



CIRCULAR  
FASHION  
FOR ALL

# ITMF Award Submission

### Executive summary

Recover™ fiber in today's market is helping to meet the growing demand for the textile industry to move to a circular system. Recover™ uses textile waste from pre- and post-consumer and post-industrial origins as raw material to create high-quality recycled cotton fiber, helping to tackle the huge quantities of textile waste disposed of worldwide.

Recover™ has various solutions to introduce its fiber into supply chain structures, which are leading the industry forward. One such option is to adopt its fibers into the existing supply chain, where it is a nominated supplier and integrates its fiber with the garment supplier, weaver, or spinner. Recover™ also establishes long term strategic alliances with garment manufacturers, spinners, and weavers. This option provides the Brand/Retailer with an introduction to these alliances that have already developed and produced garments using Recover™ fibers. Or if design is required, we also offer a full design, development and production solution using Recover™ fibers to our key partners. The range of services include 3D design, patterns, tech packs, samples, and production.

With every end-to-end solution offered, Recover™ provides tech support to help the spinners and weavers optimize the yarns and fabrics and can also offer assistance in design for cyclability integrations and on post-consumer waste integration. Transparency and traceability are also key to these sustainable solutions, and the company's traceability system allows it to know all ingredients or components used, supplier origination, production parameters, and when the garments were made.

In 2021 alone, Recover™ made the following environmental savings based upon the textile waste that we recycled, turned into cotton fiber and incorporated into the supply chain:

- **Water:** 114.3 million m<sup>3</sup>
- **CO<sub>2</sub> emissions:** 180,892 metric tons
- **PET bottles:** 43.1 million units
- **Energy:** 199399 MWh
- **Land use:** 8126 ha
- **Waste saved from landfill:** 7424 metric tons

*These results were calculated by Recover™ using Recover's LCA study, verified by AITEX, Universitat de València and UNESCO.*

## Biography

### **Helene Smits**

[Helene.simts@recoverfiber.com](mailto:Helene.simts@recoverfiber.com)

*“My passion for circular fashion started early 2014, when through my work at Circle Economy, I found myself in the middle of a warehouse filled from top to bottom with discarded clothes. “Our” discarded clothes. Every year we collectively discard huge amounts of used textiles, of which most directly end up in our household waste and go to landfill/incineration. From the textiles that are collected separately, about half is of a very low quality and considered worthless. At the same time, we are putting a lot of stress on the planet by producing more and more textiles for our clothes (the clothing industry is the second most polluting industry in the world). In that moment I realized there must be a better way of organizing this. A smarter way. For me that means CLOSING THE LOOP and making new textiles out of old textiles. Since then, it has been my personal and professional mission to develop new approaches and models that contribute to a circular, zero waste textile industry.”*

### Experience:

- **Chief Sustainability Officer, Recover™**

March 2020 – Present

- **Founder, Stating the Obvious**

February 2016 – Present

Stating the Obvious (STO) is an independent circularity agency driven by the belief that sustainable transformation is inevitable. With a clear focus on the Fashion & Textiles Industry, STO specializes in developing & managing innovative projects, concepts, and events to design, test and implement new circular approaches and ultimately 'close the loop' for textiles. To maximize impact, STO supports clients to identify opportunities for circularity at the strategic level and to translate this into an actionable roadmap and initiation of practical projects that can be implemented in daily operations.

- **Initiator and Lead of the Circle Textiles Program, Circle Economy**

April 2014 – February 2016

As the initiator and lead of the Circle Textiles Program, Helene developed a vision and definition for a Circular Textiles Industry and translated that into key focus areas and concrete goals that formed the basis for the Circle Textiles Program projects and partnerships. For two years she grew the program into what it is today: a successful showcase for an action-driven program that tackles a major Industry challenge through practical and scalable projects.

- **Circular Project Developer, Circle Economy**

December 2012 – February 2016

### Education:

- University of Amsterdam

MSc cum laude, Neuroscience

2007-2010

## **The Recover™ solution**

The Recover™ process falls under the mechanical recycling of textile waste. Through our complex proprietary system, we process textile waste, remove external elements, and shred it back into maximum quality fiber. We work together with our strategic partners to integrate our process into the supply chain, providing a closed-loop end-to-end solution.

### **Scalability**

The ability to scale is one of main barriers to solving the problem of textile waste and to meet the growing demand for a sustainable alternative. Until now, no recycled cotton fiber company has been able to scale its technology to such a degree and Recover™ is aiming to become the first in its space to scale its high-value technology globally. We are investing greatly in the growth of the company with the objective to scale the production of recycled fiber and increase Recover's annual production capacity to 180,000 metric tons of recycled cotton fiber by 2024. To achieve this, we are opening new manufacturing facilities around the world in areas such as Bangladesh, Pakistan, and Vietnam.

The hub locations have been taken carefully into consideration in Recover's expansion plans, with the new facilities situated close to the textile waste and/or textile manufacturing. Being close to both the supply and demand reduces our carbon footprint, as the transport of the raw waste material has a significant carbon impact. South Asia and North/Central America are two of the largest cotton waste producing regions and by establishing a presence in these countries, we can provide a fully closed loop solution.

Recover™ is not an on-demand supplier, we build strategic alliances with retailers, and to meet the growing demand for recycled cotton, it is important to scale our production to meet our commitments. Recover™ has already collaborated with big fashion retailers such as C&A and Primark, with the aim to have a large-scale impact and bring affordable sustainable clothing options to the high street. Available in more than 179 stores worldwide, textile waste was converted into high-quality Recover™ recycled cotton fiber to use in Primark's mainstream collection with each item was made using between 15% to 25% of Recover™ recycled cotton. The remaining percentage was composed of a mix of materials including sustainable cotton, organic cotton, and polyester. Our focus is on achieving the lowest-impact, highest-quality of recycled fiber on the market and we believe our scalability project makes us unique and pioneers.

### **Traceability**

To tackle the issue of traceability within the cotton supply chain and to make sure that 3<sup>rd</sup> party manufacturers use Recover™ branded fibers in the yarn and fabric, in 2021, Recover™ initiated its Fiber Tracer proof of concept, with milestones including the selection of the solution and the testing in applications.

The concept includes a tracer that has a customized light emission as an optical fingerprint, becoming machine-readable. When this tracer is mixed with Recover™ recycled fiber it will survive all stages of the product life cycle, making our product readable in fiber, yarn, fabric, and final product status. Therefore, Recover™ fibers can be detected at every moment using a specific sensor that can read the tracer optical fingerprint and assure our product has been used and in which proportions.

To further improve traceability to the original source, Recover™ also joined the Circular Fashion Partnership with Global Fashion Agenda, Reverse Resources, BGMEA and P4G, early 2021. In this project, we seek to enhance traceability of our post-industrial waste to the factory of origin via the Reverse Resources platform.

### **Post-consumer waste recycling**

High value recycling of pre- and post-consumer textile waste is an essential part of the circular textiles industry that we want to move towards as part of our vision to 'achieve circular fashion for all'. Recover™ therefore aims to create high quality, commercial PCW recycled fiber products for the industry at scale. Recover™ aims to have >40% of our inputs to come from pre- and post-consumer textile waste (PCW) by 2025 (±85.000 Metric tons).

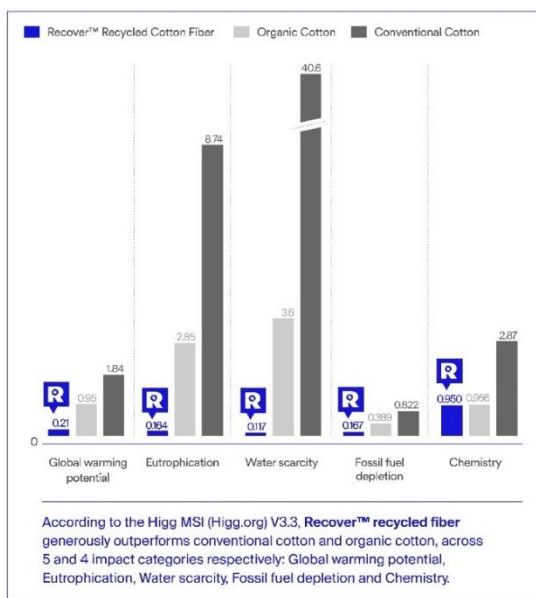
Strong collaborations between textile collectors/sorters, the supply chain and brands/retailers are key to establishing the circular supply chain that is needed for this. To achieve this goal, we are therefore active in several industry initiatives and work closely with selected sorters, supply chain and brand partners to develop and implement a scaled model for PCW recycling.

**Our approach**

Our key priority is to improve as much as possible the sustainability performance, both environmental and social, of our own products, processes, and overall facility operations and to have full traceability and transparency of our product and supply chains. Recover™ continuously tracks environmental impacts at product, process, and company level through Ecochain LCA software and other indicators in our Social and Environmental Management System. With the help of these tools Recover™ can identify key hotspots for improvement, identify effective interventions and track performance against a set of well-defined KPIs.

In addition, we adhere to leading industry certifications and assessment schemes including GRS, OCS, Oekotex Standard 100, Higg FEM and Higg FSLM. These processes and standards are rolled out across all Recover™ hubs worldwide. Recover’s LCA data has been submitted, verified, and scored by the Higg Materials Sustainability Index (MSI). Higg MSI enables brands and manufacturers to measure and score the environmental impact of materials used in creating textile products, compare their products to the rest of the industry and make better decisions about material use. As member of the Sustainable Apparel Coalition (SAC), Recover™ is dedicated to use and contribute to the Higg Index tools to enable the industry to understand the positive impact of using Recover™ recycled cotton.

According to Higg MSI V3.3, Recover™ recycled fiber generously outperforms conventional cotton and organic cotton, across 5 and 4 impact categories respectively: Global warming potential, Eutrophication, Water scarcity, Fossil fuel depletion and Chemistry.



As a frontrunner in sustainability in the textiles industry, Recover™ is always looking for the next step to take to achieve our mission: circular fashion for all. Our scalable recycled cotton fiber and its insertion into the supply chain will help create greater circularity within the industry and by increasing the transparency of our own product we can help to achieve greater transparency in the supply chain.