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

- Traceability & Transparency
- Legal Requirements
- Inspection & results (KPIs)
- Production & Manufacturing
- Recycling & reuse
- Consumer
- Sustainability

Able to follow and access data

CO2 emissions, transportation waste

Impacts on environment, health and social aspects

Recycling aspects of products and packaging

Consumption & post consumption

Used materials, Chemicals, compositions

Proof by data and certificates

Production waste, chemical inventory data

Regulation compliance
Position of Textile & Leather data

**Library**

- UN/CEFACT Core Component 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 Development & Circular Economy View

**Business Standards Layer**

- Data Models
  - 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. ......?

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

Traceable Asset

Raw Materials, Product, Product Batches

Logistics Units
Comparing Textile & Leather sector

Technology

WHY
Processes etc

Sustainability
HOW
Environment, Social, Health risks

WHO
Chain of Custody, Ownership

WHAT
Materials, products, logistics objects traced

WHERE
Place, Location

Additional Information

Across different organizations in the value chain

Sharing data

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 (encapsulated)
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
Key data components behind 5 W’s

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

**WHY**
- Processes etc

**WHO**
- Chain of Custody/Ownership

**WHERE**
- place, location

**WHEN**
- date/time

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

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

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

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

- **Transport Movement**
  - Process Certificates
  - Organization Certificates
  - Sustainability Characteristics
  - Sustainability Claim
  - Sustainability Inspection

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

**Information Needs**

- **Step 1: Basic Information**
  - **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

- **Step 2: Additional Information**
  - **Traceability Repository**
    - **For traceability [basic information]:**
      - visibility thru events / discovery
  - **Business-Partner Systems**
    - **For transparency: Additional Information Entities**

**Textile and Leather Data Model**

- **For transparency: Event Information Entities (5Ws)**
  - Product Guardian
  - Transformation Partner
  - Validation/Verification Body
  - Other Suppliers/Service Providers
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