Traceability Implementation Material
Simple Steps for Traceability
Simple Steps for Traceability Implementation

1. Get Knowledge
2. Analyse current conditions
   - Diagnostic
3. Set up the work structure and Scope
4. Analyse needs and conditions
5. Design Technical solutions
   - For each physical process that is relevant
6. Validate Specification
   - For each process
7. Implement the Traceability System
8. Training/Education and Documentation
9. Validation / Conformance
10. Using and Monitoring
Simple Steps for Traceability Implementation

<table>
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<tr>
<th>STEPS</th>
<th>TASKS</th>
<th>RESULTS</th>
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</table>
| Get knowledge | • Contact GS1 Organisation  
• Collect Information | Knowledge, including of the GTS Need for Consulting ? |
| Analyse current conditions  
*Diagnostic* | • Analyze Internal / External Conditions  
• Prepare Business Plan, SWOT Analysis  
• Make Diagnosis of what need to be done | Go/No Go decision  
Budget Definition |
| Set up the work structure and Scope | • Define Responsibilities  
• Fix Deadlines  
• Determine Scope | Project Manager  
Steering committee  
Action planning  
1st level of specification |

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**Planning Stage**

**STEPS**

Analyse needs and conditions

Design Technical solutions
  For each physical process that is relevant

Validate Specification
  For each process

**TASKS**

- Identify departments most concerned
- Chart the organisation processes
- Chart the product flow - linked with information flow
- Apply the GTC – Check List
- Identify where to achieve traceability
- Select the enabling technology
- Define information system
- Prepare implementation schedule
- Validate the model

**RESULTS**

Chart of product flow / Description of the process
  Project Management Plan
  Gap analysis
  Functional specifications

Technical specifications
  Description of the procedures

Agreement between departments and partners

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**STEPS**

1. Implement the Traceability System
2. Training/Education and Documentation
3. Validation / Conformance
4. Using and Monitoring

**TASKS**

- **Implementation/Operation Stage**
  - Inform partners
  - Implement Identification, Serialization
  - Develop EDI Messages / Master Data
  - Install equipment
  - Execute pilots
  - Train staff
  - Prepare documentation
  - Audit the organisation
  - Apply the GTC
  - Evaluate and revise the Traceability System
  - Create a plan for annual training
  - Execute regular internal tests

**RESULTS**

- Data Alignment
  - Test
- Documentation available
  - Staff / People involved trained
- Certification
  - GS1 Seal
- Continuous Improvement
  - Development
The objective of this material is to describe the basic steps to be followed by organisations, in any industry sector, to implement traceability. Following this methodology will help organisations’ design the traceability system that meets their specific needs whilst being in line with global standards. It contains all the fundamental steps to ensure all important tasks have been covered including necessary internal and external agreements.

Building or leveraging a traceability system requires effort and resource allocation. The GTS – Global Traceability Standard (*) should be taken into consideration at the earliest stage of the project in order to fulfill traceability partners’ requirements. The Standard allows for interoperability along the supply chain, between each partners traceability system.

(*) GTS defines the minimum requirements to achieve traceability, so organisations that want to have traceability whatever the technology should fulfill at least the business requirements presented in the GTS 7.1 Section.
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Research, collection of data and a clear understanding of current literature needs to be undertaken to obtain an up-to-date picture of existing traceability solutions, procedures and best practices. This will enable organisations to make the right early decisions such choosing appropriate consulting services and enabling technologies.

The local GS1 organisation can help you get the necessary knowledge and training on the traceability process, technologies and on GS1’s corresponding Standards. It provides expert advice about traceability and the GS1 Global Traceability Standard, as well as any existing industry specific agreements, support during your implementation project and help to identify the technology most suited to your requirements.

The GS1 Organisations list is available at [www.gs1.org/contact/worldwide.php](http://www.gs1.org/contact/worldwide.php).
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This step is extremely important for understanding the organisation’s current operating conditions and, therefore, influencing decision-making. It includes high level analysis of existing internal operational conditions (e.g. the organisation’s operational adaptability) and current external environmental conditions (e.g. applicable regulations, contractual agreements, partners’ business requirements, their drivers and internal technologies).

Some well-known tools can help at this stage such as brainstorming, SWOT analysis and high level business plans.

The results of this analysis enables evaluation of the problem and indicates the required resources and budget necessary to implement the solution and, ultimately, to take a go/no go decision.
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**STEPS**

Set up the work structure and scope

**TASKS**

- Define Responsibilities
- Fix Deadlines
- Determine Scope

**RESULTS**

Project Manager
Steering committee
Action planning
1st level of specification

Traceability is multi-disciplinary. Many departments will be involved in its development and implementation.

A fundamental decision to take at the beginning of this process is to define internal and external roles and responsibilities, the scope of the traceability process across the supply chain, timelines, the traceability partners involved, the traceability model boundaries, the main use cases of the traceability system and expected types of trace requests, as well as the level of required traceability (e.g. at pallet, case, SKU level).

The results of this step are the appointment of the steering committee and project manager, action planning and first level specifications.
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Start by describing the physical flow of items through your supply chain. This can be done by walking though each step of the supply chain to identify the physical locations, inputs, internal processes and outputs, to identify the type of products that are exchanged between your traceability partners and to describe the logical hierarchies. Make sure you add flow of information about items to this diagram.

The results are a project plan, gap analysis and functional specifications (including supply chain links, operating and data exchange processes, relevant documents, key departments, critical control point definitions and assign Global Traceability Standard (GTS) roles).

Applying the Global Traceability Conformance (GTC) Check list can help during this analysis, enabling your organisation to compare actual conditions with intended performance.
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**STEPS**
- Design Technical solutions
  - For each physical process that is relevant

**TASKS**
- Identify where to achieve traceability
- Select the enabling technology
- Define information system
- Prepare implementation schedule

**RESULTS**
- Technical specifications
  - Description of the procedures

This step involves a number of activities:

- Define and model how and where to achieve traceability along the internal process of the physical flow (stock management, production, transformation, manipulation process).

- Prepare the technical specifications: select the enabling technologies for identification and the data carrier to collect, share, store and retrieve data.

- Prepare detailed work breakdown structure (WBS) and time schedule of implementation. Determine the steps to implement appropriate level of identification (e.g. consumer or logistic units).

- Define and implement EDI Messages and the information systems to be acquired or adapted.
Simple Steps for Traceability Implementation

**STEPS**

- Validate Specifications
  - For each process

**TASKS**

- Validate the model

**RESULTS**

- Agreement between departments and partners

Validate the whole model with all parties by applying the Global Traceability Conformance (GTC) and paying attention to the capabilities of parties to fulfill the requirements for reception and delivery of goods.
Now implementation can start. Firstly, inform all affected supply chain partners, so they can include the results of your plan in their own traceability related projects. Implementing traceability will most probably change the way products are labelled and information is shared between traceability partners. It therefore impacts the entire supply chain.

It might be beneficial to first select a pilot project involving one partner in order to test the live procedures and technology solutions. Lessons learnt from the pilot can help to improve the specifications and plan.
Raise staff awareness. The skills learnt through the work of the project team must not be lost once the implementation phase is finished. Training the operational traceability team and all key staff and having good documentation of the system is a substantial part of this project.
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Once the new traceability business process has been implemented by all parties, the Global Traceability Conformance (GTC) check list can be applied to validate the system and an audit can be requested to receive a GS1 seal.

Contact your local GS1 Organisation to get additional information.
To maintain a high quality traceability system, annual training of key staff and regular internal tests should be undertaken. Best practices recommend simulations and annual tests with traceability partners.

Based on the results of assessments, tests and trial runs and/or new tools available, evolution of regulatory landscape, existing recalls and withdrawals, the system should be evaluated and revised as necessary. If improvements are identified as the result of the periodic evaluation, then a new traceability project is required.