CCES 2025
Textiles & Apparel Track Session Summary

Identity Crisis: The First Step in Solving for Textile Circularity

Each year, 100 billion garments are produced, overwhelming the planet with millions of tons of waste. Modern day textiles are incredibly diverse, made of complex blends and embellished designs which pose significant challenges for reuse and recycling. In this keynote, Amelia explored the root of the issue: identifying what garments are made of and how they're constructed. By solving this "identity crisis" through innovation and collaboration, we can unlock circular solutions and pave the way for a sustainable future in the apparel, fashion, and textile space.

Speaker

- **Amelia Eleiter**, Debrand

April 15, 2025, Montreal, Canada

SUMMARY

Amelia Eleiter from Debrand discusses the critical challenge of **product identity** within the circular economy, emphasizing that understanding a product's composition and origin is key to unlocking its value and preventing waste.

The Problem of Unidentified Products

Debrand, based near Vancouver with operations in Ohio, works with brands on **take-back programs** to extend the life of returned goods. The core issue they face is the **lack of product identity**, which hinders efficient reuse and recycling. Amelia highlights the massive scale of textile waste, with 92 million tons ending up in landfills annually, partly because 70% of collected items are difficult to identify. Without knowing a product's material composition or origin, it's challenging to determine its best next use.

The Value of Identity

Amelia draws a parallel to her brother's company, Trulioo, which verifies human identities for financial services, illustrating that **identity, whether for people or products, holds immense value**. For products, this value translates to enabling better transparency for consumers and facilitating circular solutions.

Methods for Product Identification

Debrand and others in the industry are exploring several technologies to address this:

- **Digital Identifiers:** Technologies like QR codes or digital product passports linked to comprehensive datasets provide the most complete information but are not yet widely adopted.
- **Image-Based Recognition:** Leveraging AI and large language models, this method can identify products and their attributes (material, price) from images, a rapidly advancing field.
- **Near-Infrared (NIR) Technology:** Debrand uses systems like the Valvan AutoSort, which analyze material wavelengths to determine composition, aiding in sorting for recycling.

Unlocking Value Through Identity

Accurate and rapid product identification is crucial for:

- **Reuse and Resale:** Knowing a product's details allows for seamless integration into resale platforms, making circularity more accessible for brands and consumers.
- **Recycling Feedstock:** Emerging recycling technologies have strict material specifications. Quick identification ensures products meet these requirements, making the recycling process scalable and cost-effective.

Debrand's focus is on efficiently gathering accurate product information and preparing items for their next life in the ecosystem, whether through repair, recycling, or resale. Amelia concludes by stressing the importance of **transparency** throughout the product lifecycle to truly value resources, keep items in circulation longer, and move towards a more sustainable future.