TRACING SUSTAINABLE VISCOSE
INDUSTRY-WIDE IMPLEMENTATION

THE PROBLEM

Around six million tonnes of viscose are used used to produce garments annually. An estimated 30% of viscose is sourced from endangered forests, making it crucial to to verify the origin of sustainably-sourced fibres.

THE VISCOSE TRACEABILITY PILOT: TRIALING A SOLUTION

In December 2020, Fashion for Good brought together a pioneering consortium to test a solution that verifies sustainable viscose along the supply chain. The TextileGenesis platform, an innovator from the Fashion for Good Accelerator Programme, traced eight different garment styles for BESTSELLER and Kering, with a total of ~23,000 product units tracked via 25 suppliers from seven countries. The sustainable viscose was sourced from Lenzing, ENKA and Tangshan Sanyou. Zalando has generously supported the project.

THE PILOT SUCCESS STORY

This pilot has proven that it can bring a scalable traceability solution, from fibre to finish, in the viscose supply chain. The pilot achieved 3 key goals:

1. Flexibility. The platform was able to capture real-world supply chain complexity. This was enabled by TextileGenesis's Fibrecoin tokenisation model.

2. Interoperability. Combining digital & physical traceability for a robust system. Aggregating physical tracer technologies demonstrating its ability to communicate with other systems, including incorporating & verifying physical tracer certification.

3. Scalability. Simultaneously on-boarding 25 suppliers in a short span of four to six weeks, and able to independently use the system after a single training session.

CALL TO ACTION: SCALING THE PILOT AND EXPANDING INTO OTHER FIBRES

- Brand partners will scale the number of styles in viscose, as well as adding organic cotton and recycled polyester articles to the platform
- TextileGenesis has also developed other key partnerships, including Textile Exchange, a major certification body, to digitise their certification processes, and the U.S. Cotton Trust Protocol to record and verify the movement of U.S. cotton fibre.
- Fashion for Good makes an industry wide call for collaboration to embed traceability systems into the value chain.

KEY STATS

Brand stakeholders: BESTSELLER, Kering and Zalando
Project Length & Geography: 5 months in 7 countries across Europe and Asia
Innovator: TextileGenesis is a blockchain traceability system specifically created for the apparel sector that focuses on sustainable fibres.
Project press releases: Launch Press Release | Project Close Press Release

CONTACT

Textile Genesis: Amit Gautam | amit@textilegenesis.com

KEY LEARNINGS

1. CAPTURING REAL-WORLD COMPLEXITY ON A DIGITAL PLATFORM

The TextileGenesis platform was able to capture the real-world complexity of these supply chains using its Fibrecoin tokenisation model. Once a fibre is produced, each kilogram of that fibre is represented in the platform by 1 Fibercoin. All the supply chain nodes, from the fibre producer through to brand has a digital representation of the fibre in their physical inventory. As transactions take place along the supply chain, the fibre in the physical world is also represented as Fibercoins on the TextileGenesis platform.

KEY LEARNINGS FROM THIS PILOT

This tokenisation model helped to uncover certain supply chain steps that were previously unknown to brands, demonstrating the efficacy of this traceability mechanism.

2. COMBINING THE DIGITAL AND PHYSICAL WORLDS

Many viscose producers have their own branded physical tracer enabling brands to verify that the fibre present in the garment is in fact from a specific certified fibre producer. The TextileGenesis platform aggregates all of this information in one place, allowing brands to have visibility over the traceability of their products.

WHICH PHYSICAL TRACERS WERE USED AS PART OF THIS PILOT?

- **Lenzing** uses a special manufacturing process to create its EcoVero fibre, embedding a physical tracer component into the fibre which can then be verified at garment level.
- **ENKA** uses a unique fibre construction process which, when identified later on in the process, acts as verification that the fibre is in fact produced by ENKA. For the first time ever as part of this pilot, ENKA was able to verify its fibre at the product-level.

3. LEVERAGING PHYSICAL TRACERS AND OTHER SYSTEMS

Interoperability refers to the ability of a platform to communicate and aggregate information from other systems.

- The platform successfully incorporated certificates verifying physical traceability from distinct viscose producers.
- Through this consortium platform, upgrades of the TextileGenesis platform will integrate Canopy hot-button ranking data and next generation viscose lines which will not only be available to the participating pilot brands, but to all other brands using the platform.

PRINCIPLES OF A TRACEABILITY SYSTEM

WHERE DOES BLOCKCHAIN FIT INTO DIGITAL TRACEABILITY?

Digitisation of the supply chain is a key next step to achieving the level of traceability necessary to drive sustainability forward. Blockchain is often seen as the "silver bullet" solution to traceability, however it is important to recognise it as one of multiple building blocks that constitutes the right digital innovation, rather than the one and only solution.

There are five key operating principles that constitute a robust traceability system:

- **Digitisation at the point of origin**
  This is the main area influenced by blockchain technology, as it enables the use of a "digital twin" or "tokenisation". A physical fibre is digitised at the point of origin thereby controlling the volume of sustainable fibres entering the supply chain network. This eliminates the scenario where more sustainable materials are marketed to brands/retailers than physically produced.

- **Fibre-forwards real time traceability**
  The supply chain traceability system must capture real time transactions and shipments along the supply chain as it happens. This is referred to as the "fibre-forwards" approach and creates real time inventory across the value chain.

- **Standardised traceability data protocol**
  A data protocol is key to a scalable solution as it enables seamless and accurate data exchange between suppliers and brands in a secure and verifiable manner.

- **Forensic audits**
  These enhance the traceability system by incorporating forensic (physical) verification product samples either on a risk-based or random-sample basis.

- **Integration with ESG standards body**
  The system should be able to integrate with key ESG standards body in the textile industry to automatically and reliably verify the sustainability credentials of supply chain actors.