

External Traceability

External traceability takes place when a traceable item is physically handed over from one Traceability Partner to another (see Figure 3.)

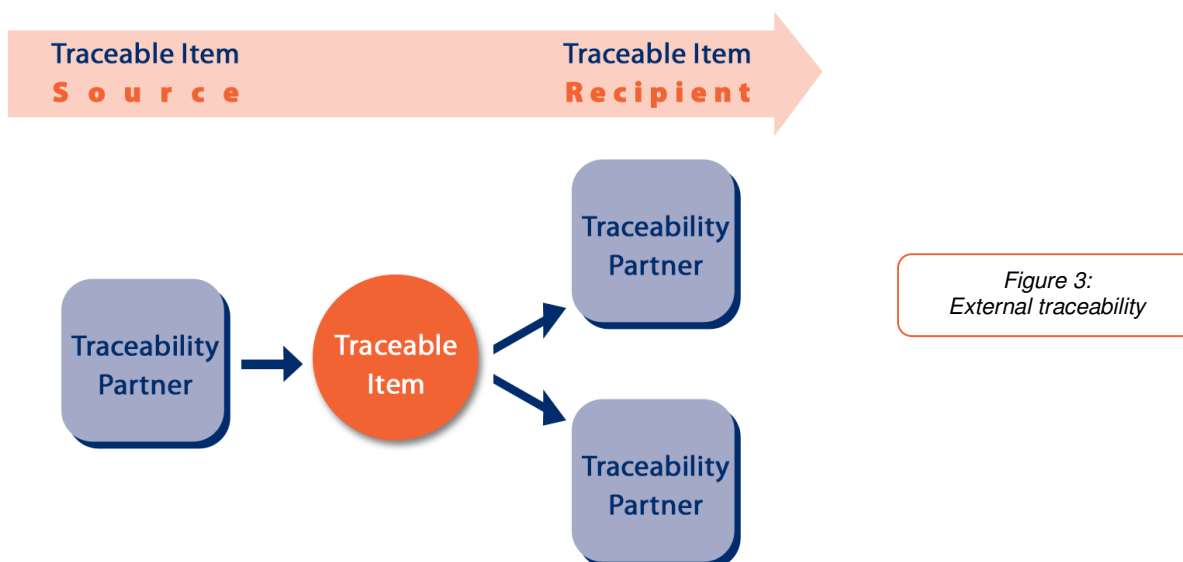


Figure 3:
External traceability

Each Traceability Partner should be able to trace back to the direct source and be able to identify the direct recipient of the traceable item: This is the "**one step up, one step down**" principle.

Traceability does not mean that every Traceability Partner must hold and publish all traceability information: however, the Traceable Item Source and Traceable Item Recipient must communicate and record the identification of at least one common level of traceable item within their respective systems. This ensures efficient information flow of data when tracing back or tracking forward.

All traceable items must carry identification and be labelled, marked or tagged at the source (or at their creation). This standard recommends the use of a Global Trade Item Number (GTIN) or Serial Shipping Container Code (SSCC) for this.

The Brand Owner must ensure the true uniqueness of the identification of the traceable item. When sub-contractors or licensees are involved, it is up to the Brand Owner to find a way to ensure uniqueness, and may depend on contractual agreements.

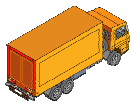
The identification carrier (mark, tag, label, accompanying document) must remain on the traceable item or attached to it until the traceable item is consumed or destroyed.

Traceability Process Participants

The GS1 Traceability Standard distinguishes between parties and roles. A party is a generalization of a legal or physical entity (for example, a retailer). A role is a specific function of a party in a specific process at a specific time (for example, a buyer).

Who are the parties in the traceability process?

Trading Partners can be distinguished as following parties:



Carrier/Third Party Logistics Provider (3PL)

The party responsible for the delivery or shipping of the traceable item.



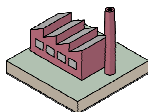
Processor/Manufacturer/Primary Producer

Typically receives inputs and transforms those inputs. Examples include the farmer, an abattoir or a packer that consolidates product from a number of growers, and a food manufacturer that processes food ingredients into a finished product. A supply chain may be comprised of more than one processor/manufacturer/primary producer.



Retailer/Point of Sale or Service Operator

Has the final relationship with the consumer. For example, a retailer, healthcare provider, institution, or hospitality service such as a hotel or restaurant.



Warehouse/Distribution Centre

Responsible for the handling (may transform the traceable item) and storage of the traceable item.



Authorities

The party legally mandated to protect the public interest.

The same legal entity can be more than one party. For example a Third Party Logistics Provider may also act as a Warehouse or Distribution Centre. Indeed, parties in the supply chain often play multiple roles in the traceability process.



What are the roles the parties might play in the traceability process?

Different parties have roles depending on the physical and information process flows.

Information process flow role

Trading Partners can be distinguished as following roles in information process flow:

Brand Owner

- The party that is responsible for allocating GS1 System numbering and bar code symbols on a given trade item. The administrator of a GS1 Company Prefix.
- And/or the party that is the ultimate authority for the trade item.
- And /or the owner of the product specifications.
- And/or responsible for placing a traceable item into commerce.

Traceability Data Creator

The Traceability Partner that generates traceability information.

Traceability Data Source

The Traceability Partner that provides the traceability information.

Traceability Data Recipient

The Traceability Partner authorized to view, use, and download traceability information.

Trace Request Initiator

The person who starts the trace request.

Physical process flow roles

Trading Partners can be distinguished as following roles in physical process flow:

Traceable Item Creator

The Traceability Partner that generates a traceable item, or makes a distinct traceable item by transformation of one or more traceable items.

Traceable Item Source

The Traceability Partner that despatches or provides a traceable item.

Traceable Item Recipient

The Traceability Partner that receive the traceable item.

Transporter

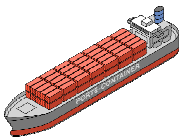
The Traceability Partner that receives, carries, and delivers one or more traceable items from one point to another without transforming the traceable item(s). Typically only has possession, custody, or control of a traceable item, but may have ownership.

What is a traceable item?

A traceable item is a physical object where there may be a need to retrieve information about its history, application, or location.

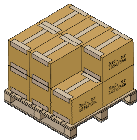
The level at which the traceable item is defined within a product packaging or logistical hierarchy is dependent on the industry and degree of control required.

A traceable item from the **highest** level to the **lowest**, may be a:



Shipment

- May contain one or more logistic unit(s)
- Examples include truckload, vessel, 10 pallets of various items.



Logistic unit

- May contain other logistic unit(s)
- May contain one or more trade item(s)
- May be a trade item
- Examples include pallet, container.



Trade item not crossing the POS

- A trade item
- Batch/lot of trade items
- Serialized trade item
- Examples include carton, bag.



Trade item crossing the POS

- Examples include consumer units.



How are traceable items identified?

All traceable items must carry a global, unique identification **directly on the traceable item**, or if not possible, at least on the asset containing it, or on an accompanying document.

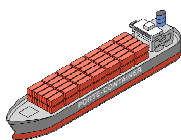
Which GS1 global unique identification should be used?

The GTIN is the basis for product identification, which serves as a reference to the full body of product information. For the purpose of traceability, this may not be sufficient, requiring additional information to uniquely identify a product or grouping of products. (See Figure 4.)

Precision of the identification					
		Shipment	Logistic Units	Trade item not crossing the point of sale	Trade item crossing the POS, Consumer Unit
	Unique (serialized)	Shipment Identification Number (SIN)	SSCC	GTIN + Serial Number SGTIN	GTIN + Serial Number SGTIN
	Specific (batch)	Not Applicable	Not Applicable	GTIN + Batch / Lot Number	GTIN + Batch / Lot Number
	Generic	Not Applicable	Not Applicable	GTIN	GTIN
		Level in the logistical hierarchy			

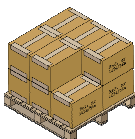
Figure 4:
Traceable item matrix

More information on using GS1 global unique identifiers



If the traceable item is a shipment:

- At a unique (serialized) level of identification, Shipment Identification Number (SIN) shall be used, e.g., bill of lading number, despatch advice number, invoice number, packing slip number, container number, proof of delivery.



If the traceable item is a logistic unit:

- The Serial Shipment Container Code (SSCC) shall be used.



If the traceable item is a trade item not crossing the POS:

- At a generic level of identification, GTIN for Grouping of Trade Items shall be used.
- At the specific (batch) level of identification, GTIN + Batch/Lot shall be used.
- At the unique (serialized) level of identification, GTIN + Serial number (SGTIN) shall be used.



If the traceable item is a trade item crossing the POS :

- At a generic level of identification, GTIN for Consumer Unit shall be used.
- At a specific (batch) level of identification, GTIN + Batch/Lot shall be used.
- At a unique (serialized) level of identification, GTIN + Serial number (SGTIN) shall be used.

Assumptions for the traceable item matrix/hierarchy:

- All traceable items may need to be **physically marked** with a batch or lot number to comply with legal requirements, e.g., food products.
- Where appropriate, a **Best Before Date** (e.g., food) or **Expiry Date** and **Batch/Lot Number** (e.g. pharmaceuticals) should be added.
- As the level of precision required is increased, it may be appropriate to identify traceable items with a **Serial Number**, e.g., a car, a washing machine, a personal computer.
- A **Serial Number** may be appropriate for trade items not crossing the point of sale (cases of consumer units) that need to be traced at this level, e.g., a tray of fruit or vegetables, a carton of meat.

When the logistic unit is a trade item, it is also identified with a GTIN and cumulates the corresponding identification standards from both "Logistic Unit" and "Trade Item not crossing the point of sale".

Traceability Data

Traceability data can be **master** or **transactional** data depending on product type, and can be **public** or **private** information depending on contractual relationship (see Figure 5.)

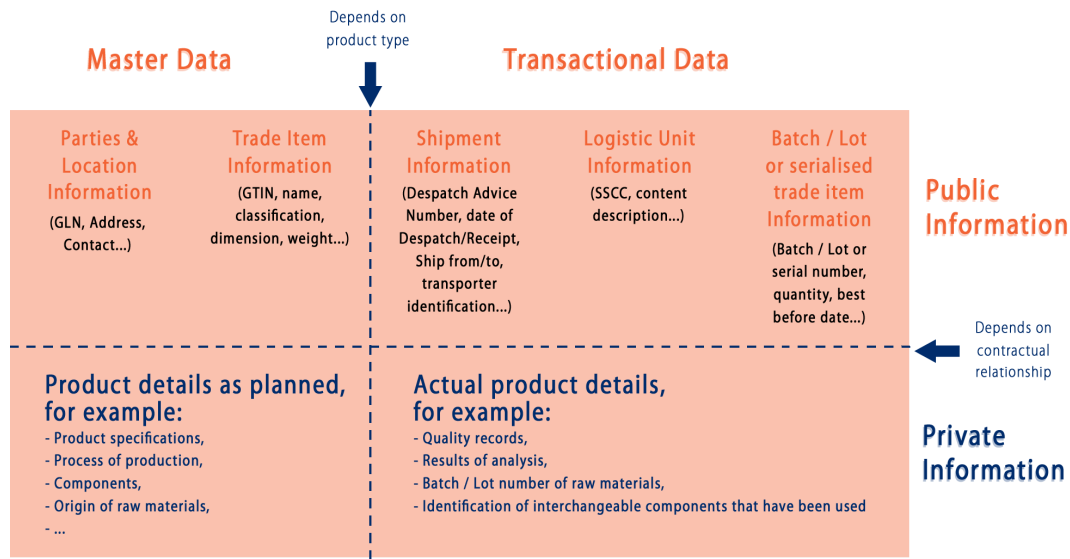


Figure 5: Traceable data matrix

Master Data

Master data has the following characteristics:

- Permanent or lasting nature
- Relatively constant across time, not subject to frequent change
- Accessed or used by multiple business processes and system applications
- Can either be neutral or relationship dependent
- Master data describes:
 - Trade item information (GTIN, name, classification, dimensions, weight...)
 - Parties & location information (GLN, address, contact...)
 - Product details as planned (product specification, process of production, components, origin of raw materials...)

Transactional Data

Transactional data is created during the physical flow of goods. It can only be collected when events occur. Transactional data refers to:

- Shipment information (Despatch Advice number, date of dispatch/receipt, Ship from/to, transporter identification...)
- Logistic Unit (SSCC, content description...)



- Batch/lot or serialised trade item information (Batch/lot or serial number, quantity, best before date...)
- Actual product details (quality records, results of analysis, batch/lot number of raw materials, identification of interchangeable components that have been used)

Public Data

Public information may be in the traceability records of the traceable item holders (successive traceable item sources and recipients). Public data may be:

- Parties & location information
- Trade item information
- Shipment information
- Logistic Unit information
- Batch/lot or serialized trade item information

Private Data

Private information is likely to be in the traceability records of one of the previous or subsequent trading partners. Private data may be:

- Product details as planned
- Actual product details

Minimum Data Requirements for Traceability

For a global traceability process, a minimum amount of traceability data must be exchanged to accompany the physical flow of goods. Each industry should consider whether an extension to this generic standard is required to meet their specific data requirements.

The minimum information required, and corresponding data elements:

Who is my Traceability Partner?

Parties may serve as a:

- Traceable Item Source, often as Traceability Data Source (GLN)
- Traceable Item Recipient, often as Traceability Data Recipient (GLN)

What is the Traceable Item?

The data elements required are dependent on the level of traceable item chosen:

When the Traceable Item is a Trade Item:

- Trade Item Identification (GTIN)
- Trade Item Description (GDD)
- Trade Item Quantity



When the Traceable Item is a batch of trade item:

- Trade Item Identification (GTIN + Batch/Lot Number)
- Trade Item Description (GDD)
- Trade Item Quantity

When the Traceable Item is a serialised of trade item:

- Trade Item Identification (GTIN + Serial Number)
- Trade Item Description (GDD)
- Trade Item Quantity

When the Traceable Item is a Logistic Unit:

- Logistic Unit Identification (SSCC + Application Identifiers)
- Logistic Unit Quantity

When the Traceable Item is a Shipment:

- Shipment Identification (Shipment Identification Number, SIN)

Where was it shipped from or shipped to?

- Best practice or specific extensions of traceability requirements: “ship from” or “ship to” identification (GLN).

When did I receive/dispatch it?

- Date of receipt and/or date of dispatch as relevant depending on the role of the party (DESADV)

In order for traceability to be effective along the supply chain, and the above data elements to be truly useful, each Traceability Partner must practice **internal traceability**. (See definition, page 5.)

The Traceability Process

The GS1 standard traceability process is composed of five sub-processes and eighteen steps.

This section will explain in more details these sub-processes and steps.

Note: In the explanation, the word "**MUST**," "**REQUIRED**" and "**SHALL**" mean that the definition is an absolute requirement of the specification. The words "**MAY**" or the adjective "**OPTIONAL**" means that the action is truly optional.

The process of performing traceability can be visualised as shown in figure 6 below:



Figure 6:
The traceability process

Five Sub-processes (composed of Eighteen Steps)



Sub-process 1: Plan and Organise

Sub-process 1 of the traceability process determines how to assign, collect, share, and keep traceability data. Furthermore, it determines how to manage links between inputs, internal processes, and outputs. It is a prerequisite phase.

This sub-process begins when Trading Partners decide to achieve traceability.

Step 1: Determine how to assign, collect, share and keep traceability data.

The Primary Actor is the Traceability Partner.

Step 2: Determine how to manage links between inputs, internal processes and outputs.

The Primary Actor is the Traceability Partner.

Sub-process 1 ("Plan and Organise") ends when number assignment, collecting, sharing, keeping and linking methods are decided. The output of this sub-process is that Traceability Partners have made their plan and organisation for traceability.



Sub-process 2: Align Master Data

Sub-process 2 determines how to assign identifications to the parties and physical locations, trade items and if appropriate to assets. It also determines how to exchange master data with trading partners. The recommendation is to align master data that is public **before** the physical flow begins. *See Figure 7.*

Step 3: Assign identification to the party.

The Primary Actor is the Traceability Partner. Trading Partners **MUST** be globally and uniquely identified. The corresponding GS1 Standard is the GLN.

Step 4: Assign identification to physical locations.

The Primary Actor is the Traceable Item Source and Traceable Item Recipient. Secondary Actors are Traceable Item Creator, Transporter, Brand Owner, Traceability Data Creator, Traceability Data Source, and Traceability Data Recipient. Any internal or external location that needs to be traced **MUST** be globally and uniquely identified. This may be at a high level (warehouse location), but could be at the detail level (precise bin location) within a warehouse. The corresponding GS1 Standard is the GLN.

Step 5: Assign identification to the assets.

The Primary Actor is the Traceability Partner. Any asset, which needs to be traced forward or traced back, **MUST** be globally and uniquely identified. Corresponding GS1 Standards are the GIAI and if asset is returnable, the GRAI.

Step 6: Assign identification to the trade item.

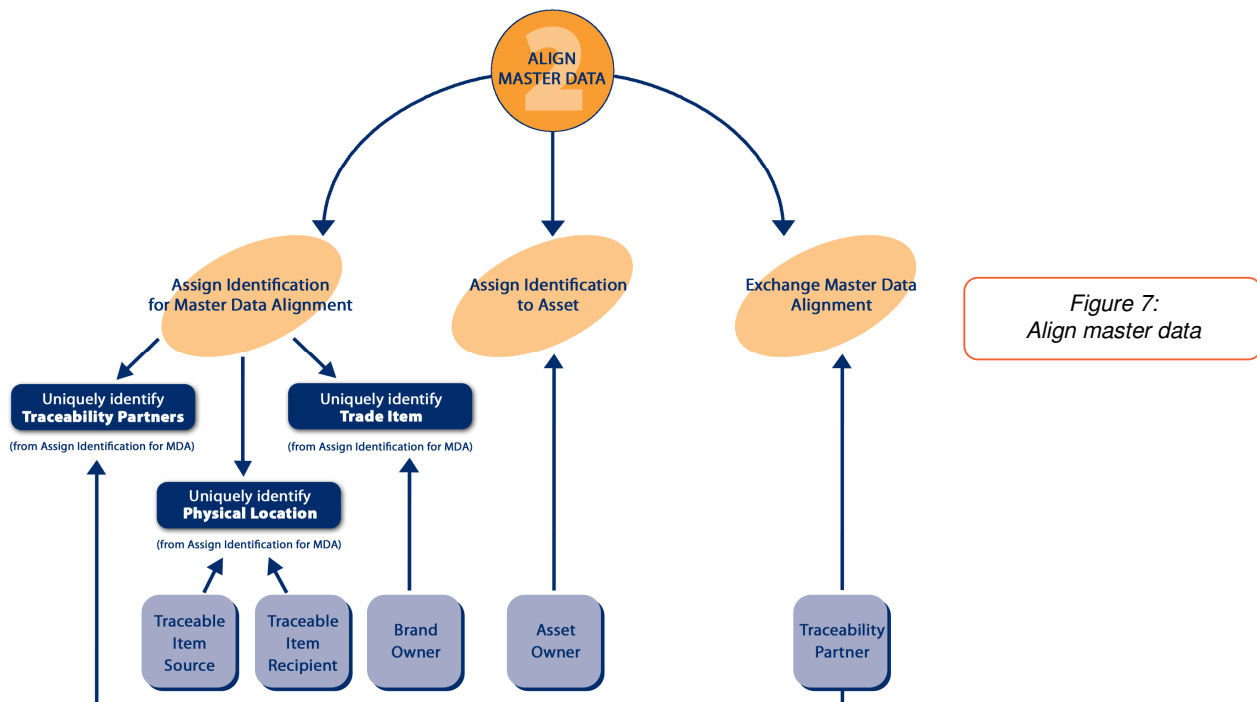
The Primary Actor is the Brand Owner. Any trade item that needs to be traced forward or traced back **MUST** be globally and uniquely identified. This applies to any level of the product hierarchy, for example, consumer unit or a trade item not crossing the point of sale. The corresponding GS1 Standard is the GTIN.

Step 7: Exchange master data.

The Primary Actor is the Traceability Partner.

Sub-process 2 ("Align Master Data") ends when master data alignment has been achieved.

The output of this sub-process is that all Traceability Partners have aligned their master data.



Sub-process 3: Record Traceability Data



This sub-process determines how to assign, apply and capture traceable items identification and how to collect, share and store traceability data during the physical flow. *See Figure 8.*

It begins when a manufacturer needs to create inventory, or a vendor-managed inventory triggers an inventory creation request.

Step 8: Assign identification to traceable item when it is created.

The Primary Actor is the Traceable Item Creator. The Secondary Actors are Brand Owner and Traceability Data Creator. The Brand Owner **MUST** ensure the unique identification of the traceable item. The identification of the traceable item **MUST** be assigned, at the latest, when physically created. Traceability Partners **MUST** agree on what the common level of traceable item is and for this common level agree on the set of consistent traceability data to be exchanged.

- ✓ When the traceable item is a **trade item**:
The trade item identification **MUST** at a minimum be identified with a GTIN. For the purpose of traceability, this may not be sufficient, requiring additional information to uniquely identify a product or grouping of products such as a batch/ lot number or where appropriate, a serial number.

The corresponding GS1 Standards are GTIN, GTIN + Batch/Lot Number and GTIN + Serial Number/SGTIN.

- ✓ When the traceable item is a **logistic unit**:
It **MUST** be uniquely identified. The corresponding GS1 Standard is the SSCC.

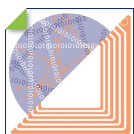
Step 9: Apply the identification to the identification carrier on the traceable item or in an accompanying document when a transformation takes place.

The Primary Actor is the Traceable Item Creator.



The corresponding GS1 Standards when using bar codes:

- If the traceable item is a trade item crossing the point of sale (consumer unit): EAN/UPC, RSS.
- If the traceable item is a trade item not crossing the point of sale (grouping of trade items): GS1-128, ITF-14, RSS, EAN/UPC (excluding GTIN-8), if is a Batch/Lot of trade items not crossing the point of sale, or a serialized trade item not crossing the point of sale: GS1-128, RSS.
- If the traceable item is a logistic unit: GS1-128, RSS
- If the traceable item is a shipment: GS1-128



The corresponding GS1 Standards when using RFID:

- EPC Class 1 Generation 2 UHF RFID protocol for communications at 860-960 MHz
- EPC Global Tag Data Standard
- For more information <http://www.epcglobalinc.org/standards>

All instances of a traceable item **MUST** carry a global, unique identification directly on the traceable item or if not possible at least on the asset containing it or on an accompanying document.

The identification carrier **MUST** remain on or attached to the traceable item until the traceable item is consumed, sold for consumption or destroyed.

The identification carrier **MUST** remain on or attached to the traceable item when it is packed in an upper level of packaging

The identification carrier **MUST** carry some information to link with at least one Traceability Data Source (i.e. Brand Owner, importer).

The traceable item identification **MUST** appear in all accompanying documents or messages containing information related to the traceable item.

Step 10: Capture the identification of the traceable item or the asset containing it from the identification carrier when despatching and receiving the traceable item

The Primary Actors are the Traceable Item Source and Traceable Item Recipient. The Secondary Actors are Traceable Item Creator, Transporter, Traceability Data Source, and Traceability Data Recipient.

All Traceable Item Sources and Traceable Item Recipients **MUST** collect the identification of the traceable item or asset containing it from the identification carrier.



Step 11: Collect all other data including traceability information from internal and external sources by any method

The Primary Actor is the Traceability Data Recipient. The Secondary Actors are Traceable Item Creator, Traceable Item Source, Traceable Item Recipient, Transporter, Traceability Data Creator, and Traceability Data Source.

Step 12: Share relevant traceability data: send information by any method

The Primary Actor is the Traceability Data Source. Secondary Actors are Traceable Item Creator, Traceable Item Source, Transporter, and Traceability Data Creator.

All Traceable Item Sources(s) and Traceable Item Recipient(s) **MUST** record and **MAY** share the data elements detailed in the Minimum Data Requirements for Traceability on page 16 (often recorded within shipment identification documents).

The Traceable Item Source **MAY** have to share or make available some details and quality information about the traceable item with one or more Traceability Partners.

A process or event on which there may be a need to retrieve information **MAY** be uniquely identified.

Step 13: Store traceability data

The Primary Actor is the Traceability Partner.

All Traceable Item Creators, Sources and Recipients **MUST** record the linkage between Traceable Items created, received, processed and/or dispatched.

Traceability data **MUST** be archived for a minimum period that is set by regulation (e.g., food law), business practice (e.g., internal policy, contract) or GS1 standards.

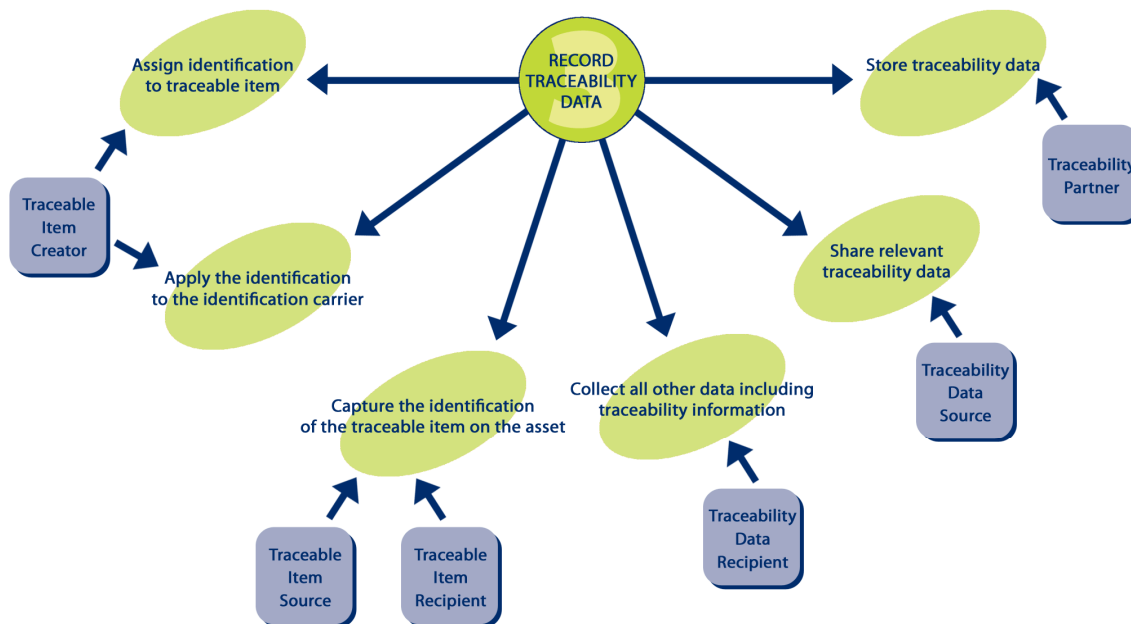


Figure 8:
Record traceability data

Sub-process 3 ("Record Traceability Data") ends at the delivery to the "Back Room" or "Back Door" (the receiving area for the final stage of the point of sale or service), the destruction of the item or the out-of-scope of the traceability process. The output of Sub-process 3 is that Traceability Partners can identify traceable items and collect and record relevant traceability data as traceable items move across the supply chain.



Sub-process 4: Request Trace

This sub-process determines how to initiate and respond to a traceability request. Any Traceability Partner may initiate a trace request. The authorities or a consumer complaint may be the reason for a Traceability Partner to start a trace request to recall or withdraw defective product. *See Figure 9.*

A trace request may trigger subsequent trace requests up or down several levels of the supply chain in order to fulfil the original request. This fulfils the requirement often included in regulations to the effect that traceability must work “**one step up and one step down**” the supply chain. The trace request may jump a step to contact a Traceability Partner further up or down the chain in order to obtain the information more quickly.

This sub-process begins when there is a need for trace. The information is not available internally, and the information must be requested to external trading partner.

Step 14: Initiate trace request.

The Primary Actor is the Trace Request Initiator. Secondary Actors are Traceable Item Creator, Traceable Item Source, Traceable Item Recipient, Transporter, Brand Owner, Traceability Data Creator, Traceability Data Source, and Traceability Data Recipient.

Any Traceability Partner **MAY** send a trace request to a Traceable Item Source, Traceable Item Recipients, Traceability Data Source or Traceability Data Recipient.

Traceability partners who wish to initiate a trace request **MUST** communicate to the Traceability Data Source at least one item of information from the list below to help the Traceability Data Source find the information requested:

- Traceable item identification (or some traceable item attributes)
- Traceability Partners identification (or some Traceability Partners attributes)
- Location identification (or some location attributes)
- Date/Time, period of time
- Process or event identification (or some process attributes)

Step 15: Receive the trace request.

The Primary Actor is the Traceability Partner.

Step 16: Send a response to the requested trace.

The Primary Actor is the Traceability Partner.

Step 17: Receive a response to the requested trace.

The Primary Actor is the Trace Request Initiator. Secondary Actors are Traceable Item Creator, Traceable Item Source, Traceable Item Recipient, Transporter, Brand Owner, Traceability Data Creator, Traceability Data Source, and Traceability Data Recipient.

Sub-process 4 ("Request Trace") ends when the Trace Request Initiator receives information or receives the message that the information cannot be found.

The output of this sub-process is that the traceability data is available and Traceability Partners can provide comprehensive, accurate and timely information to an authorized party upon request about a traceable item.

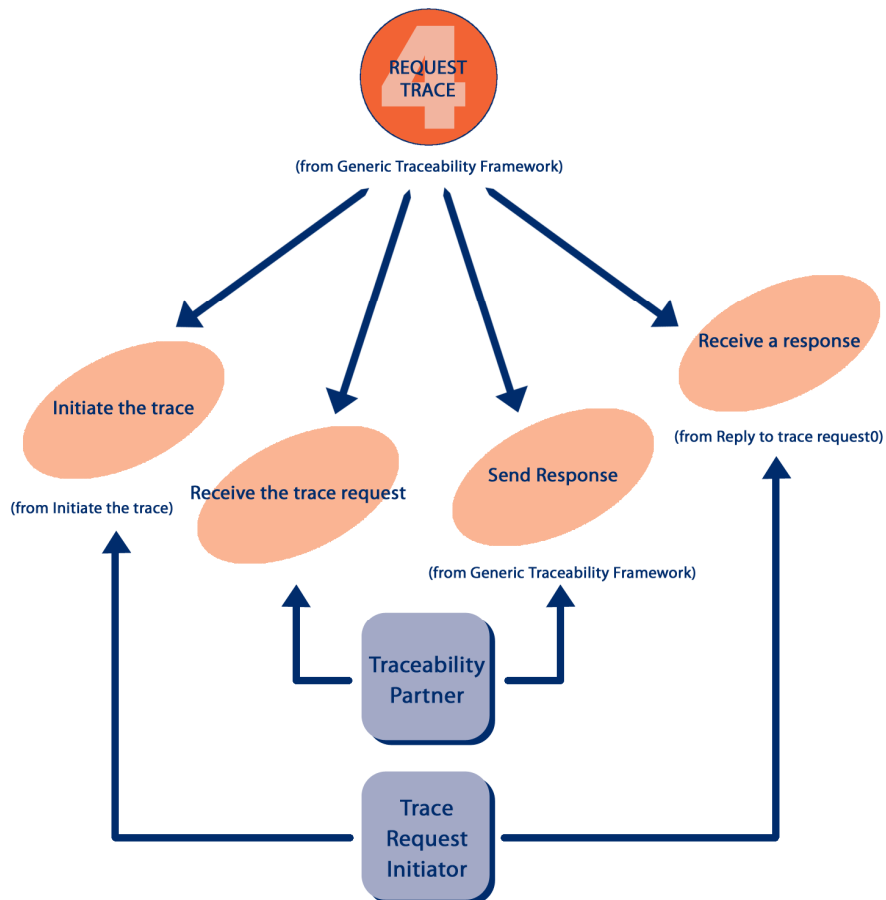


Figure 9:
Request trace



Sub-process 5: Use Information

This sub-process enables the use of the previous processes to take appropriate action as required by legal and business requirements. It begins when Trading Partners decide to use information.

Step 18: Take action.

The Primary Actor is the Traceability Partner.

This sub-process ends when action meets the legal and business requirement.

The output of this sub-process is that Traceability Partners have performed traceability and meet the legal and business requirement.



Implementing a traceability system within a supply chain requires all parties involved to systematically link the physical flow of materials and products with the flow of information about them.

Figure 10: Sub-processes, steps and primary roles in the traceability process

	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18	
Steps	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		18	
Subprocesses	PLAN AND ORGANIZE				ALIGN MASTER DATA										RECORD TRACEABILITY DATA												REQUEST TRACE						USE INF			
Physical Process Flow Roles																																				
Traceable item creator	✓	✓	✓	✓	✓		✓	[P]	[P]		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Traceable item source	✓	✓	✓	[P]	✓		✓								[P]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Traceable item recipient	✓	✓	✓	[P]	✓		✓								[P]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Transporter	✓	✓	✓	✓	✓		✓				✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Information Process Flow Roles																																				
Brand owner	✓	✓	✓	✓	✓	[P]	✓	✓															✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Traceability data creator	✓	✓	✓	✓	✓		✓	✓								✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Traceability data source	✓	✓	✓	✓	✓		✓								✓		✓	[P]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Traceability data recipient	✓	✓	✓	✓	✓		✓								✓	[P]		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Trace request initiator																											[P]				[P]		✓			

[P] = Primary role in the designated use case

✓ = Involved in the designated use case

Traceability Management Rules

1

Traceability systems and procedures meet business, regulatory, and legal requirements for public safety by providing access to relevant party and product traceability information.

2

A traceable item must be one of the following:

- Shipment
- Logistic unit
- Trade item
- Batch/lot of trade items
- Serialized trade item

3

Traceability data includes information about:

- What is it? (i.e., the traceable item)
- Who has been involved? (i.e., the traceability partner(s))
- Where did it happen? (i.e., location)
- When did it happen? (i.e., date/time, period of time)
- What happened? (i.e., process or event)
- The following information is NOT within the scope of an external traceability system:
 - Full recipes or formulas,
 - Financial or pricing data,
 - Employees personal data, or
 - Research and development data

4

Key traceability principles are:

- Unique identification of products, logistic units, locations and assets
- Capturing and recording traceability data
- Sharing traceability data between trading partners
- Linking in-bound materials through changes to new out-bound traceable items

5

Traceability is an integral part of the business process. It is not separate from logistical processes and/or product safety and quality programs.

6

A traceable item may be related to another traceable item.

7

Instances of a traceable item may exist in multiple locations at the same time.



Traceability Management Rules

8

There may be several levels of traceable items at the same time in one shipment with regards to the traceable item hierarchy.

9

Traceability data may be master data, constant across time; or transactional, changing with each case or shipment.

10

All Traceability Partners must have internal and external traceability to achieve traceability across the supply chain.

11

Every Traceability Partner may decide on HOW to implement internal traceability systems. It is however essential that they be able to collect, record, and share the necessary information with upstream and downstream Traceability Partners in an accurate and timely manner.

12

Traceability Partners should use GS1 standards to ensure fast and accurate flow of information between trading partners.

13

Traceability Partners should not impose proprietary practices on other Traceability Partners.

14

It is not necessary for all Traceability Partners to store and share all traceability information, but each must be able to access relevant information and share it without infringing the intellectual property of other traceability partners.

15

The minimum information shared between Traceability Partners should be the greater of:

- minimum requirements defined in this GS1 Traceability Standard
- what is needed for day to day business transactions with trading partners



Traceability Management Rules

16

Each Traceability Partner must define at least one level of traceable item for each shipment.

17

The Brand Owner and/or Traceable Item Creator must know the details of the traceable item and be able to reply to a trace request.

18

A Traceable Item Source must know what has happened to the traceable item during its internal process and when, where, and to whom it has despatched the traceable item. Each Traceability Partner must store the data links between what is received, produced, packed, stored and shipped. When the Traceable Item is mixed with similar items from many locations or batches (e.g. in a grain silo) the Traceability Partner must store records of all inputs and outputs in order to provide fair estimates of where the Traceable Item has gone.

19

A Traceable Item Recipient must know the Traceable Item Source that supplied the traceable item.

20

If a traceable item is contained within another traceable item and links are maintained, Traceability Partners may store only records of the movements and location of the higher-level traceable item. "Contained in" means that there is an upper level of packaging and that the lower level item can be removed. It is different from an ingredient "composing" a finished good.

21

Traceability Partners must link physical movement of traceable items to the information movement, both between the Traceable Item Source and themselves, and between Traceable Item Recipient and themselves. This transactional flow of information must exactly reflect the physical movement. This linkage is necessary for the traceable item to be traced from point of origin to the POS or point of service. Conversely, this linkage must also ensure that product can be traced back through the supply chain.

22

The Traceable Item Recipient may collect information from both the previous Traceable Item Source and the previous Transporter source.



Traceability Management Rules

- 23** The Traceable Item Source may communicate information to both the Traceable Item Recipient and the subsequent Transporter.
- 24** A Trace Request initiator must contact its Traceability Partners, including the Brand Owner.
- 25** The Traceability Data Source must reply as quickly as possible to the party requesting traceability information. The time period allowed may be defined in local regulations or commercial agreements.
- 26** A Trace Request may trigger subsequent trace requests up or down the supply chain in order to fulfil the original request.
- 27** A traceability system is only as good as its weakest link. If failure occurs at any point, traceability breaks down.
- 28** Various industries, regions, countries or roles may have additional business requirements beyond this generic GS1 Traceability Standard. These should be addressed by defining specific extensions.



Further Resources

Further Resources

More information on the GS1 Traceability Standard can be found on the GS1 web site at www.gs1.org/traceability. There you will find the GS1 Global Traceability Standard brochure; traceability FAQs (frequently asked questions), implementation guidelines for fish, meat, fresh produce, bananas and wine; and a number of case studies.

Check back often for updates and new material.

You may also contact the Traceability Solutions Manager at traceability@gs1.org, or your local GS1 Member Organisation (www.gs1.org/contact).



www.gs1.org/traceability



Glossary

Term	Description
Actor	An actor is a role that a user plays with respect to a system.
Application Identifier (AI)	The field of two or more characters at the beginning of an Element String that uniquely defines its format and meaning.
Batch/Lot Number	A batch unites products/ items that have undergone the same transformation processes. Batch and Lot are considered as synonyms.
Consumer Unit	The trade item intended to be sold to the end consumer.
Event	Is an occurrence of a process in a specific time or a period of time.
External Traceability	External traceability takes place when instances of a traceable item are physically handed over from one trading partner (traceable item source) to another (traceable item recipient).
GLN (Global Location Number)	The GS1 Identification Key comprising a GS1 Company Prefix, Location Reference, and Check Digit used to identify physical locations or legal entities.
Global Trade Item Number (GTIN)	The format in which Global Trade Item Numbers [®] (GTINs [®]) must be represented in a 14-digit reference field (key) in computer files to ensure uniqueness of the identification numbers.
GRAI	Global Returnable Asset Identifier.
GS1 System	The specifications, standards, and guidelines administered by GS1.
Identification	The identity assigned to an item or party that is needed to access other relevant information about the item or party.
Identification Carrier	Mark /tag/label/accompanying document sometimes called “passport” or “identity card” in some industry sectors
Internal Process	A series of actions, changes or function(s) within a company or organization that brings about a result.
Internal Traceability	Internal traceability takes place when a trading partner receives one or several instances of traceable items as inputs that are subjected to internal processes, before one or several instances of traceable items are output.
Link	Recording the information necessary to establish the relationship to other relevant information.
Location	A place where a traceable item is or could be located. [ISO/CD 22519] A place of production, handling, storage and/or sale.
Logistic Unit	An item of any composition established for transport and/or storage that needs to be managed through the supply chain.
Master Data	Master Data describes each item and party involved in supply chain processes. Master Data is defined as data having the following characteristics: <ul style="list-style-type: none">• Permanent or lasting nature• Relatively static, not being subject to frequent change• Accessed / used by multiple business processes and system applications Can either be neutral or relationship dependent.
Party	A party (or) Location is any legal, functional or physical entity involved at any point in any supply chain and upon which there is a need to retrieve pre-defined information. A party is uniquely identified by a GS1 Global Location Number.
Process	A series of actions or steps towards achieving a particular end. Examples of common processes include Production, Transformation, Quality Control, Storage, Transportation, Movement, Recycle, Return, Packing, Receiving, traceability...



Glossary

Term	Description
Record	Act of creating a permanent piece of information constituting an account of something that has occurred.
Serial Shipping Container Code (SSCC)	The 18-digit GS1 System Identification Key comprising an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit used to identify a logistic unit.
Serialized Global Trade Identification Number (SGTIN)	SGTIN is a method of identifying unique items at the unit or retail level as well as at the case and carton levels. It is composed of a GS1 assigned Company Prefix & Item Reference (GTIN), combined with a Serial Number. Where UCC/EAN bar codes have traditionally been used, the SGTIN specification combined with an RFID tag can give visibility beyond the Item Reference right down to the exact serial number of the item.
Share	Act of exchanging information about an entity or traceable item with another Trading Partner.
Shipment	An item or group of items delivered to one party's location at one moment in time that have undergone the same despatch and receipt processes
Traceability	[ISO 9001: 2000] Traceability is the ability to trace the history, application or location of that which is under consideration.
Traceability Data	Any information about the history, application or location of a traceable item. This may be either master data or transactional data.
Traceable Item	A physical object where there may be a need to retrieve information about its history, application, or location. The level at which the traceable item is defined within a product packaging or logistical hierarchy is dependent on the industry and degree of control required. Could be tracked, traced, recalled or withdrawn. Could exist in multiple locations at the same time (for example, if identified at the Trade item and Batch level). A traceable item may be related to another traceable item. See also definition for process
Trace Request	A formal inquiry about the history, application or location of a traceable item. A request can trigger subsequent trace requests up or down the supply chain in order to fulfil the original request. The requesting party requires a response from the data source.
Tracing (Tracing Back)	The ability to identify the origin, attributes, or history of a particular traceable item located within the supply chain by reference to records held. "Tracing back" and "tracking forward" are the preferred terms used in this document.
Tracking (Tracking Forward)	The ability to follow the path of a traceable item through the supply chain as it moves between parties.
Trade Item	Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Trading Partner	Any Supply Chain Partner that has a direct impact on the flow of goods through the supply chain. Examples include Third Party Logistics Provider, Manufacturer, Retailer, and Grower.
Transformation	A change to the nature of a traceable item that changes the identity and/or the characteristics of the traceable item. The act of changing the item such as combining ingredients to make a finished product or case picking to create a new pallet. Transformation can be production, aggregation, grouping, splitting, mixing, packing and repacking traceable items.
Transporter	The party that handles and or stores the traceable item from one point to another without transforming the item. Receives, carries, and delivers one or more traceable items. The Transporter may only have 'possession, custody, control' of a traceable item, as distinct from ownership.



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GS1 GTC

Control Points & Compliance Criteria - FOOD

Issue 3, Jun-2010



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1. Introduction

A Traceability conformance tool is critical for any Organisation or sector that produces goods or provides services and that also must achieve specific customer, regulatory and operational objectives.

An implemented existing Traceability System can be tested through a solid conformance tool and guidelines that ensure all required data and information is recorded and that the recorded information is a true reflection of what actually occurs along the supply chain, from point of production through to point of use or consumption or product recall.

The GS1 GTC Control Points and Compliance Criteria are traceability conformance tools developed for proactive monitoring of manufacturers' products and processes. This compliance process helps to safeguard product security, quality, certification, origin and content while ensuring compliance with current national and international traceability and recall regulations.

Effective Traceability Systems must be grounded in best practices and adhere to international regulations and global standards. System complexity may vary depending on its placement along the supply chain (i.e. producer, manufacturer, distributor, retail, etc.), the product's characteristics and the required business objectives.

The GS1 GTC Control Points and Compliance Criteria has been developed to provide industry with a common and understandable traceability language when sharing traceability information between trading partners across the extended supply chain.

1.1. Scope

This document sets out audit criteria for Global Traceability Conformance for the Food supply chain. It defines essential elements for the development of best-practices for the global production and distribution of trade items acceptable to the Food industry Worldwide.

The GS1 GTC Control Points and Compliance Criteria (GS1 GTC Checklist) has been designed in order to implement and review the Traceability Systems in manufacturing Organisations, producers/handlers and providers of product supplies and services to the Food supply chain.

A producer/manufacturer/handler is defined as any Organisation that produces, synthesizes, prepares, treats, modifies, packs or manipulates products including product supplies, packaging material and raw material. This also includes supplements.

A provider is defined as any Organisation that supplies any type of material that comes into direct contact with manufactured or processed products.

A service provider is defined as any Organisation that provides services which come into direct contact with manufactured or processed products.

In accordance with the aforementioned definitions, any of the following Organisations qualify for the application of the audit presented in this document:

- Producers
- Manufacturers
- Processors
- Supply Producers
- Third Party Logistics Providers
- Logistic Providers
- Transporters and carriers
- Retailers

- Wholesalers
- Importers and Exporters
- Storage and Deposits providers
- Container and Packaging Manufacturers

1.2. Structure

This document contains the following:

- **Introduction:** Introduces the compliance criteria for the GS1 Global Traceability Standard (GS1 GTS), the compliance levels of approval or failure and relationship with other traceability standards, and regulatory references.
- **Control Points:** Describes the basic points and the considerations the audited Organisation must comply with in order to approve the Control Points and the Compliance Criteria of the GS1 GTC Checklist.
- **Terms and Definitions:** Presents the standard vocabulary used throughout this document.
- **Appendix:** Shows the relation between the GTC Checklist and other standards. This relation can help organisations to benchmark their traceability system against traceability requirements present in these standards.
- **Bibliography:** Comprises a list of all the references and documentation from which relevant information was obtained for the preparation of this document.

1.3. Regulations References

In the preparation of this standard, the following international regulations have been considered:

- Regulation (CE) N° 178/2002, "Laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety" of the European Parliament and of the Council of January 28, 2002.
- Public Health Security and Bioterrorism Preparedness and Response Act of 2002, "To improve the ability of the United States to prevent, prepare for, and respond to bioterrorism and other public health emergencies", United States Food and Drug Administration (FDA), June 12, 2002.

1.4. Standard References

The following referenced traceability and codification standard documents are essential for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- GS1 Global Traceability Standard – Business Process and System Requirements for Full Chain Traceability (GS1 GTS)
- GS1 General Specifications
- ISO 22005:2007, Traceability in feed and food chain – General principles and basic requirements for system design and implementation.

1.5. Compliance Levels

This document contains all the Control Points and their Compliance Criteria that an Organisation must follow in order to successfully complete a Traceability Audit. These points must all be fulfilled to verify

compliance to the GS1 GTS. The document is divided in 12 sections. It contains a total of 105 Control Points, divided into the following levels:

- **Mandatory Musts:** There are 28 “Mandatory” Control Points in the GS1 GTC Checklist (shaded in Red in the document). These Control Points address the most important Business Requirements present in the GS1 GTS that can not be indicated as NOT Applicable (N/A) by the Auditor.
- **Mandatory Conditional Musts:** There are 30 “Mandatory Conditional” Control Points in the GS1 GTC Checklist (shaded in Green in the document). These Control Points address the most important Business Requirements present in the GS1 GTS that could be indicated as NOT Applicable (N/A) by the Auditor according to specific realities or situations detected in every organisation.
- **Optionals:** There are 10 “Optional” Control Points in the GS1 GTC Checklist (shaded in yellow in the document). These Control Points address those Business Requirements present in the GS1 GTS that are under the responsibility of the supplier of the trade items received by the audited organisation.
- **Recommendations:** There are 37 “Recommended” Control Points in the GTC Checklist (not shaded in the document). These Control Points address Traceability Requirements of other Standards, Best Manufacturing Practices or International Traceability Guidelines (See [Appendix A](#))

Possible responses to every Control Point may include: Compliance (yes); Non-Compliance (no) or NOT Applicable (N/A). N/A may not be used as a response to those control activities that state “No N/A” (i.e. “Mandatory Musts”). Only Auditors can indicate if a Control Point can be a NOT Applicable (N/A).

In order to obtain GS1 compliance to the GS1 Global Traceability Standard (GS1 GTS), the applicant is required to successfully complete the assessment and fulfill each of the Control Points as follows:

- **Mandatory Musts:**
100% compliance of all Mandatory Must Control Points is compulsory.
- **Mandatory Conditional Musts:**
100% compliance of all applicable Mandatory Conditional Must Control Points is compulsory.
- **Optional**
No minimum percentage of compliance is set.
- **Recommendations:**
No minimum percentage of compliance is set.

All Control Points in the GS1 GTC Checklist must be audited.

1.6. GTC and its compliance with GS1 Global Traceability Standard

The GS1 GTC Checklist will fulfill the GS1 Global Traceability Standard (GS1 GTS) if the applicant follows all Mandatory Must, applicable Mandatory Conditional and Optional Control Points. Also indicated below every Mandatory Must, Mandatory Conditional or Optional Control Point is the corresponding GTS Business Requirement (BR) and/or the corresponding GTS Business Rule (BRU), i.e.: (GTS:BR1).

1.7. The GTC and its Relationship with other Traceability & Best Manufacture Practices (BMP) Standards

There are several traceability Control Points in the GS1 GTC Checklist that fulfill traceability requirements present in other main Traceability Standards or BMP Standards.

If during the Audit an Organisation would like to benchmark its traceability system against other standards using this GS1 GTC Checklist, please refer to the ([Appendix A](#)) at the end of this document.

1.8. Control Points Usage Guide

The GS1 GTC Checklist contains 105 Control Points and their Compliance Criteria divided in 12 sections. Every Section of the GS1 GTC Checklist has a different traceability objective. By following every section it is possible to fully assess any traceability system. The following table explains in detail what is assessed in every section.

Section	Control Points	Description
1. Objectives	1.1 - 1.5	Knowledge and documentation of Traceability system
2. Product Definition	2.1 - 2.5	Trade item assignment in Master Data systems for all trade items received, produced and/ or shipped
3. Supply Chain Placement	3.1 - 3.2	Identification of Trading partners in Master Data systems
	3.3 - 3.7	Identification of Locations in Master Data systems
4. Establishment of Procedures	4.1 - 4.3	Definition of all produced and received trade items in specifications or other similar document
	4.4 - 4.8	Documented procedures for manufacturing processes, data alignment and definition of batch/ lot and/or serial numbers
	4.9 - 4.11	Documented procedures or tools to enable collection, recording and sharing of traceability information, and responsible parties
5. Flow of Materials	5.1 - 5.2	Process flow documentation for manufacturing processes (from raw materials/ packaging to finished goods)
	5.3 - 5.19	Physical identification on all trade item packages received, produced and/or shipped: <ul style="list-style-type: none"> • Global Trade item number (e.g., GTIN/ UPC) • Production batch/ lot code (consumer, case, pallet) • Unique serial number (Logistics-pallet level only) • Bar code (all levels) • Shipment identification number (shipment only)
6. Information Requirements	6.1 - 6.14	Documented linkage (electronic or paper) of traceability information between trade item levels (Le., one up, one down linkage of data)
	6.15 - 6.17	Documented list of suppliers and/or customers that received trade items

Section	Control Points	Description
	6.18 - 6.25	<p>Identification of detailed traceability information for all trade items produced, received and/or shipped to any parties, including the following components:</p> <ul style="list-style-type: none"> • Trade item number (e.g., GTIN/ UPC) • Production batch/ lot code (consumer, case, pallet) • Unique serial number (Logistics-pallet or case level) • Shipment identification number (shipment only) • Quantity • Code date (e.g., Sell-By, Pack, Production) • Recipient (customer, supplier, etc) • Transporter name • Transport date/ time
	6.26 - 6.30	Procedures to provide detailed communications to trading partners regarding above information upon request
7. Documentation Requirements	7.1 - 7.3	Traceability manual and/or documentation which describes detailed processes associated with traceability
	7.4	Documentation of roles, responsibilities and Organisation structure in place to support all traceability related activities
	7.5 - 7.7	Ongoing maintenance of traceability documentation and traceability records (transactional)
8. Structure & Responsibilities	8.1 - 8.4	Traceability team in place with proper knowledge of traceability procedures
9. Training	9.1 - 9.3	Training program and proof of training for those responsible for traceability activities
10. Supply Chain Coordination	10.1 - 10.3	<p>Acquisition of traceability information from trading partners, including the following:</p> <ul style="list-style-type: none"> • Trade item number (e.g., GTIN/ UPC) • Quantity • Batch/ lot number • Code date • Transport date • Transporter name
	10.4 - 10.9	Documentation of team structure, responsibilities and procedures associated with addressing a potential safety hazard crisis, including communications and contact information
11. Monitoring	11.1 - 11.2	Existence of monitoring and control plan for reviewing effectiveness of Traceability procedures
12. Internal and External Audits	12.1 - 12.2	Definition of all produced and received trade items in specifications or other similar document
	12.3	Documentation of corrective action plans to address Traceability non-conformities

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 <u>delivered</u> ? (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 <u>delivered</u> ?	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, <u>distributed</u> by the Organisation, identified with a GS1 identification key and a description in a Master Data record for each product hierarchy level that needs to be traced? (GTS: BR3, BR7, BRU4, BRU16)	A Master Data record with a GS1 identification key and a description must exist for all trade items distributed by the Organisation at all levels of the product hierarchy that need to be traced. The corresponding GS1 standard is the GTIN.	Mandatory (conditional)
2.2.	Are intermediate items <u>produced</u> by the Organisation that needs to be traced identified with an identification number and a description in a Master Data record?	A Master Data record with an identification number and description must exist for intermediate items, produced by the Organisation, that need to be traced.	Recommended
2.3.	Are trade items <u>received</u> by the Organisation, that need to be traced, identified with an identification number and a description in a Master Data record?	A Master Data record with an identification number and description must exist for all trade items received by the Organisation, that need to be traced. This applies to any level of the Product Hierarchy.	Mandatory (conditional)

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
2.4.	Are trade items <u>received</u> by the Organisation, that need to be traced, globally and uniquely identified in a Master Data record? (GTS: BR3, BR7, BRU4, BRU16)	A Master Data record with a GS1 identification key and description must exist for all trade items received by the Organisation, that need to be traced. This applies to any level of the Product Hierarchy. The corresponding GS1 standard is the GTIN.	Optional
2.5.	Are all assets, that need to be traced, globally and uniquely identified in a Master Data record? (GTS: BR4)	A Master Data record with a GS1 identification key must exist for all assets that need to be traced. The corresponding GS1 standard is the GRAI (Global Returnable Asset Identifier) and GIAI (Global Individual Asset Identifier).	Recommended
3. SUPPLY CHAIN PLACEMENT			
3.1.	Are all trading partners identified with a description and an identification number in a Master Data record?	A Master Data record with description and an identification number must exist for all trading partners. The description must include at least: <ul style="list-style-type: none"> • Organisation name* • Address* • Contact person** • Telephone number** • Fax** • E-mail** (All marked with * are mandatory for GTS ¹ . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Mandatory
3.2.	Are all trading partners identified with a description and a GS1 identification key in a Master Data record? (GTS: BR2, BRU4, BRU12)	A Master Data record with a GS1 identification key and a description must exist for all trading partners. The corresponding GS1 standard is the Global Location Number (GLN). The description must include at least: <ul style="list-style-type: none"> • Organisation name* • Address* • Contact person** • Telephone number** • Fax** • E-mail** (All marked with * are mandatory for GTS ² . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Optional

1 Only the ones marked with an * are required to comply with the Control Point if the Organisation doesn't trade in the US Market

2 Only the ones marked with an * are required to comply with the Control Point if the Organisation doesn't trade in the US Market

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
3.3.	Are all internal <u>locations</u> , that need to be traced, identified with an identification number and a description in a Master Data record? (GTS: BR1, BRU4)	A Master Data record with an identification number and a description must exist for all internal locations of the Organisation that need to be traced. (e.g. working position location, production lines, warehousing location).	Mandatory ³ (conditional)
3.4.	Are all internal <u>locations that need to be aligned with the trading partners</u> , identified with a GS1 identification key and a description in a Master Data record? (GTS: BR1, BR2, BRU4)	A Master Data record with a GS1 identification key and a description must exist for all internal locations of the Organisation that need to be aligned with the trading partners (e.g. Distribution Center, Point of Receiving, Point of Distribution, Manufacturing Facility, Farm). <u>Every Organisation should identify at minimum its main legal entity location.</u> The corresponding GS1 standard is the GLN and the description must include at least: <ul style="list-style-type: none"> • Location name* • Address* • Telephone number** • Fax** • E-mail** (All marked with * are mandatory for GTS ⁴ . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Mandatory
3.5.	Are all external <u>locations</u> , (e.g., storage warehouses, distribution centers) that need to be traced, identified with an identification number and a description in a Master Data record? (GTS: BR1, BR2, BRU4) ⁵	A Master Data record with an identification number and a description must exist for all trading partners' locations that need to be traced (e.g. storage warehouses, distribution centers). This must be at a high level (see Party definition). The description must include at least: <ul style="list-style-type: none"> • Location name* • Address* • Telephone number** • Fax** • E-mail** (All marked with * are mandatory for GTS ⁶ . All marked with ** are mandatory for US Bioterrorism Act).	Mandatory ⁷ (conditional)

3 Although this Control Point doesn't ask for GS1 standard, it is "Mandatory Conditional" as it is completely necessary to have external traceability if the Organisation doesn't use the standard for this.

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N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
3.6.	Are all external (trading partner) <u>locations</u> , that need to be traced identified with a GS1 identification key (GLN) and a description in a Master Data record? (GTS: BR1, BR2, BRU4)	A Master Data record with a GS1 identification key and a description must exist for all trading partner's locations that need to be traced. This must be at a high level (see Party definition). The corresponding GS1 standard is the GLN and the description must include at least: <ul style="list-style-type: none"> • Location name* • Address* • Telephone number** • Fax** • E-mail** (All marked with * are mandatory for GTS ⁸ . All marked with ** are mandatory for US Bioterrorism Act).	Optional
3.7.	Are all <u>personnel</u> involved in the production and distribution chain recognized and identified with a description and an identification number in a Master Data record?	A Master Data record with a description and an identification number must exist for all the personnel involved in the production and distribution chain. The description must include at least: <ul style="list-style-type: none"> • Name • ID number • Position No N/A.	Recommended
4. ESTABLISHMENT OF PROCEDURES			
4.1.	Are the trade items distributed by the Organisation defined in a document (e.g. Product Specifications)	A document exists (e.g. Product Specifications) which describes in detail each trade item the Organisation distributes, that needs to be traced. The description must include at least: <ul style="list-style-type: none"> • Product name • Identification number • Composition • Packaging • Method(s) of distribution 	Mandatory (conditional)
4.2.	Are intermediate items <u>produced</u> by the Organisation that needs to be traced, defined in a document?	A document exists which describes in detail each intermediate item that needs to be traced. The description must include at least: <ul style="list-style-type: none"> • Product name • Identification number • Composition • Packaging • Method(s) of distribution 	Recommended

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N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
4.3.	Are the trade items <u>received</u> by the Organisation that need to be traced, defined in a document?	<p>A document exists which describes in detail each trade item the Organisation receives, that needs to be traced. The description must include at least:</p> <ul style="list-style-type: none"> • Product name • Identification number • Composition • Packaging • Method(s) of distribution 	Mandatory (conditional)
4.4.	Does the Organisation have an effective process to align all the Master Data with its trading partners? (GTS: BR12, BR19)	<p>A documented procedure exists in the Organisation which describes in detail how to align the Master Data with trading partners. The Master Data must include:</p> <ul style="list-style-type: none"> • Parties • Physical locations • Assets • Trade items <p>No N/A.</p>	Mandatory
4.5.	Does the Organisation have an effective synchronization process with its trading partners by using GDSN? (GTS: BR12, BR19)	<p>An effective process for synchronizing Master Data with trading partners exists in the Organisation and is documented in detail. The Master Data synchronized must include:</p> <ul style="list-style-type: none"> • Parties, • Physical locations • Assets • Trade Items <p>The GS1 standard process for synchronizing master data is the Global Data Synchronization Network (GDSN).</p>	Recommended
4.6.	Does the Organisation have a documented effective process to review barcoding and assignment of numbers to ensure compliance with GS1 Standards? (GTS: BR11, BR13)	A documented procedure must exist to prove compliance with GS1 Standards for barcoding quality, allocation of numbers and maintenance of GTINs assignments for every trade item the Organisation distributes.	Mandatory (conditional)
4.7.	Does a documented procedure exist which describes in detail the definition for the production batch / lot of each trade item created by the Organisation?	A documented procedure exists in the Organisation which describes in detail the definition for the production batch / lot of each trade item created by the Organisation.	Mandatory (conditional)
4.8.	Does a documented procedure exist which describes in detail the definition for the production batch / lot defined for each inventoried intermediate item that needs to be traced by the Organisation?	A documented procedure exists in the Organisation which describes in detail the definition for the production batch / lot for each inventoried intermediate item that needs to be traced by the Organisation.	Recommended
4.9.	Does a procedure exist, at each stage of the traceability flow, that uses digital or paper forms for the recording of data and to identify each person responsible for the input of recorded information? (GTS: BR11, BRU4, BRU11, BRU22)	<p>Digital or paper forms exist which allow the recording of necessary data in each stage of traceability flow, identifying each person responsible for the input of recorded information.</p> <p>No N/A.</p>	Mandatory

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4.10.	Do effective mechanisms or tools exist that provide accurate and timely collection, recording, and sharing of traceability information? (GTS: BR13, BR14, BRU4, BRU10, BRU11, BRU18)	The Organisation has mechanisms or tools clearly defined and in operation which allows accurate and timely collection, recording and sharing of traceability information. No N/A.	Mandatory
4.11.	Is there a documented internal request process in place to obtain traceability information?	The Organisation has a documented procedure that defines the consultation process for the request of internal traceability information. The document must contain information of the records of each process involved (i.e. receipt, manufacture, packaging, product delivery) as well as those involved along the supply chain according to the objective and scope of the traceability system. The document also must specify information such as numbers of batch / lot, ingredients, descriptions, quantities, material types and categories among others No N/A.	Recommended
5. FLOW OF MATERIAL			
5.1.	Does a process flow diagram exist that reflects the Organisation's manufacturing operation from the point at which the products, product supplies, packaging and raw materials arrive until the trade item is delivered to the customer?	A schematic and systematic flow diagram must exist of the processes involved in the manufacture of trade items from the point at which the products, product supplies, packaging and raw materials arrive to the Organisation until the trade item is delivered to the customer. No N/A.	Recommended
5.2.	Has a traceability flow diagram been prepared that links traceability request processes with the Organisation's process flows so as to facilitate timely and accurate responses to traceability requests?	A schematic and systematic flow diagram must exist of the information linking between processes within the supply chain which may be used to perform traceability requests. No N/A.	Recommended
5.3.	Are trade items <u>distributed</u> by the Organisation identified physically with a global, unique identification number? (GTS: BR6)	The trade items distributed by the Organisation must have a global, unique identification number on the packaging or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is GTIN.	Mandatory (conditional)

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5.4.	Are trade items <u>distributed</u> by the Organisation carrying a GS1 Data Carrier? (GTS: BR7, BR11)	The trade items distributed by the Organisation must carry a GS1 Data Carrier attached to the packaging or on the asset containing it or on an accompanying document. The corresponding GS1 standards are: <ul style="list-style-type: none"> For trade item crossing the point of sale (consumer unit): EAN-13, EAN-8, UPC-A, UPC-E, GS1 DataBar, GS1 DataMatrix, EPC tag For trade item not crossing the point of sale (grouping of trade items such as a case): EAN-13, ITF-14, GS1-128, GS1 DataMatrix, EPC tag 	Mandatory (conditional)
5.5.	Are trade items <u>distributed</u> by the Organisation identified with the production batch / lot or Serial Number or SGTIN? (GTS: BR6, BRU4)	The trade items distributed by the Organisation must be identified with the production batch / lot, Serial Number or SGTIN on the packaging or on the asset containing it or on an accompanying document.	Mandatory (conditional)
5.6.	Are logistic units <u>distributed</u> by the Organisation physically identified with a global, unique serial number? (GTS: BR6, BRU4)	The logistic units distributed by the Organisation must have standard serial number identification on the item or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is SSCC. No N/A.	Mandatory
5.7.	Are logistic units <u>distributed</u> by the Organisation carrying a GS1 Data Carrier? (GTS: BR7, BR11)	The logistic units distributed by the Organisation must carry a GS1 Data Carrier attached to the packaging or on the asset containing it or on an accompanying document. The corresponding GS1 standards are GS1-128 or EPC tag. No N/A.	Mandatory
5.8.	Are shipments <u>distributed</u> by the Organisation, that need to be traced, physically identified with a global, unique Shipment Identification Number? (GTS: BR6, BR7, BRU4)	The shipments distributed by the Organisation must have a global, unique Shipment Identification Number on the item or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is the GS1-128 with the Global Shipment Identification Number (GSIN AI 402).	Mandatory (conditional)
5.9.	Are intermediate items identified physically with an identification number?	All inventoried intermediate items must have an identification number on packaging or if not possible at least on the asset containing it or on an accompanying document.	Recommended
5.10.	Are intermediate items, identified with the production batch / lot or Serial Number?	All inventoried intermediate items must be identified with the production batch / lot or Serial Number on the packaging or on the asset containing it or on an accompanying document.	Recommended

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5.11.	Are trade items <u>received</u> by the Organisation, that needs to be traced, physically identified with an identification number?	The trade items, received by the Organisation must have an identification number on packaging or if not possible at least on the asset containing it or on an accompanying document. No N/A	Mandatory
5.12.	Are trade items <u>received</u> by the Organisation, identified with the production batch / lot or Serial Number?	The trade items received by the Organisation must be identified with the production batch / lot or Serial Number on the packaging or on the asset containing it, or on an accompanying document. No N/A	Mandatory
5.13.	Are trade items <u>received</u> by the Organisation, that needs to be traced, physically identified with a global, unique identification number? (GTS: BR6, BR7, BRU4)	The trade items received by the Organisation must have a global, unique identification number on the packaging or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is the GTIN.	Optional
5.14.	Are trade items <u>received</u> by the Organisation carrying a GS1 Data Carrier? (GTS: BR6, BR7, BR11)	The trade items received by the Organisation must carry a GS1 Data Carrier attached to the packaging or on the asset containing it or on an accompanying document. The corresponding GS1 standards are: <ul style="list-style-type: none"> For trade item crossing the point of sale (consumer unit): EAN-13, EAN-8, UPC-A, UPC-E, GS1 DataBar, GS1 DataMatrix, EPC tag For trade item not crossing the point of sale (grouping of trade items): EAN-13, ITF-14, GS1-128, GS1 DataMatrix, EPC tag 	Optional
5.15.	Are logistic units <u>received</u> by the Organisation physically identified with an identification number?	The logistic units received by the Organisation must have an identification number on the item or if not possible at least on the asset containing it or on an accompanying document.	Recommended
5.16.	Are logistic units <u>received</u> by the Organisation physically identified with a global, unique serial number? (GTS: BR6, BR7, BRU4)	The logistic unit, received by the Organisation must have standard serial number identification on the item or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is SSCC.	Optional
5.17.	Are logistic units received by the Organisation carrying a global, unique identification? (GTS: BR7, BR11)	The logistic units received by the Organisation must carry a GS1 Data Carrier attached to the packaging or on the asset containing it or on an accompanying document. The corresponding GS1 standards are GS1-128 or EPC tag.	Optional

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5.18.	Are shipments <u>received</u> by the Organisation that needs to be traced, physically identified with an identification number? (GTS: BR6, BR7, BRU4) ⁹	The shipments received by the Organisation must have an identification number on the item or if not possible at least on the asset containing it or on an accompanying document.	Mandatory (conditional)
5.19.	Are shipments <u>received</u> by the Organisation physically identified with a global, unique Shipment Identification Number? (GTS: BR6, BR7, BRU4)	The shipments received by the Organisation must have standard identification on the item or if not possible at least on the asset containing it or on an accompanying document. The corresponding GS1 standard is the GS1-128 with the Global Shipment Identification Number (GSIN AI 402).	Optional
6. INFORMATION REQUIREMENTS			
6.1.	For each production batch/lot or Serial Number of a trade item, is it possible to obtain information regarding the processes involved in the manufacture of the trade item and are processing dates or sell by dates recorded?	For each production batch / lot or Serial Number of a trade item, all processes, reprocessing if applicable, transformation dates and sell by dates if applicable, must be identified and documented.	Mandatory (conditional)
6.2.	Is it possible to link the identification of a <u>received</u> logistic unit with the production batch / lot or Serial Number of the trade items contained within it, using available documentation? (GTS: BR13, BR14, BRU4, BRU6, BRU18)	For each logistic unit received it must be possible to relate by documentation its identification with the production batch / lot or Serial Number of the trade items contained within it.	Mandatory (conditional)
6.3.	Are all logistic units received by the Organisation that needs to be traced, identified with an identification key and a description in a record? (GTS: BR6, BR13, BRU4, BRU18) ¹⁰	A record with an identification key and a description must exist in one or more systems (electronic or physical) for each logistic unit received by the Organisation that needs to be traced. The description must include at least: <ul style="list-style-type: none"> • Supplier (GLN if used) • Receipt date 	Mandatory (conditional)
6.4.	Are all logistic units received by the Organisation that needs to be traced, identified with a GS1 identification key and a description in a record? (GTS: BR6, BR13, BRU4, BRU18)	A record with the GS1 identification key and a description must exist in one or more systems (electronic or physical) for each logistic unit received by the Organisation that needs to be traced. The corresponding GS1 standard is the SSCC. The description must include at least: <ul style="list-style-type: none"> • Supplier (GLN if used) • Receipt date 	Optional

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6.5.	Are all logistic units delivered by the Organisation identified with a GS1 identification key and a description in a record? (GTS: BR6, BR13, BRU4, BRU18)	A record with the GS1 identification key and a description must exist in one or more systems (electronic or physical) for each logistic unit delivered by the Organisation. The corresponding GS1 standard is the SSCC. The description must include at least: <ul style="list-style-type: none"> Recipient Identification (GLN if used) Dispatch date No N/A	Mandatory
6.6.	Are all shipments received by the Organisation that needs to be traced, identified with an identification key and a description in a record? (GTS: BR6, BR13, BRU4) ¹¹	A record with an identification key and a description must exist in one or more systems (electronic or physical) for each shipment received by the Organisation that needs to be traced. The description must include at least: <ul style="list-style-type: none"> Supplier Identification (GLN if used) Receipt date 	Mandatory (conditional)
6.7.	Are all shipments received by the Organisation that needs to be traced, identified with a GS1 identification key and a description in a record? (GTS: BR6, BR13, BRU4)	A record with the GS1 identification key and a description must exist in one or more systems (electronic or physical) for each shipment received by the Organisation that needs to be traced. The corresponding GS1 standard is the GS1-128 with the Global Shipment Identification Number (GSIN AI 402). The description must include at least: <ul style="list-style-type: none"> Supplier (GLN if used) Receipt date 	Optional
6.8.	Are all shipments delivered by the Organisation that needs to be traced, identified with a GS1 identification key and a description in a record? (GTS: BR6, BR13, BRU4)	A record with the GS1 identification key and a description must exist in one or more systems (electronic or physical) for each shipment delivered by the Organisation that needs to be traced. The corresponding GS1 standard is the GS1-128 with the Global Shipment Identification Number (GSIN AI 402). The description must include at least: <ul style="list-style-type: none"> Recipient Identification (GLN if used) Dispatch date 	Mandatory (conditional)
6.9.	Is it possible to link the SSCC of each logistic unit <u>distributed</u> by the Organisation with the GTIN and batch / lot or Serial Number of the trade items contained within it, using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	For each logistic unit distributed by the Organisation it must be possible to relate by documentation its SSCC number with the GTIN and production batch / lot or Serial Number of the trade items contained within it.	Mandatory (conditional)

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6.10.	Can a trade item <u>distributed</u> by the Organisation be related to the trade items <u>received</u> by it, using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	It must be possible to relate by documentation, each batch / lot or Serial Number of trade items distributed by the Organisation to the batch / lot or Serial Number of the trade items received and used on its process.	Mandatory (conditional)
6.11.	Can a trade item <u>received</u> by the Organisation be related to the trade items, <u>distributed</u> by it, using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	It must be possible to relate by documentation, each batch / lot or Serial Number of trade items received to the batch / lot or Serial Number of the trade items, distributed by the Organisation and used on its process.	Mandatory (conditional)
6.12.	Is it possible to link a batch / lot or Serial Number of a trade item <u>distributed</u> by the Organisation with the SSCC of the logistic units involved, using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	It must be possible to relate by documentation, each batch / lot or Serial Number of a trade item distributed by the Organisation to the SSCC of the logistic units involved.	Mandatory (conditional)
6.13.	Is it possible to link a batch / lot or Serial Number of a trade item <u>received</u> by the Organisation with the identification of the logistic units involved, using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	It must be possible to relate by documentation, each batch / lot or Serial Number of a trade item received by the Organisation to the identification of the logistic units involved.	Mandatory (conditional)
6.14.	Is it possible to determine the dates in which a trade item <u>received</u> was used to produce a batch / lot or Serial Number of any trade item of the Organisation using available documentation?	There is a registry that documents the use of a received trade item, identifying the date of use and the batch / lot or Serial Number of the trade item produced.	Recommended
6.15.	Is it possible to determine the supplier of a <u>received</u> logistic unit by its identification using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	There is a registry that documents the identification of each logistic unit received by the Organisation from its suppliers	Mandatory (conditional)
6.16.	Is it possible to determine the customer to which a logistic unit was dispatched using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	There is a registry that documents the identification of each logistic unit dispatched by the Organisation to its customers. No N/A.	Mandatory
6.17.	Is it possible to determine the customers to which a batch / lot or Serial Number of a trade item was <u>dispatched</u> using available documentation? (GTS: BR14, BRU4, BRU6, BRU18)	There is a registry that documents the identification of all the possible customers which a batch / lot or Serial Number of a trade item was dispatched by the Organisation.	Mandatory (Conditional)
6.18.	Is it possible to determine whether a batch / lot or Serial Number of a trade item was <u>dispatched</u> or is <u>still</u> in the Organisation using available documentation? (GTS: BR14, BRU3, BRU4, BRU7, BRU18)	There is a registry that documents whether a batch / lot or Serial Number of a trade item was dispatched or is still in the Organisation. No N/A.	Mandatory

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
6.19.	If a batch / lot or Serial Number of a trade item is still in the Organisation, is it possible to determine and verify its <u>exact location</u> , using available documentation? (GTS: BR13, BRU3, BRU4, BRU23) ¹²	There is a registry that documents the exact location (GLN if used) in the Organisation of all the batch / lot or Serial Numbers of trade item that are still in the Organisation and that registry can be verified.	Recommended
6.20.	If a batch / lot or Serial Number of a trade item was dispatched by the Organisation, is it possible to identify dispatch information, using available documentation? (GTS: BR13, BRU3, BRU4, BRU23)	If a batch / lot or Serial Number of a trade item was dispatched by the Organisation, it is possible to identify at least the following information: <ul style="list-style-type: none"> • Trade Item Identification (GTIN if used)* • Quantity* • Possible Customers (GLN if used)* • Possible Recipients (GLN if used)* • Transporter utilized in the dispatch (GLN if used), address, telephone number, and fax number and email address (if available)** • Dispatch documentation* • Dispatch date* (All marked with * are mandatory for GTS ¹³ . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Mandatory
6.21.	If a batch / lot or Serial Number of a trade item was imported or exported by the Organisation, is it possible to identify import/export information using available documentation? (GTS: BR13, BRU3, BRU4, BRU23)	If a batch / lot or Serial Number of a trade item was imported or exported by the Organisation, it is possible to identify at least the following information: <ul style="list-style-type: none"> • Supplying company (for imports) (GLN if used)** • Purchasing company (for exports) (GLN if used)** • Transportation company (GLN if used)** • Shipment Id. Number* • Logistic Unit Id. (SSCC if used)* • Shipment Identification Number (GSIN if used)* (All marked with * are mandatory for GTS ¹⁴ . All marked with ** are mandatory for US Bioterrorism Act).	Mandatory (conditional)

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6.22.	Is it possible to identify the delivery information for a batch / lot or Serial Number of a trade item received by the Organisation using available documentation? (GTS: BR13, BRU3, BRU4, BRU22)	For a batch / lot or Serial Number of a trade item received, it is possible to identify at least the following information: <ul style="list-style-type: none"> • Trade Item Identification (GTIN if used)* • Quantity* • Supplier (GLN if used)* • Dispatch documentation* • Transporter utilized in the dispatch (GLN if used), address, telephone number, and fax number and email address (if available)** • Receipt date* (All marked with * are mandatory for GTS ¹⁵ . All marked with ** are mandatory for US Bioterrorism Act).	Mandatory (conditional)
6.23.	Is it possible to provide detailed traceability information of trade items distributed by the Organisation to trading partners using available documentation? (GTS: BR13, BR15, BRU14, BRU15, BRU17)	It is possible for the following traceability information to be provided for each batch / lot or Serial Number of trade items distributed by the Organisation: <ul style="list-style-type: none"> • Trade Item identification (GTIN if used)* • Quantity* • Dispatch date* • Possible Customers to which the batch / lot or Serial Number was dispatched (GLN if used)* • Transporter utilized in the dispatch (GLN if used), address, telephone number, and fax number and email address (if available)** • Dispatch documentation* • Batch / Lot or Serial Number and supplier of trade items used as inputs* • Receipt dates of batch / lot or Serial Number of trade items used as inputs* • Transporter (GLN if used), address, telephone number, and fax number and email address (if available) used in the delivery of trade items used as inputs** (All marked with * are mandatory for GTS ¹⁶ . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Mandatory

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N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
6.24.	Is it possible to identify the delivery information for a batch / lot or Serial Number of a trade item received by the Organisation using available documentation? (GTS: BR13, BRU3, BRU4, BRU22)	For a batch / lot or Serial Number of a trade item received, it is possible to identify at least the following information: <ul style="list-style-type: none"> • Trade Item Identification (GTIN if used)* • Quantity* • Supplier (GLN if used)* • Dispatch documentation* • Transporter utilized in the dispatch (GLN if used), address, telephone number, and fax number and email address (if available)** • Receipt date* (All marked with * are mandatory for GTS ¹⁷ . All marked with ** are mandatory for US Bioterrorism Act).	Mandatory (conditional)
6.25.	Does a procedure exist which defines the Organisations response in the case of a traceability request from a trading partner that includes: an appointed responsible person, a responsive communication system and the provision of appropriate documentation?	There is a traceability response procedure in the case of a trading partner request which defines: <ul style="list-style-type: none"> • Response roles and responsibilities • Response communications systems • Identification of the documentation to be provided. No N/A.	Recommended
6.26.	For each batch / lot or Serial Number of a trade item distributed by the Organisation is it possible to observe and identify all associated quality control information?	For each batch / lot or Serial Number of a trade item distributed by the Organisation it is possible to identify at least: <ul style="list-style-type: none"> • Types of controls carried out • Person responsible for each control • Measurement variables • Observation applied 	Recommended
6.27.	Is there a standard traceability report that can be provided upon request to trading partners?	In the case of any traceability request from trading partners, a standard traceability report exists. No N/A.	Recommended
6.28.	Is the GS1 electronic document "Dispatch Advise" (DESADV) or EDI Advance Shipping Notice (ASN) used to send detailed dispatch information of trade items to the trading partners prior to physical delivery? (GTS: BR13)	Prior to the delivery of a trade item, an electronic message that includes the information of the dispatched trade item is sent to the trading partners. The corresponding GS1 standards are EANCOM or GS1 XML. EDI Advance Shipping Notice (ASN) also can be used.	Recommended
6.29.	Is it possible to provide detailed traceability information of trade items to customers in accordance with industry agreements and in a timely fashion? (GTS: BRU25)	Traceability information is to be provided for a batch / lot or Serial Number of trade item distributed by the Organisation according to industry agreement (i.e. US Bioterrorism Act ask 4 hours in normal business hours).	Recommended

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N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
6.30.	Does the traceability request procedure for trading partners operate continuously?	A traceability response procedure operates continuously through normal business hours in the case of a trading partner request. No N/A.	Recommended
7. DOCUMENTATION REQUIREMENTS			
7.1.	Does a Traceability System Manual exist?	There is a Traceability System Manual which describes the objectives, scope and methodology as well as position inside of the organisation responsible to guarantee traceability of all trade items that the Organisation delivers. No N/A.	Recommended
7.2.	Does the Traceability System Manual comply with all standards, regulations and requirements stated in the objectives of the Traceability System?	The Traceability System Manual must reflect the information required by the standards, regulations and requirements stated in the objectives of the Traceability System. No N/A.	Recommended
7.3.	Does documentation exist within the Organisation which describes all relevant process stages from the time trade items are received to the time trade items are delivered to trading partners?	Documentation must exist which describes all the processes of the Organisation, from reception of trade item to the point in which the trade item is delivered to the trading partners. No N/A.	Mandatory
7.4.	Are the responsibilities regarding administration of traceability information described in a document that includes organisational structure, operational responsibilities and system capabilities?	Documentation must exist which describes the organisational structure, operational responsibilities and system capabilities for traceability information management including: <ul style="list-style-type: none"> • Organisation • Dependency • Roles • Personnel • Infrastructure • Documentation methods • Software used (if applicable) No N/A.	Mandatory
7.5.	Is traceability documentation filed for the duration of the useful life of the trade item and kept for a minimum period of 1 year? (GTC: BR8)	All records are to be kept up to date for a period of one year or more in accordance with regulations, standards or industry requirements defined in the objectives of the Traceability System. No N/A.	Mandatory
7.6.	Is the Traceability System information filed in an organized manner and in a restricted location?	The Organisation has an area with restricted access where all Traceability System information is administered. No N/A.	Recommended

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
7.7.	Is the Traceability System documentation up to date and does it reflects the procedures that currently occur on the production line?	There is concurrence between the current production process and the current traceability documentation. It must be confirmed that what occurs in the production line is reflected in its documentation. No N/A.	Mandatory
8. STRUCTURE & RESPONSIBILITIES			
8.1.	Does an operational traceability team exist and are their roles and responsibilities defined and documented?	The Organisation has an operational traceability team with their roles and responsibilities defined and documented. No N/A.	Mandatory
8.2.	Does the traceability team have the necessary resources in order to maintain the Traceability System? Resources include HR, IT and budget.	The Organisation must ensure a direct relation between HR assigned to traceability, the technology used and the budget assigned to these items. No N/A.	Mandatory
8.3.	Are the personnel aware of the traceability procedures and instructions applicable to their functions and know where to find them and when and how to use them?	The personnel are aware of the current traceability procedures and instructions applicable to their functions. They know where to find them and when and how to use them. No N/A.	Mandatory
8.4.	Is a computerised system used to manage traceability information?	The Organisation has a computerised system to manage traceability information. No N/A.	Recommended
9. TRAINING			
9.1.	Have specific instructions been given or Traceability System training provided to the Organisations personnel and are training records maintained?	Records indicate that required instructions have been given or a training program for the Traceability System is in effect. Copies of certificates of attendance or attendance registers are also filed signed by the participants of the course. No N/A.	Mandatory
9.2.	Have specific training been given to the all responsible of the traceability system about GS1 System and this training has been updated periodically	Records indicate that an updated training about GS1 System have been given to all responsible of the traceability system. Copies of certificates of attendance or attendance registers are also filed signed by the participants of the course No N/A.	Recommended
9.3.	Is a record of all traceability training carried out kept along with a signed employee attendance register?	Records must be kept for each employee indicating training programs required and carried out, including certificates of attendance, or with the signature of the employee on a list of attendance.	Recommended

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
10. SUPPLY CHAIN COORDINATION			
10.1.	Is it possible to obtain traceability information of all trade items <u>received</u> from trading partners? (GTS: BR18, BR19, BRU17, BRU23, BRU26)	For each trading partner of a batch / lot or Serial Number of a trade item that needs to be traced, it is possible to obtain at least the following traceability information: <ul style="list-style-type: none"> • Product Identification (GTIN if used)* • Quantity* • Manufacture Date* • Dispatch Date* • Transporter (GLN if used), address, telephone number, and fax number and email address (if available)** (All marked with * are mandatory for GTS ¹⁸ . All marked with ** are mandatory for US Bioterrorism Act). No N/A.	Mandatory
10.2.	Is it possible to obtain traceability information from trading partners in a timely manner according to industry agreement? (GTS: BRU25)	For each trading partner of a batch / lot or Serial Number of a trade item, that needs to be traced, it is possible to obtain traceability information in a timely manner according to industry agreement (i.e. US Bioterrorism Act ask 4 business hours).	Recommended
10.3.	In the case of traceability inquiry is there a document that details traceability information required from each trading partners regarding traceable items and is this document updated at least annually?	Documentation exists, which is updated at least on an annual basis, indicating the level of traceability information required from each trading partner of a trade item that needs to be traced. No N/A.	Recommended
10.4.	Does a documented management procedure exist detailing how to manage a safety hazard crisis?	Documentation must exist defining when a crisis is to be activated and indicate all the actions that are to be taken in order to manage the crisis.	Recommended
10.5.	Does a safety hazard crisis team exist within the Organisation and are their respective roles and responsibilities assigned?	The Organisation must have a team with authority to manage a crisis. This team must have a detailed definition of responsibilities and roles.	Recommended
10.6.	In the event of a safety hazard crisis, is there a communication procedure defined to communicate the crisis to listed internal and external contacts?	Documentation exist defining internal and external communication procedure in the event of a crisis. This document must also contain a list of key internal and external contacts. No N/A.	Recommended
10.7.	Does a documented management procedure exist where emergency protocols and actions are defined in order to inform trading partners about a safety hazard crisis?	Documentation exists indicating in detail how to inform trading partners about the crisis, actions that must be taken and the closure of the crisis. No N/A.	Recommended

18 Only the ones marked with an * are required to comply with the Control Point if the Organisation doesn't trade in the US Market

N°	CONTROL POINTS	COMPLIANCE CRITERIA	Level
10.8.	Does a documented plan exist for the recall of affected products?	Documentation exists detailing how affected products are to be recalled. No N/A.	Recommended
10.9.	Does the safety hazard crisis procedure operate 24/7?	It can be proved that the crisis procedure operates 24/7. No N/A.	Recommended
11. MONITORING			
11.1.	Does a monitoring and control plan exist for the Traceability System and is this plan executed periodically?	A monitoring and control plan exists for the Traceability System that periodically verifies the correct operation in accordance to the scope and objectives. No N/A.	Mandatory
11.2.	Guided by the monitoring and control plan does the Organisation record the results of its Traceability System reviews?	The Organisation must provide evidence of results of monitoring and control of the Traceability System in accordance with the monitoring plan. No N/A.	Recommended
12. INTERNAL AND EXTERNAL AUDITS			
12.1.	Does the Organisation maintain a register of internal or external audits to ensure compliance to the Traceability standard, and are these audits carried out at least on an annual basis?	Documentation is recorded indicating that internal or external audits have been carried out on an annual basis. No N/A.	Mandatory
12.2.	Is there written or saved information that documents the results of past traceability reviews and audits?	Documentation exists of the results of traceability reviews and audits previously carried out. No N/A.	Mandatory
12.3.	Does documentation exist that reflects actions taken in order to resolve non-conformities regarding the operation of the Traceability System?	Documentation exists which describes actions taken in order to resolve non-conformities regarding the operation of the Traceability System.	Mandatory (conditional)

3. Glossary of Business Terms

Term	Description
Batch / Lot	<p>[GS1 GTS] The batch or lot number associates a trade item with information the manufacturer considers relevant for traceability of the item. The data may refer to the trade item itself or to items contained in it.</p> <p>GDD Implementation Notes: A typical batch/ lot code might include a plant location, production line, date of production and shift. The format and structure will vary by organization.</p>
Compliance Criteria	Are the facts that must be monitored and documented by the Organisation in order to maintain traceability over a certain Control Point.
Consumer	[GS1 GTS] The end user of a trade item or a service.
Consumer Unit	[EANCOM Glossary] The package size of a product or products agreed by trading partners as the size sold at the retail point of sale.
Correction	Action to eliminate a detected nonconformity.
Corrective Action	Action to be taken to eliminate the cause of a detected non conformity or other undesirable situation in a traceability system.
Customer	[GS1 General Specification] The party that receives, buys, or consumes an item or service.
Data Carrier	[GS1 General Specification] A means to represent data in a machine readable form; used to enable automatic reading of the Element Strings.
Data Matrix	[GS1 General Specification] A standalone, two-dimensional matrix symbology that is made up of square modules arranged within a perimeter finder pattern. Data Matrix ISO version ECC 200 is the only version that supports GS1 System identification numbers, including Function 1 Symbol Character. Data Matrix Symbols are read by two dimensional imaging scanners or vision systems.
EANCOM	[GS1 General Specification] The GS1 standard for Electronic Data Interchange (EDI) is a detailed implementation guideline of the UN/EDIFACT standard messages using the GS1 Identification Keys.
EAN-13	[GS1 General Specification] A bar code symbol of the EAN/UPC Symbology that encodes GTIN-13, Coupon-13, RCN-13, and VMN-13.
Electronic Product Code	[GS1 General Specification] An identification scheme for universally identifying physical objects (e.g. trade items, assets, and locations) via RFID tags and other means. The standardised EPC data consists of an EPC (or EPC Identifier) that uniquely identifies an individual object, as well as an optional Filter Value when judged to be necessary to enable effective and efficient reading of the EPC tags.
EPC tag	[GS1 General Specification] RFID tag that complies with the EPCglobal standard and contains an Electronic Product Code.
Flow Diagram	Schematic and systematic presentation of the sequence and interactions of steps.
GIAI (Global Individual Asset Identifier)	[GS1 General Specification] The GS1 Identification Key used to identify an Individual Asset. The key is comprised of a GS1 Company Prefix and Individual Asset Reference.
GLN (Global Location Number)	[GS1 General Specification] The GS1 Identification Key used to identify physical locations or legal entities. The key is comprised of a GS1 Company Prefix, Location Reference, and Check Digit

Term	Description
GRAI (Global Returnable Asset Identifier)	[GS1 General Specification] The GS1 Identification Key used to identify Returnable Assets. The key is comprised of a GS1 Company Prefix, Asset Type, Check Digit, and optional serial number.
GSIN (Global Shipment Identification Number)	[GS1 General Specification] The GS1 Identification Key used to identify a logical grouping of logistic or transport units that are assembled by the consignor (seller) for a transport shipment from that consignor to one consignee (buyer) referencing a despatch advice and/or BOL. The key comprises a GS1 Company Prefix, Shipper Reference and Check Digit.
GTIN (Global Trade Item Number)	[GS1 General Specification] The GS1 Identification Key used to identify trade items. The key is comprised of a GS1 or U.P.C. Company Prefix followed by an Item Reference Number and a Check Digit.
GS1 Application Identifier (AI)	[GS1 General Specification] The field of two or more digits at the beginning of an Element String that uniquely defines its format and meaning.
GS1-128 Symbology	[GS1 General Specification] A subset of the Code 128 that is utilized exclusively for GS1 System data structures.
GS1 DataBar	[GS1 General Specification] A family of bar code symbols, including GS1 DataBar Truncated, GS1 DataBar Limited, GS1 DataBar Expanded, and GS1 DataBar Stacked. Any member of the GS1 DataBar family can be printed as a stand-alone linear symbol or as a composite symbol with an accompanying 2D Composite Component printed directly above the GS1 DataBar linear component.
GS1 DataMatrix	[GS1 General Specification] GS1 implementation specification for use of Data Matrix.
GS1 Identification Key	[GS1 General Specification] A numeric or alphanumeric data field defined by GS1 to ensure the global, unambiguous uniqueness of the identifier in the open demand or supply chain.
GS1 XML	[GS1 General Specification] The GS1 standard for Extensible Markup Language schemas providing users with a global business messaging language of e-business to conduct efficient Internet-based electronic commerce.
Identification number	[GS1 General Specification] A numeric or alphanumeric field intended to enable the recognition of one entity versus another.
Identify physically	It is related to the identification of products with a number but not necessarily converted into a barcode symbology.
Intermediate Item	[GS1 GTS] Partly processed product that must undergo further manufacturing steps before it becomes a bulk finished product.
Location	A place where a traceable item is or could be located [ISO / CD 22519]. A place of production, handling, storage and / or sale. (Examples include Farms, Processing Plants, Distribution Centres and Warehouses. The internal and external locations shall be defined in the declaration of the objectives at the beginning of the audit process).
Logistic Unit	[GS1 General Specification] An item of any composition established for transport and/or storage that needs to be managed through the supply chain. It is identified with an SSCC.
Manufacturer	[GS1 General Specification] The Party that produces the Item.

Term	Description
Master Data	<p>[GS1 GTS] Master Data describes each item and party involved in supply chain processes. Master Data is defined as data having the following characteristics:</p> <ul style="list-style-type: none"> Permanent or lasting nature Relatively constant across time, not being subject to frequent change Accessed / used by multiple business processes and system applications Can either be neutral or relationship dependent
Monitoring	Conducting a planned sequence of observations and measurements to assess whether control measures are operating as intended.
Party	[GS1 GTS] A Party (or) Location is any legal or physical entity involved at any point in any supply chain and upon which there is a need to retrieve pre-defined information. A Party is uniquely identified by a Global Location Number (GLN).
Point of Sale (POS)	[GS1 General Specification] Refers to the retail checkout where omnidirectional bar codes must be used to enable very rapid scanning or low volume checkout where linear or 2D matrix bar codes are used with image-based scanners.
Process	[GS1 GTS] A series of actions or steps towards achieving a particular end. Examples of common processes include Production, Transformation, Quality Control, Storage, Transportation, Movement, Recycle, Return, Packing, Receiving, Traceability.
Safety Hazard	Chemical, biological or physical agent in product, or condition of product, with the potential to cause an adverse health effect.
Shipment	[GS1 General Specification] A grouping of logistics and transport units assembled and identified by the seller (sender) of the goods travelling under one despatch advice and/or Bill of Lading to one customer (recipient).
SSCC (Serial Shipping Container Code)	[GS1 General Specification] The GS1 Identification Key used to identify logistics units. The key is comprised of an Extension digit, GS1 Company Prefix, Serial Reference, and Check Digit.
SGTIN (Serialized Global Trade Item Number)	[GS1 GTS] SGTIN is a method of identifying items at the unit or retail level as well as at the case and carton levels. It is composed of a GS1 assigned Company Prefix & Item Reference (GTIN), combined with a Serial Number. Where GS1 bar codes have traditionally been used, the SGTIN specification combined with an EPC tag can give visibility beyond the Item Reference right down to the exact serial number of the item.
Supplier	[GS1 General Specification] The party that produces, provides, or furnishes an item or service.
Traceability	[GS1 GTS] Traceability is the ability to track forward the movement through specified stage(s) of the extended supply chain and trace backward the history, application or location of that which is under consideration.
Traceability System	[GS1 GTS] The tools and organisation necessary to implement the traceability process in a given environment, party or group or parties
Traceable Item	[GS1 GTS] A physical object where there may be a need to retrieve information about its history, application, or location. The level at which the traceable item is defined within a product packaging or logistical hierarchy is dependent on the industry and degree of control required. Could be tracked, traced, recalled or withdrawn. Could exist in multiple locations at the same time (for example, if identified at the trade item and batch level). A traceable item may be related to another traceable item. It is the choice of the Traceability Partner which identification level (e.g. GTIN or Lot/Batch or serial level) to use for the traceable item. See also definition for process.

Term	Description
Traceable Item Recipient	[GS1 GTS] The Partner that receives the traceable item.
Trade Item	[GS1 General Specification] Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
Trading Partner	[GS1 GTS] Any Supply Chain Partner that has a direct impact on the flow of goods through the supply chain. Examples include Third Party Logistics Provider, Manufacturer, Retailer, and Grower.
Transporter	[GS1 GTS] The Traceability Partner that receives, carries, and delivers one or more traceable items from one point to another without transforming the traceable item(s). Typically only has possession, custody, or control of a traceable item, but may have ownership.



Note: All terms contained in this glossary are correct as of the publication date. Please reference the glossary contained in the GS1 Global Data Dictionary (<http://gdd.gs1.org/gdd/public/>) for the most recent version of the Glossary.

Appendix A. Relation between the GTC Checklist and other Standards

The GTC and its Relationship with Traceability Standards and Best Manufacture Practices (BMP) Standards

There are several Control Points in the GS1 GTC Checklist that fulfill the traceability requirements of other main standards. This appendix present cross references between the Control Points of this document and the Traceability requirements of the following standards.

- **ISO 22005**
- **ISO 9001**
- **HACCP (ISO 22000:2005)**
- **BRC (British Retail Consortium) Global Standard - Food**
- **IFS (International Featured Standard) - Food**
- **SQF (Safe Quality Food)**
- **GlobalGap**

! **Important:** The cross references between the GS1 GTC Checklist and the standards addressed in this Appendix has been prepared by GS1 and do NOT in any case imply compliance with the traceability requirements of such standards. This cross references have not been validated by the Standard Bodies that own the standards presented in this Appendix

Cross Reference between the GS1 GTC Checklist and Traceability Standards and Best Manufacture Practices (BMP) Standards

- **ISO 22005**
To date, the GS1 GTC Checklist has been benchmarked against ISO 22005:2005 ("Traceability in the feed and food chain – General principles and basic requirements for system design and implementation"). The following table presents the cross reference between the GS1 GTC Checklist and the traceability requirements and clauses of ISO 22005:2005:

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
ISO 22005	1.CHOICE OF OBJECTIVES	1.1, 1.4, 1.5	34
	2. PRODUCT DEFINITIONS	2.1 ¹⁹ , 2.3 ²⁰	
	3. SUPPLY CHAIN PLACEMENT	3.1	

¹⁹ ISO 22005 requires identification, but not coding of all trade items

²⁰ ISO 22005 requires identification, but not coding of supplies and raw materials that affect the security of a trade item

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
	4. ESTABLISHMENT OF PROCEDURES	4.1, 4.3, 4.7, 4.8, 4.9, 4.10	
	5. FLOW OF MATERIAL	5.5, 5.11, 5.12	
	6. INFORMATION REQUIREMENTS	6.1, 6.10, 6.11, 6.17, 6.22 ²¹ , 6.23 ²² , 6.24	
	7. DOCUMENTATION REQUIREMENTS	7.3, 7.4 ²³ , 7.5, 7.7	
	8. STRUCTURE & RESPONSIBILITIES	8.1, 8.2, 8.3	
	9. TRAINING	9.1	
	10. SUPPLY CHAIN COORDINATION	10.1 ²⁴	
	11. MONITORING	11.1	
	12. INTERNAL AND EXTERNAL AUDITS	12.1, 12.2, 12.3	

- ISO 9001**

ISO 9001:2008, Quality management systems - Requirements. This standard specifies requirements for a quality management system where an Organisation needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. The following table presents the cross reference between the GS1 GTC Checklist and the traceability requirements and clauses of the ISO 9001:2008 standard:

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
ISO 9001	1. CHOICE OF OBJECTIVES	1.4	13
	2. PRODUCT DEFINITIONS	2.2, 2.5	
	3. SUPPLY CHAIN PLACEMENT	3.1	

21 ISO 22005 does not specify the information to be provided by the suppliers.

22 ISO 22005 does not specify the information to provide to the customers

23 ISO 22005 does not specify specific information.

24 ISO 22005 does not specify the information to be provided by the suppliers.

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
	4. ESTABLISHMENT OF PROCEDURES	4.1, 4.9, 4.10	
	5. FLOW OF MATERIAL	5.4, 5.9	
	6. INFORMATION REQUIREMENTS	6.10, 6.11	
	7. DOCUMENTATION REQUIREMENTS	7.3, 7.4	
	8. STRUCTURE & RESPONSIBILITIES	N/A	
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	N/A	
	11. MONITORING	N/A	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	

- HACCP (ISO 22000:2005)**

The GS1 GTC Checklist contains some Control Points included in the HACCP (HAZARD ANALYSIS AND CRITICAL CONTROL POINT) standard – that is widely known, utilized and required by the food industry and considered within the ISO 22000:2005 standard “Food safety management systems – Requirements for any Organisation in the food Chain”. The following table presents the cross reference between the GTC Checklist and the traceability requirements and clauses of HACCP:

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
HACCP	1. CHOICE OF OBJECTIVES	N/A	18
	2. PRODUCT DEFINITIONS	2.1 ²⁵ , 2.3 ²⁶	
	3. SUPPLY CHAIN PLACEMENT	3.1 ²⁷	
	4. ESTABLISHMENT OF PROCEDURES	4.1, 4.3, 4.10	

²⁵ HACCP requires identification, but not coding of all trade items when dispatched

²⁶ HACCP requires identification, but not coding of all food supplies and raw materials that affect the security of a trade item

²⁷ HACCP requires identification, but not coding of all services that affect the trade items

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
	5. FLOW OF MATERIAL	5.5, 5.12	
	6. INFORMATION REQUIREMENTS	6.1, 6.10, 6.11, 6.17	
	7. DOCUMENTATION REQUIREMENTS	7.3 ²⁸ , 7.5	
	8. STRUCTURE & RESPONSIBILITIES	N/A	
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	10.4, 10.5, 10.6, 10.7	
	11. MONITORING	N/A	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	

- BRC (British Retail Consortium)**

The BRC Global Standard – Food “was developed to assist retailers in their fulfillment of legal obligations and protection of the consumer, by providing a common basis for the audit of companies supplying retailer branded food products”²⁹. It requires the adoption and implementation of HACCP. The following table presents the cross reference between the GS1 GTC Checklist and the traceability requirements and clauses of the BRC Global Standard – Food:

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
BRC	1. CHOICE OF OBJECTIVES	N/A	21
	2. PRODUCT DEFINITIONS	2.1 ³⁰ , 2.3 ³¹	
	3. SUPPLY CHAIN PLACEMENT	3.1 ³²	
	4. ESTABLISHMENT OF PROCEDURES	4.1 ³³ , 4.3 ³⁴ , 4.10	

28 HACCP requests a detailed description of trade items.

29 BRC GLOBAL STANDARD – FOOD, Issue 4, British Retail Consortium, January 2005.

30 This point is required by HACCP, but is not explicit in BRC

31 This point is required by HACCP, but is not explicit in BRC

32 This point is required by HACCP, but is not explicit in BRC

33 This point is required by HACCP, but is not explicit in BRC

34 This point is required by HACCP, but is not explicit in BRC

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
	5. FLOW OF MATERIAL	5.5 ³⁵ , 5.12 ³⁶	
	6. INFORMATION REQUIREMENTS	6.1, 6.10, 6.11, 6.17	
	7. DOCUMENTATION REQUIREMENTS	7.3, 7.5	
	8. STRUCTURE & RESPONSIBILITIES	N/A	
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	10.4, 10.5, 10.6, 10.7, 10.8	
	11. MONITORING	11.1, 11.2	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	

- IFS (International Featured Standard)**

IFS FOOD, Version 5, International Featured Standard. It is a norm created by the major German and French distribution Organisations that regulates the quality management systems in Organisations within the food and feeding sector, with the objective to obtain the maximum security in the manufacture processes and/or food manipulation. The following table presents the cross reference between the GS1 GTC Checklist and the traceability requirements and clauses of the IFS FOOD Standard:

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
IFS	1. CHOICE OF OBJECTIVES	N/A	21
	2. PRODUCT DEFINITIONS	2.1 ³⁷ , 2.3 ³⁸	
	3. SUPPLY CHAIN PLACEMENT	3.1 ³⁹	
	4. ESTABLISHMENT OF PROCEDURES	4.1 ⁴⁰ , 4.3 ⁴¹ , 4.10	

35 This point is required by HACCP, but is not explicit in BRC

36 This point is required by HACCP, but is not explicit in BRC

37 This point is required by HACCP, but is not explicit in IFS

38 This point is required by HACCP, but is not explicit in IFS

39 This point is required by HACCP, but is not explicit in IFS

40 This point is required by HACCP, but is not explicit in IFS

41 This point is required by HACCP, but is not explicit in IFS

Standard reference	GTC Section	Related GTC Control Points	Total Control Points
	5. FLOW OF MATERIAL	5.5 ⁴² , 5.12 ⁴³	
	6. INFORMATION REQUIREMENTS	6.1, 6.10, 6.11, 6.17	
	7. DOCUMENTATION REQUIREMENTS	7.3, 7.5	
	8. STRUCTURE & RESPONSIBILITIES	N/A	
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	10.4, 10.5, 10.6, 10.7, 10.8	
	11. MONITORING	11.1, 11.2	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	

- SQF (Safe Quality Food)**

SQF 2000 CODE, "A HACCP Supplier Assurance Code for the Food Industry, 5th Edition – Issued November 2005", SQF Institute. It is a food safety and quality certification standard developed by the US Food Marketing Institute. Enables a Supplier to demonstrate that they can supply food that is safe and that meets the quality specified by a customer. The following table presents the cross reference between the GS1 GTC Checklist and the traceability requirements and clauses of the IFS FOOD Standard:

Standard reference	GTC Section	Related GTC Control Points	Total Reference Control Points Addressed
SQF	1. CHOICE OF OBJECTIVES	N/A	23
	2. PRODUCT DEFINITIONS	2.1, 2.3	
	3. SUPPLY CHAIN PLACEMENT	N/A	
	4. ESTABLISHMENT OF PROCEDURES	4.1, 4.2, 4.3, 4.9, 4.10	
	5. FLOW OF MATERIAL	5.3, 5.4	

⁴² This point is required by HACCP, but is not explicit in IFS

⁴³ This point is required by HACCP, but is not explicit in IFS

Standard reference	GTC Section	Related GTC Control Points	Total Reference Control Points Addressed
	6. INFORMATION REQUIREMENTS	6.1, 6.10, 6.11, 6.17, 6.24	
	7. DOCUMENTATION REQUIREMENTS	7.4, 7.5	
	8. STRUCTURE & RESPONSIBILITIES	N/A	
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	10.4, 10.5, 10.6, 10.7, 10.8	
	11. MONITORING	11.1, 11.2	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	

- GlobalGap**

GlobalGap is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The aim is to establish a common approach for Good Agricultural Practice (G.A.P.) with different product applications capable of fitting to the whole of global agriculture. It consists of a set of normative documents. These documents cover the GLOBALGAP General Regulations, the GLOBALGAP Control Points and Compliance Criteria and the GLOBALGAP GS1 GTC Checklist. The following table presents the cross reference between the GTC Checklist and the traceability requirements and clauses of the GlobalGap Standard:

Standard reference	GTC Section	Related GTC Control Points	Total Reference Control Points Addressed
GlobalGap	1.CHOICE OF OBJECTIVES	N/A	6
	2. PRODUCT DEFINITIONS	N/A	
	3. SUPPLY CHAIN PLACEMENT	N/A	
	4. ESTABLISHMENT OF PROCEDURES	4.9, 4.10	
	5. FLOW OF MATERIAL	N/A	
	6. INFORMATION REQUIREMENTS	6.10, 6.11, 6.20	
	7. DOCUMENTATION REQUIREMENTS	7.5	
	8. STRUCTURE & RESPONSIBILITIES	N/A	

Standard reference	GTC Section	Related GTC Control Points	Total Reference Control Points Addressed
	9. TRAINING	N/A	
	10. SUPPLY CHAIN COORDINATION	N/A	
	11. MONITORING	N/A	
	12. INTERNAL AND EXTERNAL AUDITS	N/A	



Important: It is important to note that if an Organisation complies with all the BMP Control Points, this does not imply compliance to the full BMP standard itself, it only assures that the Organisation complies with the “traceability requirements” of the BMP standard.

Cross Reference Summary

The following table presents all the related standards covered by every Control Point:

Control Point	GTS	22005	HACCP	IFS	BRC	SQF	9001	Global GAP
1. CHOICE OF OBJECTIVES								
1.1	x	x						
1.2								
1.3	x							
1.4		x					x	
1.5		x						
2. PRODUCT DEFINITIONS								
2.1	x	x	x	x	x	x		
2.2							x	
2.3		x	x	x	x	x		
2.4	x							
2.5	x						x	
3. SUPPLY CHAIN PLACEMENT								
3.1		x	x	x	x		x	
3.2	x							
3.3	x							
3.4	x							
3.5	x							
3.6	x							
3.7								
4. ESTABLISHMENT OF PROCEDURES								
4.1		x	x	x	x	x	x	
4.2						x		
4.3		x	x	x	x	x		
4.4	x							
4.5	x							
4.6	x							
4.7		x						
4.8								

Control Point	GTS	22005	HACCP	IFS	BRC	SQF	9001	Global GAP
4.9	x	x				x	x	x
4.10	x	x	x	x	x	x	x	x
4.11								
5. FLOW OF MATERIAL								
5.1								
5.2								
5.3	x					x		
5.4	x					x	x	
5.5	x	x	x	x	x			
5.6	x							
5.7	x							
5.8	x							
5.9							x	
5.10								
5.11		x						
5.12		x	x	x	x			
5.13	x							
5.14	x							
5.15								
5.16	x							
5.17	x							
5.18	x							
5.19	x							
6. INFORMATION REQUIREMENTS								
6.1		x	x	x	x	x		
6.2	x							
6.3	x							
6.4	x							
6.5	x							
6.6	x							
6.7	x							
6.8	x							
6.9	x							
6.10	x	x	x	x	x	x	x	x
6.11	x	x	x	x	x	x	x	x
6.12	x							
6.13	x							
6.14								
6.15	x							
6.16	x							
6.17	x	x	x	x	x	x		
6.18	x							
6.19	x							
6.20	x							x
6.21	x							
6.22	x	x						
6.23	x	x						

Control Point	GTS	22005	HACCP	IFS	BRC	SQF	9001	Global GAP
6.24	x	x				x		
6.25								
6.26								
6.27								
6.28	x							
6.29	x							
6.30								
7. DOCUMENTATION REQUIREMENTS								
7.1								
7.2								
7.3		x	x	x	x		x	
7.4		x				x	x	
7.5	x	x	x	x	x	x		x
7.6								
7.7		x						
8. STRUCTURE & RESPONSIBILITIES								
8.1		x						
8.2		x						
8.3		x						
8.4								
9. TRAINING								
9.1		x						
9.2								
9.3								
10. SUPPLY CHAIN COORDINATION								
10.1	x	x						
10.2	x							
10.3								
10.4			x	x	x	x		
10.5			x	x	x	x		
10.6			x	x	x	x		
10.7			x	x	x	x		
10.8				x	x	x		
10.9								
11. MONITORING								
11.1		x		x	x	x		
11.2				x	x	x		
12. INTERNAL AND EXTERNAL AUDITS								
12.1		x						
12.2		x						
12.3		x						

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