



FOUNDER OF EVRNU,
STACEY FLYNN.
PHOTOS COURTESY OF EVRNU

EVERYTHING OLD IS EVRNU AGAIN

Evrnu's Stacey Flynn believes that the textile industry is ripe for disruption—and forges a path for the 21st-century future of fiber.

By SARAH FONES

When you consider some of the most beloved items in your wardrobe, you might think about a flattering, perfectly faded pair of vintage Levi's, or perhaps a butter-soft pullover that goes from work to weekend without a hitch. Now think about how many times you've worn those pieces.

If the answer is in the 30 to 50 or more range, then you're hitting the mark, sustainability-wise, according to Evrnu CEO and cofounder Stacey Flynn, speaking to *Mission* in New York.

Also key, she says, is buying items made from quality materials that tend to last longer and supporting smaller, local designers trying to help consumers build more conscientious wardrobes.

"They may not have the buying power that the bigger brands have, but they're such a vital component to this ecosystem because they actually create the trends in a lot of ways," Flynn explains. "Supporting these smaller designers by buying their clothing allows them to stay on the forefront of what's next, what's up-and-coming."

When it comes to divining fashion's more sustainable future, Flynn is particularly well positioned to weigh in because her Seattle-based company, Evrnu, has patented a technology that converts postconsumer garment waste—cotton specifically—into a new, pristine fiber that can be adapted to a designer's needs.

To get there, Flynn, who had previously worked for the likes of Target, Eddie Bauer, and DuPont after graduating from New York's Fashion Institute of Technology, first went back to school. After earning an MBA in Sustainable Systems, she began studying the problem of garment waste.

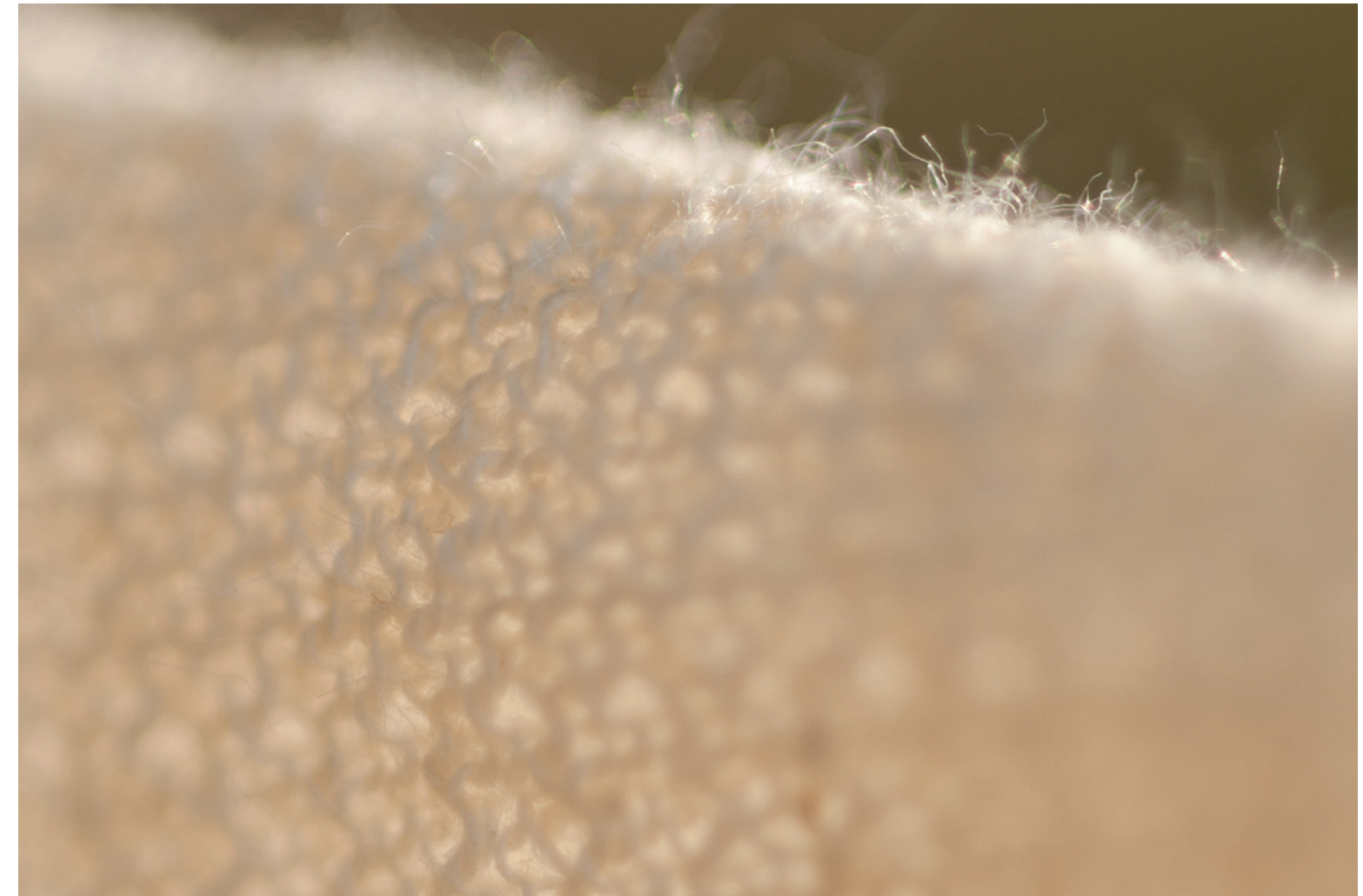
Flynn's interest was piqued following a 2010 business trip to China in search of manufacturing sources. Though she had visited the country previously, this was her initial foray into the so-called subcontracted areas, where she witnessed the damage being inflicted by the industry and how people were living as a result.

"It was shocking—so shocking that I actually decided that I would spend the balance of my career trying to find solutions that were powerful enough to essentially render them obsolete," she says.

Flynn and her business partner, Christo Stanev, founded Evrnu in 2014, seeking a scalable system intervention. Eventually, Flynn says, they were able to isolate the design challenge by honing in on a couple of salient facts. Firstly, 90 percent of all clothing is made from either cotton or polyester. Secondly, consumers are disposing of an estimated 15 million tons of textile waste in the U.S. each year.

Considering these the two bookends to a seemingly intractable problem, Flynn began focusing on resource (or fiber) extraction and waste. "I isolated the design challenge

“Consumers are disposing of an estimated 15 million tons of textile waste in the U.S. alone.”



Beautifully soft fabric created with Evrnu fiber

to be whether there was a way to take the waste and leverage it into new fiber. That was the lynchpin of impact for the entire system."

Evrnu's technology works specifically on cotton, although it can separate cotton from polyester and vice versa. Flynn would make sure that it worked on what she described as the "worst of the worst" when it came to postconsumer garment waste. This meant those pieces with a high degree of variability—the ones about to end up in a landfill, already worn by many people, or with a lot of stains.

So how does it work, exactly? Flynn explains: "Our core technology essentially cleans the garment waste and then dissolves the cotton into what's called a pulp. Then that pulp is sent through a fiber extrusion line, and that fiber extrusion line takes the pulp from a liquid and converts it back into a solid."

What makes this admittedly cool from a textile engineering perspective, she adds, is that there's a great deal of design

capability when using material this way. More specifically, it comes down to a little mechanism called a spinneret, which functions like a small dial on the front end of the extrusion line and resembles a showerhead. The number of holes on the spinneret and the shape of those holes determine the characteristics of the fiber.

This means that Evrnu's technology can produce the fiber used to make various different types of clothing, from casual pieces to higher-end items. "We can engineer fiber that's coarse for denim, or superfine for luxury apparel, or even performance-oriented for athletic apparel just by changing some of the attachments on our equipment," Flynn points out.

One of the companies that took an interest in Evrnu early on was Levi's, which partnered with Evrnu to create the first regenerated (postconsumer cotton) jean back in 2016. Created from five discarded T-shirts, the Levi's 511 denim serves as a powerful prototype for the future.

Flynn says that Evrnu is working closely with the company to commercialize the product and bring it to market, although she's not able to reveal publicly yet when that may be. In the meantime, Evrnu continues to work with various companies in a research and development capacity, taking on increasingly complex projects revolving around resource scarcity.

"We are going to be partnering up with waste owners and also training different fiber producers to take our technology and scale on behalf of the brand partners that we're working with," Flynn says.

The plan for 2018, she adds, is to take Evrnu's technology, transfer it to a commercial line for brands and retailers, and bridge the gap between existing waste and apparel supply chains.

It's a large problem to grapple with—and Flynn cites some facts and figures to illustrate just how deep of a hole the industry has dug. "We've got over 50 million tons of garment waste per year worldwide going into landfills or generators. The

problem we have is that if anything goes into a landfill, it causes methane. Methane is 20 times more powerful than CO₂."

Thus, Flynn says, the key is figuring out how to remove textiles from landfills, and this is what Evrnu's technology seeks to address directly. The goal is to offset the damage created by the use of virgin materials like cotton and polyester. Comparatively speaking, Evrnu fibers use 98 percent less water than virgin cotton and cut CO₂ emissions by 90 percent in polyester production.

While Flynn considers Evrnu an R&D company at its core, R&D is not where companies have traditionally spent their money. Instead, suppliers have typically provided it to brands and retailers. The problem, Flynn points out, is that supplier innovation is based on the ways brands and retailers currently produce—and they're only offering innovation up to the point at which they land the next sale.

If existing business models seem dated or, at the very least, not particularly progressive, then it's probably because they

are. Flynn thinks the textile industry is ripe for disruption, much the same way the tech industry transformed with the advent of the cell phone.

"We're still using 19th-century equipment; the way we think about this industry is very much set and taught in a 20th-century mind-set, you know, that resources are endless and unlimited, and we have this 21st-century reality looming, and the industry is ill-equipped."

Flynn considers the biggest barrier to change simply the way that we think. Too many people refuse to engage in critical analysis or ponder an industry beyond the confines of what they already know. Luckily, Flynn has recently seen attitudes shift and conversations begin, filtering from CEOs and the C-Suite on down through all departments.

"One of the most powerful tools in this whole system—and how we've been successful—is we've found a handful of individuals who work for, in some cases, very powerful companies who were going to do whatever it took personally to see that our technology made it through their company's infrastructure."

Consumers, too, are asking questions of the industry, seeking quantifiable data and looking beyond a hard PR push. In the near future, Flynn hopes to have fully transparent conversations with consumers about the products they're helping to build and the technology behind them.

Critically, that technology necessitates reimagining our very conception of clothing as something that potentially lasts forever. To wit, all of the product Evrnu is currently developing is being designed for disassembly in the future.

"I see a world where clothing is never thrown away in the garbage and all clothing that's donated is fully recovered and broken down and turned into new clothing in the future—that there is no waste—we designed it out of the system entirely," Flynn says. "And that's what we're trying to do—design a way out."

evrnu.com

*Stacey Flynn at a TEDx Talk.
Scan the QR code to
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Regenerative clothing made with Evrnu fiber

