UN/CEFACT Standards

Traceability, Transparency and Sustainability for Textile & Leather sector

Joint Traceability Discussion
28 April 2021
Sustainable Textile&Leather Traceability and Transparency (TT) Project

**Traceability is understood** as “the ability to trace the history, application or location of an object” in a value chain (ISO 9001:2015).

- **Traceability**
  
  “…to ensure the reliability of sustainability claims” (UN Global Compact 2014)

  “…and the conditions in which they were produced through the supply chain” (OECD, 2018).

- **Transparency**
  
  “…relevant information being made available... in a harmonized way..

  “… which allows common understanding, accessibility, clarity and comparison” (EU 2017).

- **Sustainability**
  
  “… all activities, throughout a product’s life cycle, take into account their environmental, health, human rights and socio-economic impacts, and their continuous improvement (UNECE 2019).

- **Circularity**
  
  “…the ability of this process to retain the value of products, materials and resources in the economy for as long as possible.
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..key drivers..

**Consumers**
- Increasing demand for sustainable products that respect workers’ rights, the environment and are safe - especially in advanced economies

**Civil society**
- Increasing number and strength of NGOs, standards organizations, and industry platforms that demand traceability, transparency and sustainability

**Regulators**
- Set regulations that require transparency and consumers protection such as safety and labelling standards

**Businesses**
- Need to address reputational risk and respond to consumer demand for “the sustainable brand”
- Need to contain costs and efficiencies to remain competitive
- Need to meet legal and compliance obligations across multiple jurisdictions
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..specific attention to tackling negative health, social and environmental impacts..

PROJECT DELIVERABLES – THE TOOLBOX

- **Deliverable 1:**
  - UNECE Recommendation 46 on TT for Sustainable Value Chains (VCs) in the Garment&Footwear Sector
  - UNECE Call to Action
  - ----building upon ecosystem, policy and regulatory mapping

- **Deliverable 2:**
  - BRS on TT for Sustainable Textile and Leather VCs
  - ......building upon detailed BPA

- **Deliverable 3:**
  - CCBDA exchange syntax neutral message structure on TT for sustainable Textile&Leather VCs (or technical equivalent)

- **Deliverable 4:**
  - XML message schema for the Traceability for sustainable Textile&Leather VCs
Building upon existing UN/CEFACT standards and semantics of others

- UN/CEFACT Buy-Ship-Pay Model
- UN/CEFACT technical deliverables in the agriculture domain
  - Animal traceability, plant traceability and their bi-products
  - eCROPS
  - Fisheries Language for Universal eXchange (FLUX)
  - Electronic laboratory observation reporting message
  - eCERT Export specification
Requirements

- Textile & Leather
- Sustainability
  - CO2 emissions, transportation waste
  - Able to follow and access data
  - Regulation compliance
  - Traceability & Transparency
  - Legal Requirements
  - Inspection & results (KPIs)
  - Production & Manufacturing
  - Recycling & reuse
  - Consumption & post consumption
  - Impacts on environment, health and social aspects
  - Recycling aspects of products and packaging
  - Used materials, Chemicals, compositions
  - Production waste, chemical inventory data

Proof by data and certificates
Position of Textile & Leather data

UN/CEFACT Core Component Library

**Library**

- **Architecture Layer**
  - Reference Data Models
    - SC RDM
      - BSP Cross Industry Supply Chain View
    - MMT RDM
      - BSP Multi Modal Transport View
    - CBM RDM
      - BSP Cross-Border Management View
    - SDCE RDM
      - BSP Sustainable & Circular Development Economy View

**Business Standards Layer**

- Mining Industry?
- Road Transport?
- Textile & Leather sector

**Messages**

1. Traceability Event Message
2. Product Transparency Message
3. Facility Transparency Message
4. ......?

1. Traceability Event Message
2. Transport Means Transparency Message
3. ......?
A traceable asset

Traceable Asset

Raw Materials, Product, Product Batches

Logistics Units
Comparing

Textile & Leather sector

- **Technology**
  - TRUST
    - Blockchain, DNA markers, Certification
- **WHY**
  - Processes etc
- **Sustainability**
  - Environment, Social, Health risks

Sharing data

- **Transparency**
  - Traceability events
    - 5 Ws: what, when, where, why, who visibility
- **Additional Information**
- **WHAT**
  - Materials, products, logistics objects, traced
- **WHERE**
  - place, location

Across different organizations in the value chain

Transport & Logistics

- **Technology**
  - TRUST
    - Blockchain
- **WHY**
  - Processes etc
- **Sustainability?**
  - Logistics Risks

Sharing data

- **Transparency**
  - Traceability events
    - 5 Ws: what, when, where, why, who visibility
- **Additional Information**
- **WHAT**
  - Logistics objects, traced
- **WHERE**
  - place, location

Logic differences

- **WHAT**: Focus Product <-> Focus Logistics Unit
- **HOW**: Sustainability Risks <-> Transport Risks
- **WHY**: Supply Chain Process <-> Transport Process
- **TRUST**: DNA markers/Certificates <-> ?
- **SHARING**: Across enterprises <-> Between Seller/Buyer
- **EVENT DATA**: EPCIS structure <-> Transport Event (encapsuled)
Traceability Events

**EPCIS**

**Business Step**
- harvesting, breeding, shipping, receiving, producing, slaughtering, etc.

**Trade Transaction List**
- order, bill of lading, despatch advice, point of sale transaction etc.

**Disposition**
- active, in progress, in transit, sold, recycled, reused etc.

**Date Time**
- date time, time zone offset, record time

**Location**
- source/destination, type and ID, read point and business location

**Party**
- source/destination, type and ID etc, farmer, spinner, dyer, manufacturer, retailer etc

**Object**
- product, product batch, product instance (serialized) etc.

**Event Element**
- quantity, input quantity, output quantity, child quantity, unit of measure

**Action**
- add (e.g. born, create)
- deleted (e.g. waste, destroy)
- observe (all others)

**Electronic Product Code Information Services**

**EVENTS**

**Object**
- Harvesting
- Shipping
- Destroying

**Transformation**
- input material
- Output material

**Aggregation**
- Packing
- - parent/child

**Transaction**
- Dis-/Associate object to a transaction

**WHEN**

**WHERE**

**WHO**

**WHY**

**WHAT**
Key data components behind 5 W’s

**WHAT**
- materials, products, logistics units

**WHY**
- Processes etc
- Chain of Custody/Ownership

**WHO**
- place, location

**WHERE**
- date/time

**WHEN**

**WHAT**
- Product
  - Product Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

- Product Batch
  - Product Batch Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

- Material
  - Product Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

**WHERE**
- Production Process
  - Product Certificates
  - Process Certificates
  - Organizational Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

**WHEN**
- Party/Organization
  - Product Certificates
  - Process Certificates
  - Organizational Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

**WHO**
- Production Facility
  - Product Certificates
  - Process Certificates
  - Organizational Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

**WHEN**
- Referenced Location
  - Agricultural Certificate
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection
Sharing data

### Basic and Additional Information

- **Traceability Information Requestor**
  - Information Needs
    - Step 1: Basic Information
      - Get basic visibility information and use this information to identify the parties involved who can provide the necessary additional information (transparency).
  - Step 2: Additional Information
    - Get additional information for the necessary transparency

- **Traceability Repository**
  - For traceability [basic information]:
    - visibility thru events / discovery

- **Business-Partner Systems**
  - For transparency [additional information about]:
    - product, product batch, party, facility, process, location, transport, inspections, certifications

- **Textile and Leather Data Model**
  - For transparency:
    - Event Information Entities (5Ws)
  - For transparency:
    - Additional Information Entities

**Steps**:  
1. Basic Information  
2. Additional Information
End of presentation

Thank you. Question to you all:

Could other domains reuse part(s) of our work?

For more:
https://unece.org/trade/traceability-sustainable-garment-and-footwear