

# NEW TECHNOLOGY TRANSFORMING TEXTILE WASTE TO FASHION CREATED BY INFINITED FIBER COMPANY IN FINLAND

May 2025

[Infinna™ is the virgin-quality circular fiber made by the Infinited BFiber Company, 100% from cotton-rich textile waste, such as worn-out clothes, which would otherwise destined to landfills or incinerators. Infinna™ has the natural and soft look and feel of cotton, and it can be used either on its own for 100% recycled garments or blended with other fibers, such as organic cotton or viscose. Infinna™ helps brands meet their sustainability and circularity targets by replacing virgin materials and enables create high-quality styles that come from a great place.](#)



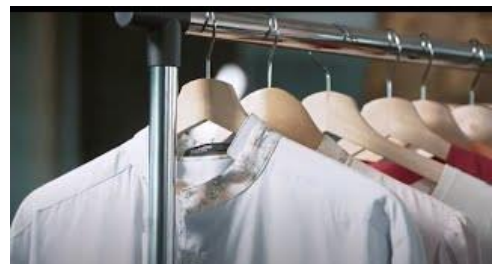
Infinited Fiber Company, startup based in Espoo, in Finland: founded in 2015, was born out of the desire to solve some of the biggest challenges in the textile industry – mountains of waste, limited natural resources, and consumers calling for more sustainable choices.

The company is working to build the first commercial-scale circular Infinna™ fiber factory with a production capacity of 30,000 metric tons of Infinna™ annually, equivalent to the fiber needed for about 100 million T-shirts. The future factory's customer-base includes several of the world's leading apparel companies. The production of Infinna™ fiber consumes less water compared to cotton and viscose, and by recycling textile waste, it is helping to reduce the number of textiles that end up in landfills or incinerated. As such, they are capturing resources that would otherwise be wasted and alleviating the burden on virgin resources.



In particular, [the new technology has the following features:](#)

- *100% from textile waste, fully circular.* Infinna™ is a virgin-quality textile fiber regenerated 100% from textile waste. When finally worn out, clothes and textiles made with Infinna™ can be recycled with other textile waste, enabling textile circularity.
- *An alternative to virgin materials.* A high-quality Next Generation material that's soft and versatile and can be used to replace virgin materials. It is made from textile waste instead of cotton, wood or oil. With Infinna™, nothing new needs to be grown to make something new.
- *Natural and biodegradable, contains no microplastics.* Infinna™ is as natural as man-made can be. It's created out of cellulose, which is a building block of all plants, anything else that's in the textile waste is cleaned out in our process. Infinna™ is completely biodegradable and contains no microplastics.
- *Supply chain ready.* Infinna™ fibers are easy to integrate into the supply chain – yarn spinners and textile manufacturers can use commonly known technologies and their existing equipment to process Infinna™ into yarns and fabrics.



- Soft and versatile. Whether you use it to make a t-shirt, dress, jeans, hoodie or dress shirt, Infinna™ feels soft and natural to the touch – much like cotton.
- Saves water. Producing the fibers to make one t-shirt with Infinna™ takes almost 90% less water compared to producing a similar amount of conventional cotton. Multiply by the 2 billion T-shirts made annually, and you see the scope of what's possible.

[According to Petri Alava, CEO of the Finnish startup Infinited Fiber](#), Infinna was created to find solutions for two of the major problems the fashion industry needs to solve: its reliance on resource intensive and polluting virgin raw materials and finding a valuable use for the more than 92 million tons of textile waste that are incinerated or landfilled at great environmental cost around the globe annually. Infinna Fiber's technology offers a solution for both. The company uses textile waste as raw material – raggedy t-shirts, worn-out jeans, old bedsheets, all kinds of textiles that are made primarily from cotton and that people have chucked out. In their process, these textiles lose their history. They are cleaned and broken down at the polymer level through responsible chemistry to be born again as unique, new, high-quality textile fibers that have a soft and natural look and feel like cotton.

[Their patented technology](#) takes piles of textile waste that would otherwise be landfilled or burned and transforms them into brand-new premium-quality fibers for the textile industry. They take in cotton-rich textile waste no longer fit for use and they clean it. It doesn't matter what colour the incoming textiles are, how worn out they are, if there's something synthetic like polyester or elastane in the mix, as long as about 88% of the total is cotton. During the cleaning phase they remove synthetic fibers and dyes and capture what's precious to the process: the cellulose, a building block of all plants that is most abundant in cotton. They break the cellulose down at the molecular level, activate it with urea, and dissolve it to create a liquid cellulose. The liquid cellulose is wet-spun into new fiber filament and cut to staple length, washed and dried. And the result is that the old textiles that were once destined to become pollution have instead become valuable, brand-new textile fibers that are ready to be made into new yarns, fabrics, and textiles. The scientific name of this unique textile fiber is *cellulose carbamate fiber* – but they call it Infinna™. This technology is applicable to existing pulp and viscose fiber mills (thus saving investment costs and reducing risks).

The *Infinited Fiber* Company is working to find new actors interested in investing in their flagship factory to expand their production capacities. At the same time, they are investing in involving fashion industries to sign agreements to develop operational partnerships. Companies like H&M Group, Patagonia and Adidas have already invested and signed deals with the Finnish company. Zalando in particular is committed to using Infinna to produce garments under its own brand, while H&M has already presented a collection of 64 jeans made with Infinna. Patagonia, one of the most committed brands to sustainability in the fashion industry, has signed a multi-year supply agreement with Infinited Fiber Company. The company is also looking for expanding their activity to produce sheets, towels and other textiles for the home.

### ***To know more***

[Infinited Fiber website](#)





[Infinite Fibers About Infinna](#)

[Infinite Fibers in Forbes.com](#)

[Infinite Fibers in bbc.com](#)

[Infinite Fiber in Fashionforgood.com](#)

[Article in Innovationintextiles.com](#)

[Article in knowledge.hub.circleeconomy.com](#)

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[Infinite Fiber in EllenMacArthur Foundation.org](#)

