



ACP US Update Fall 2023

VISION

A world in which textiles are no longer wasted.™

MISSION

Accelerating Circularity is a nonprofit that catalyzes new circular supply chains and business models to turn used textiles into mainstream raw materials.



Textile-to-Textile Supply Networks



Phase: Pilot textile-to-textile supply networks



RESEARCH existing systems for textile feedstock generation, collection, sorting, preprocessing, recycling, apparel & product development and brands and retailer businesses.



MAP existing systems and identified gaps.



US Trial Strategies and Goals

- Pre-competitive collaboration of 25 trial member companies
- Recycling technologies include mechanical cotton, thermal mechanical polyester, and chemical polyester and cotton
- Demonstrate logistical and technical feasibility of circular, textile-to-textile systems
- Execute sorting and pre-processing activities that fulfill recyclers' requirements in quality and quantity within a commercial lead-time
- Address feedstock pre-processing and refining bottlenecks
- Meet industry-standard MOQs per value chain segment
- Develop yarns and fabrics with 20% of post consumer textile content
- Replace, not add to conventional product ranges
- Boost demand for recycled fibers by demonstrating possibilities.
- Challenge perceptions that "recycled is of inferior quality"

Year 2023 Mar May Jul Oct Nov Month Apr Jun Aug Sep Dec Feedstock Yarn Spinning Knitting Weaving

US Trial Timeline

US Trial Map



US Trials

Trial Number	Product	Fiber Content	Yarn Size	Fabric Quality	Quanitity Produced
Trial 1B		100% post industrial cotton.	20/1 OE.	170 gsm jersey.	5,000 pounds of yarn.
Trial 1C		60% virgin cotton, 20% post industrial cotton and 20% post consumer cotton.	26/1 OE.	170 gsm jersey.	21,000 pounds of yarn.
Trial 2		20% virgin cotton, 20% post industrial cotton, 20% post consumer cotton, 20% PET textile, 20% PET Bottles	20/1 OE.	170 gsm jersey.	10,000 pounds of yarn and 20,000 yards of fabric
Trial 6		100% post consumer polyester.	FF 200/100, TX 70/34	240 gsm fleece	5,000-10,000 yards of fabric
Trial 7		19% virgin cotton, 18% post industrial cotton, 18% post consumer cotton,35% PET Bottles, 10% PET textile	20/1 OE, 16/1 OE, 70D	265 gsm jersey fleece.	10,000 pounds of yarn and 5,000 yards of fabric
Trial 9		43% Refibra (™), 38% virgin cotton, 8% post industrial cotton, 7% post consumer cotton, 2% spandex	9.77/1 OE, 9/1 CRS 70Den	11.5 oz/yd denim	12,000 yards of fabric
Trial 10		73% virgin cotton, 13% post industrial cotton, 13% post consumer cotton, 1% spandex	8.55/1 OE, 12/1 CRS 40Den	11 oz/yd denim	12,000 yards of fabric
Trial 12		30% Refibra (™), 10% virgin cotton, 30% post industrial cotton, 30% post consumer cotton.	20/1 OE	200 gsm jersey	12,000 pounds of yarn
Trial 13		60% virgin cotton, 20% post industrial cotton, 20% post consumer cotton	8/1 OE	11.5 oz/yd denim	2,000 yards of fabric
Trial 14		35% virgin cotton, 33% PET bottles, 32% PET Textile	14/1 OE, 12/1 OE	8.3 oz/yd woven bottom	15,000 yards of fabric
Trial 15		60% virgin cotton, 20% post industrial cotton and 20% post consumer cotton.	12/1 OE, 16/1 OE.	1.1#	10,000 towels
Trial 16		100% cotton. Fiber Compositions: 70% supima cotton, 20% post industrial cotton and 10% post consumer cotton.	20/1 RS	170 gsm jersey	60,000 pounds of yarn

US Trial Member Companies



The Playbook: Making Used Textiles New Again



Launched at Circularity 23, the Playbook is an introductory guide for stakeholders to plan and implement circular systems, which can progress from trial stage to full scale textile-to-textile programs.



Plan & Set Up a Project

Create a structure to execute the project planEngage with stakeholders



Implement the Plan

 Identify the needs of the system and highlight gaps



Conduct Trials

 Demonstrate the feasability of textile-to-textile recycling systems through trials in each phase of manufacturing products



Measure Success

• Improve data quality to further the knowledge required to commercialize these systems

• Report progress and learnings to stakeholders on what worked/ what did not for the fullscope of the work

CSTIM Working Group



The CSTIM (Circular Systems for Trim and Ignored Materials) Working Group kicked off in June. The group brings together major suppliers of trims, adhesives, thread, laminates, and labels to tackle the challenges of identifying, removing, and/or recycling these products in circular, textile-to-textile systems. CSTIM will develop and publish recommendations to support scalable feedstock flows and quality to meet specifications for textile-to-textile recycling.

Coming Soon

REALITY ZONE What's technically feasible in mechanical cotton recycling.

BUILDING CIRCULAR SYSTEMS Our next phase of work.

For more information on these projects, contact angela@acceleratingcircularity.org





Acknowledgments

Report Team

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For further information, please reach out to:

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