Roundtable 3

Innovation and digital tools to support sustainability and due diligence

24 November 2020
Textile Exchange

Our Mission

Textile Exchange inspires and equips people to accelerate sustainable practices in the textile value chain. We focus on minimizing the harmful impacts of the global textile industry and maximizing its positive effects.

Our Vision

We envision a global textile industry that protects and restores the environment, while enhancing lives. By 2030 we aspire to guide the textile industry to reduce GHG emissions (CO2 equivalents) by 45% from a 2020 baseline.
Challenges of Responsible Consumption & Production

Consumer awareness and sustainability claims

People want to do the right thing
- 60% want to know if their clothing and home textiles are safe from harmful stances and responsibly produced
- 31% indicate that they have purchased certified clothing

Consumers are interested but skeptical
- 52% check for certification label
- 49% check for fiber content
- 34% check for brand’s sustainability practices

Majority of top 100 brands have announced 100% sustainable fibers target by 2022-2025

Only 34% of companies has a traceability approach of which half has visibility up to material manufacturing or finished materials production only (UNECE, 2019)
The Role of Sustainability Standards

- **Material verification (Forensic authentication)**
  - Physical testing to authenticate material in product.

- **Transaction verification (Chain of Custody)**
  - Chain of custody is the custodial sequence of how the material ownership is changed from one party to another in the supply chain.
  - Traceability is the ability to demonstrate this chain of custody.
  - Transparency is the access of visibility to the extent which the material is traced.

- **Site verification (Scope verification)**
  - Verification of processes at site to ensure compliance to baseline sustainability criteria.
## Textile Exchange’s Traceability Programs

### Material verification (Forensic authentication)
- TC - Now
- Track 1: Digital Trackit
- Track 2: Electronic Trackit

<table>
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<th>COC model</th>
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<th>Data flow</th>
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<td>Segregated</td>
<td>Digital certificates</td>
<td>CE → CB → TE</td>
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<tr>
<td>Segregated</td>
<td>Electronic (tokens)</td>
<td>CE → TE → CB</td>
<td>System auto</td>
<td>CB</td>
</tr>
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</table>

- **Validation**: CB manual
- **Verification**: CB

- **Site verification (Scope verification)**
- **Track 1**: Scope Certificates (CB → TE)
- **Track 2**: Scope Certificates (CE → TE)

- Forensic results

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**Digital Trackit**

- **Track 1**
  - **Site verification**: Segregated
  - **Traceability method**: Certificates
  - **Data flow**: CE → CB
  - **Validation**: CB manual
  - **Verification**: CB

**Electronic Trackit**

- **Track 2**
  - **Site verification**: Segregated
  - **Traceability method**: Electronic (tokens)
  - **Data flow**: CE → TE → CB
  - **Validation**: System auto
  - **Verification**: CB

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**COC model**

- Segregated
- Certificates
- CE → CB
- CB manual
- CB

**Traceability method**

- Certificates
- Digital certificates
- CE → CB → TE
- CB manual
- CB

**Data flow**

- CE → CB
- CE → CB → TE
- CE → TE → CB

**Validation**

- CB manual
- System auto

**Verification**

- CB
Opportunities in Innovative Technologies

Material verification (Forensic authentication)

Transaction verification (Chain of Custody)

Site verification (Scope verification)

Physical Tracers (Isotope, Microbiome, DNA, Fluorescent Ink, Nano-Marker, Invisible ink)

Tagging Tracers (RFID, NFC, Integrated) IoT

Central Database, Cloud Database, Permissioned / Public Blockchain (Standards, Suppliers, Certification Body, Third Party)

Audit Management System
Certification System
Geographical Information System
Farm Management System

AI, ETL
Machine Learning
The Missing Links

Cost
- Certification cost
- Traceability cost
- Fair distribution of cost
- Price paradigm

Integrity
- Compliance
- Impact
- Assurance
- Performance
- Risk

Security & Privacy
- GDPR
- Commercial sensitive data vs transparency
- Incentives
- Marginalized stakeholders
- Security

Measurement
- Definition
- Data model
- Indicators
- Claims framework (sustainability, assurance, marketing)
Thank you

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