STIMULATING TEXTILE TO TEXTILE RECYCLING IN NORDIC TEXTILES

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Background
Project Goal

Inspire more Nordic brands to engage in textile-to-textile recycling and closed loop thinking
Greater demand for Recycled materials

Greater supply of recyclable textiles

Design for ease of recycling

Collection, sorting and processing systems
Use of recycled materials in new products

Design of products for recyclability

Closed-loop systems

- What motivates you?
- How are you engaged?
- What challenges did you experience?
- What solutions did you find?
- What’s needed for an industry transition?
TEXTILE-TO-TEXTILE RECYCLING

Ten Nordic brands that are leading the way

STIMULATING TEXTILE-TO-TEXTILE RECYCLING

Nordic Council of Ministers
Case wallet

TOUCHPOINT
-turning surplus and used fabrics into new work clothes

Touchpoint works from a principle that to increase the use of recycled textiles, the industry needs to investigate new options and be visible with solutions. Companies need to speak loudly and openly about their successes to raise awareness.

Touchpoint’s clients can become frontrunners in recycling

A focus on sustainability and resource efficiency has been part of Finnish workwear brand, Touchpoint’s business plan since its foundation in 2008. The founders believe that businesses have responsibility for more than just raising profits and it offers its client companies concrete solutions on how to execute this wider responsibility. Touchpoint’s story as a frontrunner in recycling can also become the story of its clients.

No compromise on quality

Touchpoint’s business is based on production of sustainable uniforms and work clothing for large and small companies. It also offers sustainable reuse/recycling options for the work clothing that is being replaced. Clients include, for example, airlines, cruise lines and restaurant chains.

The company’s focus was initially on the use of surplus fabrics and organic cotton, but they have since expanded into using recycled fibres, so far it has used approximately 370,000 recycled PET bottles for production of shirts, trousers, aprons and accessories such as bags.

Touchpoint works closely with its customers in developing new work clothing. Work clothes have to be resilient to hard working conditions as well as be comfortable and look good. The quality has to be at least as good as work clothes from virgin materials. Quality testing includes laboratory tests for strength and durability, and use trials for comfort and utility.

Touchpoint has worked closely with supplier Dutch Awareness (DA) on the design of clothing, such as chef’s jackets with stretch, to ensure full recyclability and high quality. Touchpoint has relied heavily on DA’s knowledge in the area of circularity.

DA has taken a circularity building role with many other brands.

Short rollout times can be a challenge

Work clothes are a large investment for a client company and usually the rollout schedule is tight. This can challenge production using recycled and surplus fabrics, since production rates can be slower and delivery times longer.

It has also been challenging to find recycling solutions for the old work clothes that Touchpoint’s products replace, especially clothing that has been treated with functional finishes such as fire retardants. It is important to avoid cross-contamination of these substances into products that will be used by sensitive groups such as children.

The future

The company’s long-term plan is to move more deeply into the circular economy, adopt a cradle-to-cradle approach, and to have a product portfolio by 2020 that only contains organic, recycled and recyclable materials. Touchpoint is also working on more efficient and cost-effective take-back systems.

LESSONS LEARNED

- New clients may be initially doubtful that clothing from recycled materials can feel and look as good as new clothing. A smart design and visual appeal is an important part of the process of winning them over.
- Don’t be afraid to investigate new options and be visible with solutions in order to increase the use of and the demand for recycled textiles.

PARTNERSHIP WITH DUTCH eWEARness

Touchpoint has strong partnerships with suppliers of used materials and fabrics with recycled content. One of these is Dutch eWEARness (DA). DA offers fully circular models for textiles including textiles from thermally recycled PET. The process of re-melting and spinning of PET material can be carried out around eight times for use in consecutive garments, before impurities require other recycling processes. DA’s Circular Constant Management System allows brands to fully trace the material’s origin and how many times it has been recycled.
PURE WASTE
– Turning Factory Waste into New T-shirts

Pure Waste's owners couldn't find reliable supplies of recycled cotton yarns. They now have direct control of production facilities in India spinning pre-consumer factory waste into new yarns for their T-shirts, hoodies and sweaters. By 2020 these facilities will be collected together with their garment production under one roof.

Inspired by a lack of supply
Finnsk brand, Pure Waste emerged from the experiences of clothing brand, Coste. In recognition of the huge demands a growing global population will place on cotton and other raw materials, Coste's owners wished to buy yarns produced from pre-consumer waste for use in its collections. However, the company was unable to find sufficient supply to meet their needs. The natural solution was to develop their own yarn and fabrics.

After mapping out the availability of factory waste with an Indian partner, the decision was made to establish their own spinning facilities for pre-consumer waste close to the source of raw material; the textile production region around Coimbatore and Tirupur in southern India. The Pure Waste textile company was founded in 2011, following the successful development of a yarn produced entirely from factory waste.

Avoiding the use of dyes
Pure Waste Textiles produces clothing using its own yarns made from 100% recycled materials. The main focus is on pre-consumer textile waste such as waste yarn (mostly cotton) from textile mills, coloured off-cuts from textile factories and PET fibres recycled from used plastic bottles.

Fabric and fibre waste is sorted by colour prior to being re-spun. This avoids the need for dyeing, saving large quantities of wastewater and chemicals. The brand produces several grades of yarn and more are being developed all the time. These yarns are used for both knitting and weaving. Knitwear dominates, but the collection includes some thicker woven fabrics. The company produces t-shirts, hoodies, tank tops, sweaters and sweat pants.

Design for recycling
This reusability of Pure Waste clothing is also important. Pure Waste designers approach this by replacing hang labels with water-based transfer prints, and by using as few zippers, fasteners and other accessories as possible. Resource efficiency is increased by minimizing cutting waste and packaging materials.

Factories already use waste fibres – is secret
By establishing Pure Waste the owners secured its own supply of yarn, but it can still be a challenge to source a stable supply of quality factory waste to feed their yarn production. This is partly because many textile factories use their own waste in re-spinning processes to reduce costs. Paradoxically, factories hide this practice from their buyers believing that they would not look kindly on this practice. This demonstrates the need for stronger communication on sustainability issues across the value chain.

Ensuring product safety
Pure Waste Textiles would like to move into post-consumer textile waste with a number of promising technologies on the horizon. However, the transfer will require establishing systems to prevent cross-contamination of new products with unsafe chemicals. Pure Waste is also currently working on gathering at their production facilities in a single factory where textile waste will enter at one end and fully finished garments will exit from the other.

LESSONS LEARNT
- It is crucial for a brand to have a presence in textiles regions of Asia to gain a detailed picture of the whole production chain and what is possible
- Consumers are willing to buy recycled garments when they are given the necessary knowledge and opportunity
- Lack of knowledge may hinder the spread of design for recyclability; in fact, recyclable garments are no more expensive than non-recyclable

PARTNERSHIPS IN ASIA
Local partners in China and India played a key role during the research and development stages. The Indian partner had connections to an engineering company that provided and developed spinning and other equipment. Development of yarns was based on a combination of Pure Waste's own knowhow, the expertise of the co-operating partners and a process of trial and error. Pure Waste's ownership of the factory enabled full process control and establishment and adoption of equipment. Factories in India providing the waste material are additional key local partners as are local research institutes.
1. Use of readily available recycled material (e.g. polyester from PET bottles, pre-consumer textile waste) in single new product

2. Trials using more difficult waste products (e.g. fishing nets, post-consumer textile waste)

3. Application to more products in the brand’s collections

4. Design for ease of disassembly and recycling

5. Establish take-back systems

6. Full closed loop
Many used garments not recyclable

Communication gap between actors in value chain

Many used garments not recyclable

Low availability of recycled materials of certain fibre types

Hard to find quality recycled content yarns/fabrics

Lack of mature chemical recycling processes

Strategy 2: Work with the materials you’ve got

Strategy 3: Create your own supply chains

Engaging in recycled content can be expensive

Lack of transparency and traceability in supply chain

Lack of automated sorting technology

Report

Suppliers have minimum orders (SME challenge)
Spreading the word

• Match-making seminar back-to-back with Mistra Future Fashion

• Selected cases will be included on designforlongevity.com