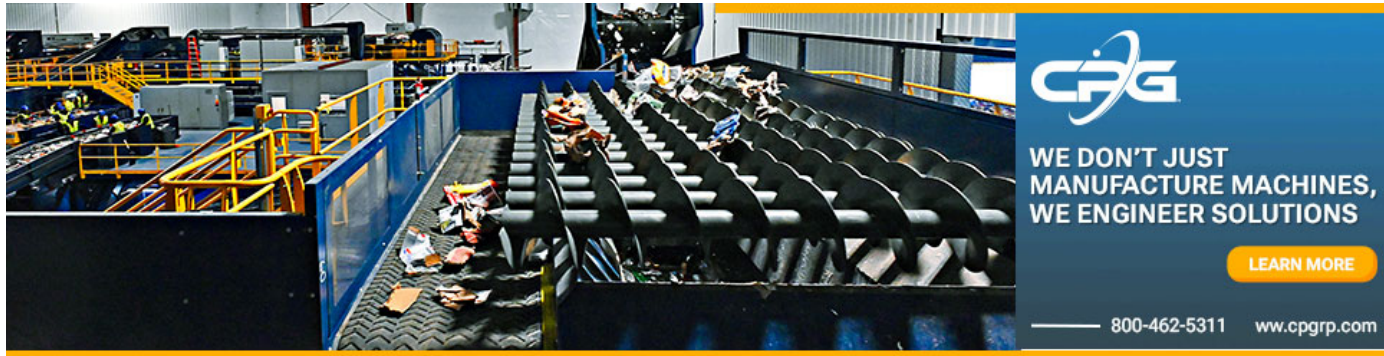


SUBSCRIBE



TEXTILES

Nurturing innovation

The NextCycle program leads the way in supporting textile recycling initiatives across the U.S.

BY MARISA ADLER OF RESOURCE RECYCLING SYSTEMS | MARCH 2024



© Ms_Tali | stock.adobe.com

In 2015, Denmark-based nonprofit [Global Fashion Agenda estimated](#) that 92 million tons of textile waste were generated worldwide annually, and the [Ellen MacArthur Foundation, based in the United Kingdom, estimates](#) less than one-fifth of these materials was recovered for reuse and recycling.

With year-over-year growth in production and stagnant recovery infrastructure development, it can be assumed more than 100 million tons of textile waste per year currently make their way to landfills, dumpsites, incinerators and burn sites. This growing volume of textile waste places an onus on overtaxed infrastructure around the world and is evidence of runaway production and consumption and the neglect of valuable resources. Fortunately, innovation could accelerate textile recovery and the move to a more circular economy.

doing so decouples economic growth from raw material extraction and enables social justice, equity and fair business practices.

The appeal of a circular economy for textiles is at an all-time high, which is encouraging considering the global volume of textile waste is growing at an alarming rate as annual textile production increases and the rate of clothing utilization decreases. Some estimates put global apparel production at approximately 150 billion units per year, though fewer than 8 billion people are on earth to consume this production.

Brands voluntarily committing to circular business practices, governments adopting extended producer responsibility (EPR) laws for textiles and advanced sorting and recycling technologies coming online to seize new market opportunities are evidence of the interest in the circular economy. According to recent market reports, the textile recycling market is [projected to reach \\$12.8 billion by 2032](#), and the secondhand apparel market was [expected to reach \\$350 billion](#) last year.



© Swapan | stock.adobe.com

The Ellen MacArthur Foundation estimates that extending the life span of textiles and increasing textile-to-textile recycling could add \$500 billion to the global economy. However, current barriers to a circular economy for textiles include unfavorable market conditions resulting from entrenched subsidies and hidden externalities, lack of supportive policies, poor supply chain transparency and insufficient consumer education.

To build an effective circular economy, a coordinated system for materials management is needed, starting with collection, processing and end markets and expanding to consumer education, supportive policies and public-private partnerships. Stakeholders across the

Given the U.S. is a [leading generator of the world's textile waste](#), it is only fitting the country also is a source of innovative solutions. One approach has been NextCycle, a program developed by Ann Arbor, Michigan-based [Resource Recycling Systems](#) (RRS) and funded by state and local governments.

Colorado, Michigan and Washington state have NextCycle programs. These programs identify, recruit and advance initiatives that focus on waste prevention, reuse, recycling, composting and developing material end markets. Teams are made up of single organizations or collaborations of businesses, nonprofits, universities and/or government entities that are selected for participation through a formal application process.

Selected teams receive technical and business support to develop their business plans, make connections across the value chain, identify partners, understand industry and economic data, identify feedstock, secure funding and drive toward shovel-ready projects under the guidance of an expert advisory committee.

Several recent participants are focused on the reuse, repurposing and recycling of textiles.



Goodwill Association of Michigan at the NextCycle Michigan Pitch Showcase in April 2023
Photo courtesy of Resource Recycling Systems

Reuse and recycling

The Goodwill Association of Michigan (GAM), based in Kalamazoo, comprises independent Goodwill organizations from across the state that are working together to improve opportunities to scale the organization's workforce development mission and improve material recovery.

GAM applied to the NextCycle Michigan program with the concept of building a textile sorting and processing hub throughout the state to supply value-enriched commodities to a

SUBSCRIBE

to recycle these textiles into higher-value commodities, GAM participated in the NextCycle Michigan 2023 cohort to build a network of collaborators and pressure test its prospective business plan.

In April 2023, GAM won the \$5,000 Recycling Processing Innovation Award and a \$500 People's Choice Award from NextCycle Michigan. The funds were directed toward implementing the next phase of its initiative, including onboarding partners, assessing operational needs and developing a full-fledged business plan for investments.



Refugee Artisan Initiative presents at the March 2023 NextCycle Washington Pitch Showcase
Photo courtesy of Resource Recycling Systems

Repurposing

Refugee Artisan Initiative (RAI) is a nonprofit organization with a mission to provide support for refugee and immigrant women in their transition to the U.S. through skill training and microbusiness development.

program to find a way to convert retired wildfire hoses from the U.S. Forest Service into new salable products. In April 2023, RAI won the Upstream and People's Choice awards from NextCycle Washington as well as a grant through the program, earning a total of \$21,750.

RAI since has created products such as waterproof hats, upcycled conference bags and other bespoke products using reclaimed materials otherwise destined for landfill and incineration. As a result, RAI prevented more than 1,500 pounds of fire hoses from being incinerated and 4,000 spent feed and grain bags from being landfilled.

[Public Thread](#), an upcycling design, upskilling and manufacturing innovation lab in Grand Rapids, Michigan, entered the 2022 NextCycle Michigan cohort in the Recycling Supply Chain track to expand its product offerings, understand upcycled market demand and connect with statewide partners. The lab works with manufacturers across western Michigan to divert scrap and surplus textiles from being landfilled, designing around those materials to create products for a variety of markets and industries.

The group diverted more than 250,000 pounds of material from across Michigan, including apparel, shoes, furniture, automotive, accessories, billboards and more. It has built systemic partnerships with companies like Steelcase, Chaco and Outfront Media to keep material from being landfilled.



Ravel presents at the March 2023 NextCycle Washington Pitch Showcase

Photo courtesy of Resource Recycling Systems



Tereform at the 2022 NextCycle Colorado Pitch Showcase
Photo courtesy of Resource Recycling Systems

From the ground up

[NexTiles](#) is a growing startup developing building insulation material and shoddy from recycled automotive and apparel manufacturing scrap. As a participant in the 2022 NextCycle Michigan program, NexTiles won the \$16,000 NextCycle Michigan Showcase

[Ravel](#) is a textile-to-textile recycling startup headquartered in Seattle. With experienced managerial and technical teams, the company is working to establish market-based circular economy solutions that address the textile waste problem and has developed a process to recover and reuse blended end-of-life textiles to create sustainable and local materials economies for the apparel industry.

Ravel won the Downstream Award and \$10,000 during the 2023 NextCycle Washington Pitch Showcase.

Originating from the U.S. Department of Energy's National Renewable Energy Laboratory, or NREL, Denver-based company Tereform is commercializing a process that uses oxygen to break down textiles into building blocks to enable textile-to-textile recycling. Tereform's process can break down polyester into clean, high-quality constituent monomers even if it contains "disruptors," such as dyes, elastane or other trim.

The Tereform team participated in a 2022 cohort of the NextCycle Colorado program and has been working with a network of partners in the Colorado region with the goals of scaling the company's technology and building local circular economies.

The NextCycle program continues to incubate winning investable ideas across Colorado, Michigan and Washington, not just for textiles but also for any and all materials in need of new or improved methods of recovery, reuse and recycling.

In the case of textile recycling, innovation and change cannot come soon enough.

Marisa Adler is a senior consultant with Resource Recycling Systems, chair of the NYSAR3 Textile Council and on the board of directors for the Secondary Materials and Recycled Textiles Association of Rockville, Maryland. She is based in New Rochelle, New York, and

SUBSCRIBE

Get curated news on YOUR industry.

Enter your email to receive our newsletters.

Submit

READ NEXT

Cultivating confidence



Explore the March 2024 Issue

Check out more from this issue and find you next story to read.

VIEW MORE

More from our latest newsletter

INSIDE

- Nurturing innovation
- Cautious collectors

SUBSCRIBE

CIRCULAR ECONOMY/SUSTAINABILITY • EXTENDED PRODUCER RESPONSIBILITY • RECYCLING EDUCATION
• COLLECTION • INVESTING • INFRASTRUCTURE • TEXTILES



More from **Recycling Today**



Century Aluminum to partner with MX Holdings on secondary billet production



Malaysia event to bring together plastics recyclers



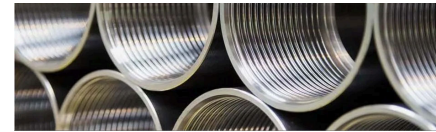
Rotochopper draws dozens of customers to training event



Genesis to bring hot rod driver to ISRI2024



Nucor to buy DRI from Brazil



ArcelorMittal buys minority stake in Vallourec

SUBSCRIBE

Subscribe to our Newsletters

Enter your email for an upgraded inbox!

Submit

SUBSCRIBE

DISTINCTION

NOW AVAILABLE DIRECTLY IN NORTH AMERICA



PAAL **LEARN MORE**



formmax
RECYCLING TECHNOLOGY



**TYRE SHREDDERS
& GRANULATORS**

[More Info](#)

WINNER 2023
Recycle
**BEST TYRE
RECYCLING
INDUSTRY
SUPPLIER**

SUBSCRIBE



No more results found.

SUBSCRIBE



[Subscribe](#)

[Advertise](#)

[Contact](#)

[Privacy Policy](#)

[Terms of Use](#)

[Construction & Demolition Recycling](#)

[Waste Today](#)

© 2024 GIE Media, Inc. All Rights Reserved.

