

Accelerating Circularity Project

Telaketju 4 November 16, 2020

SUPPORT PROVIDED BY

Gap Inc.







FOUNDING PARTNERS

Gap Inc.







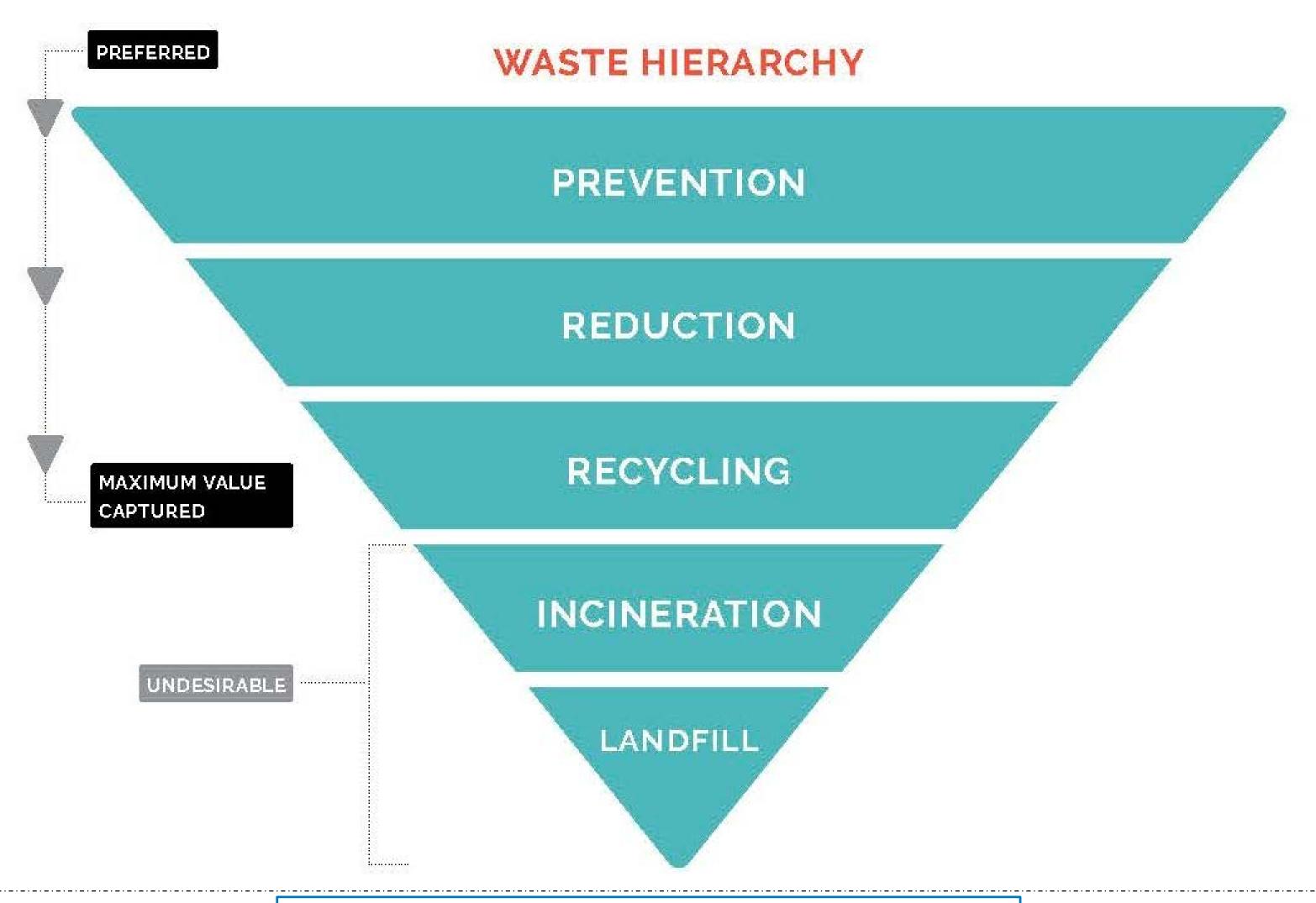






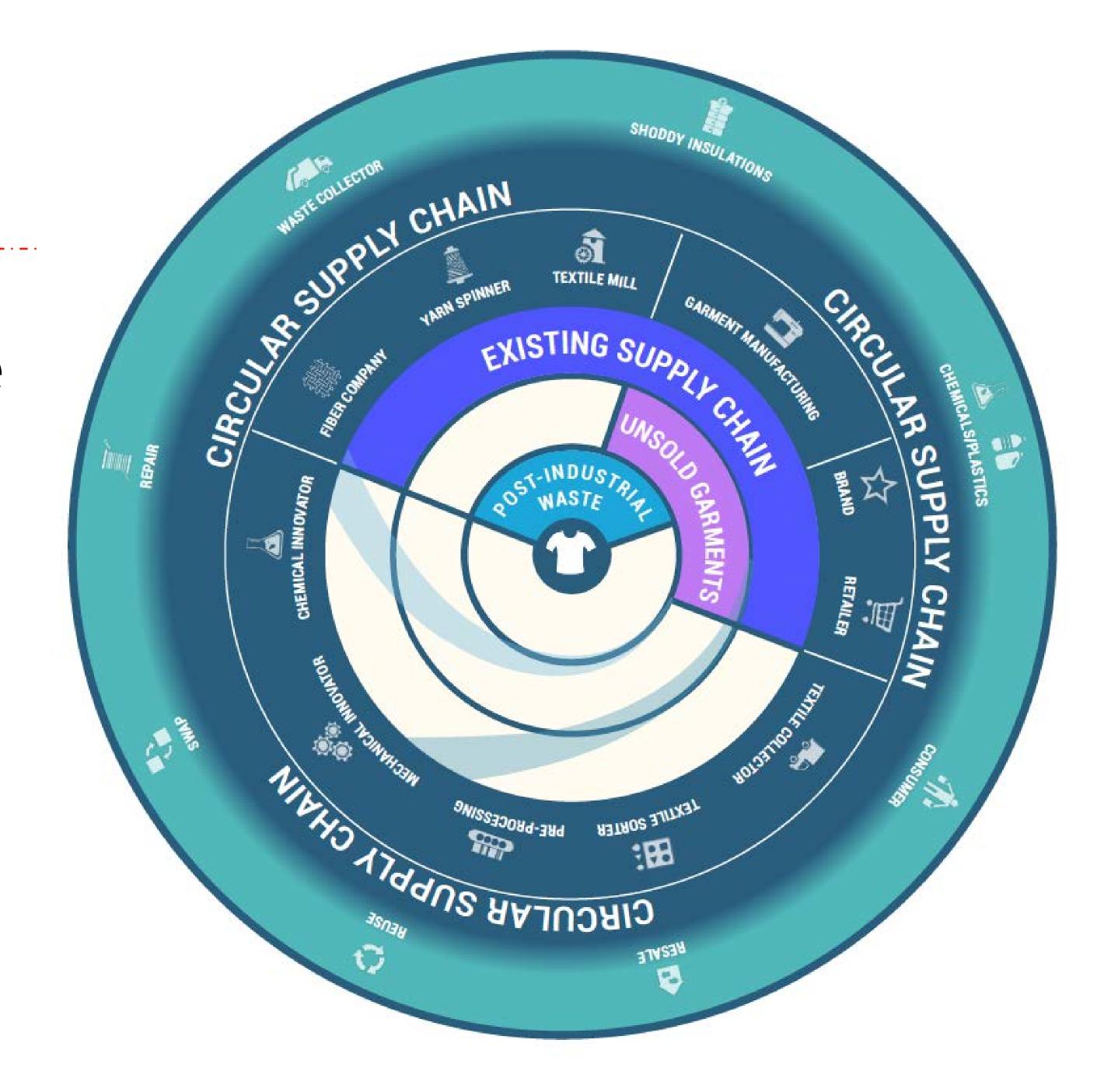


Why textile recycling?





Textile-to-Textile Circularity





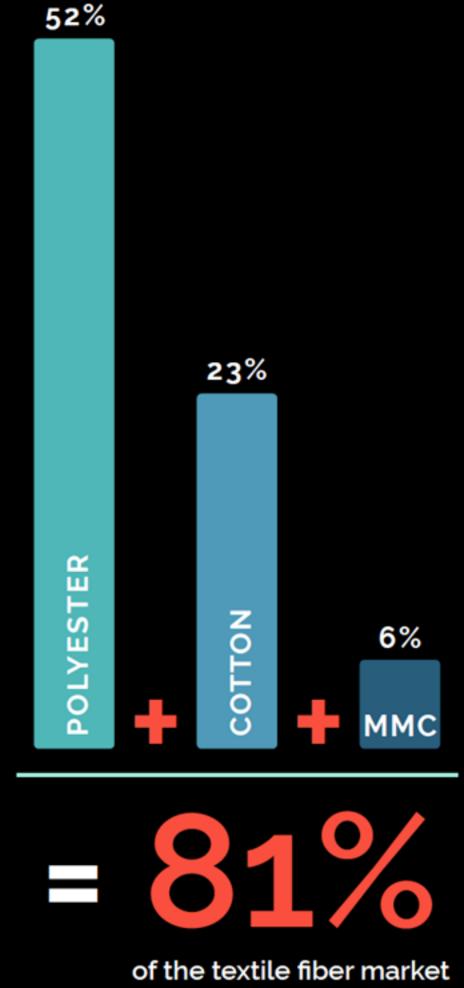
OUR SCOPE

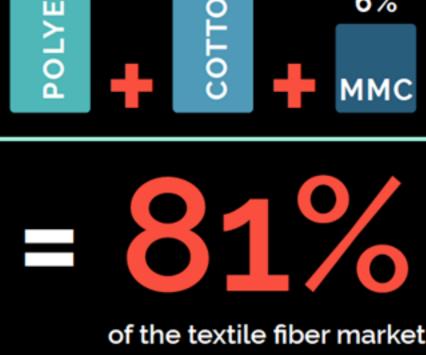
We focus on polyester, cotton and manmade cellulosics for textileto-textile supply chains. These three fibers cover over 80% of the textile market. Bottles, other packaging and agricultural and food waste are excluded.

Supply Networks include the east coast of the U.S., Caribbean Basin, Mexico, and Central America for the best opportunity and to align with functioning textile supply networks used by U.S. Brands and Retailers.

Brand & Retailers: All U.S. based companies

Recycling Technology types include both mechanical and chemical recycling. Recycler research is global based on the ability of technologies to be licensed or their outputs used by fiber producers in any location. Technologies cover polyester, cottons and blended fibers.







GEOGRAPHIC SCOPE

Post-industrial and post-consumer generation and concentration includes the east coast of the United States, where there is a high population density and existing textile supply networks. It includes 20 states and Washington, D.C. with a closer look at 26 metro areas.

STATES

Alabama	New Jersey
Connecticut	New York
Delaware	Ohio
Florida	Pennsylvani
Georgia	Rhode Island
Kentucky	South Caroli
Maine	Tennessee
Maryland	Vermont
Massachusetts	Virginia
North Carolina	West Virgin
New Hampshire	

METRO AREAS

New York, NY	Cincinnati, OH	Hartford, CT
Washington, D.C.	Columbus, OH	Birmingham, AI
Miami, FL	Cleveland, OH	Buffalo, NY
Philadelphia, PA	Nashville, TN	Rochester, NY
Atlanta, GA	Virginia Beach, VA	
Boston, MA	Providence, RI	
Tampa, FL	Jacksonville, FL	
Baltimore, MD	Raleigh, NC	
Orlando, FL	Memphis, TN	
Charlotte, NC	Richmond, VA	
Pittsburgh, PA	Louisville, KY	

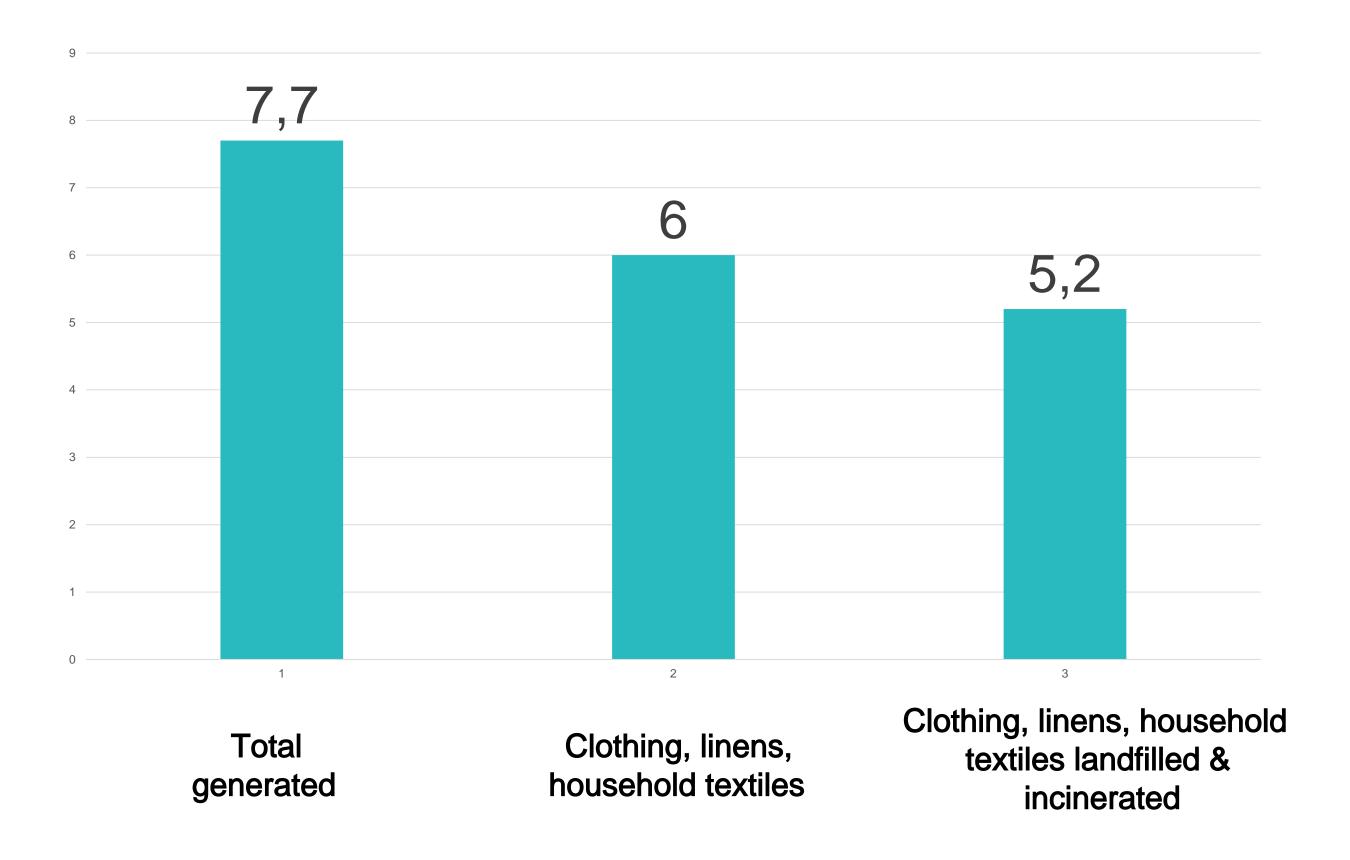


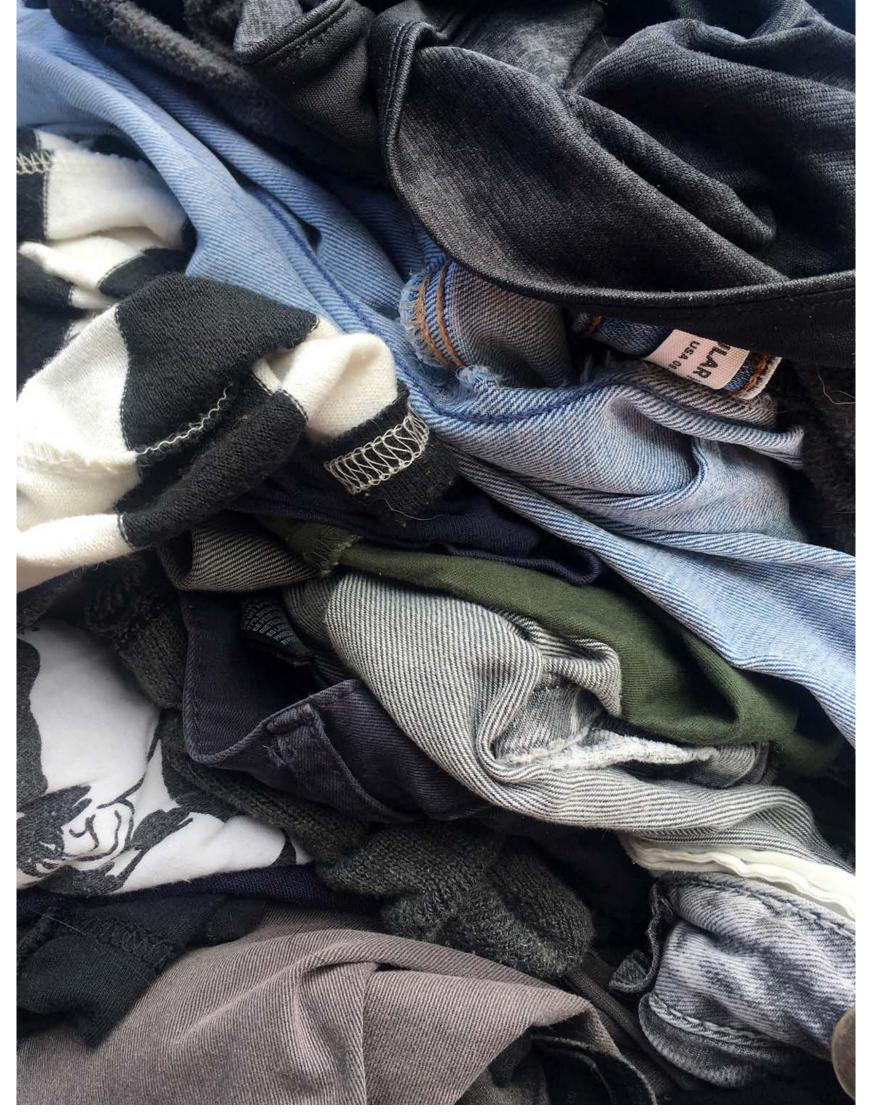
Spent post-industrial textiles (tons)

NAICS Code	Tons of Spent Textile Materials to Landfill
3132 + 3133 Fabric Mills, Finishing, and Coating	39,500
3141 Textile Furnishing Mills (Curtans and Linens)	14,750
3149 Other Textile Product Mills (Textile bags and Canvas Mills)	31,250
3152 Cut and Sew Apparel Manufacturing	4,500
TOTALS	90,000



Spent post-consumer textiles (millions of tons)

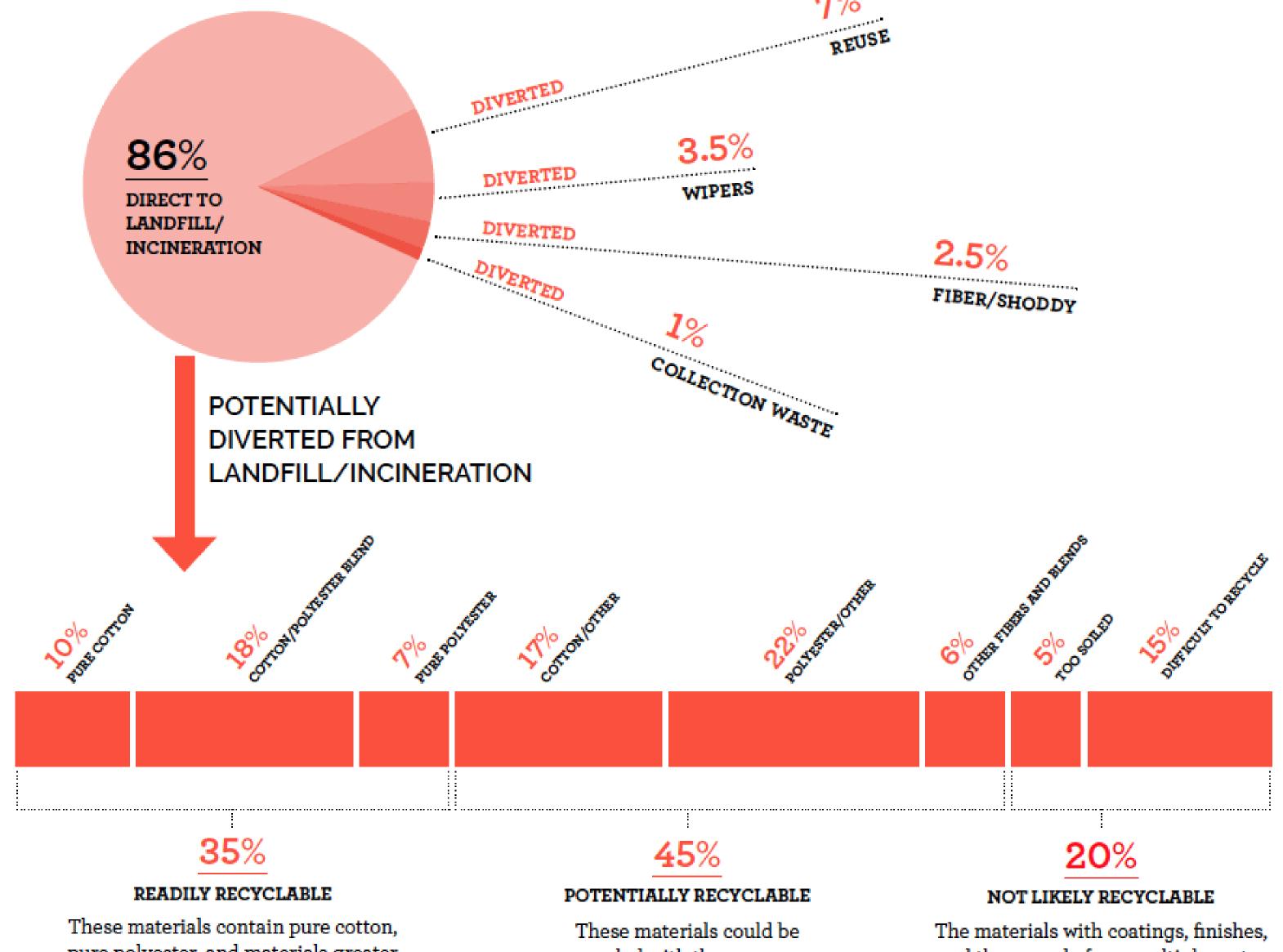








What is there to recycle?

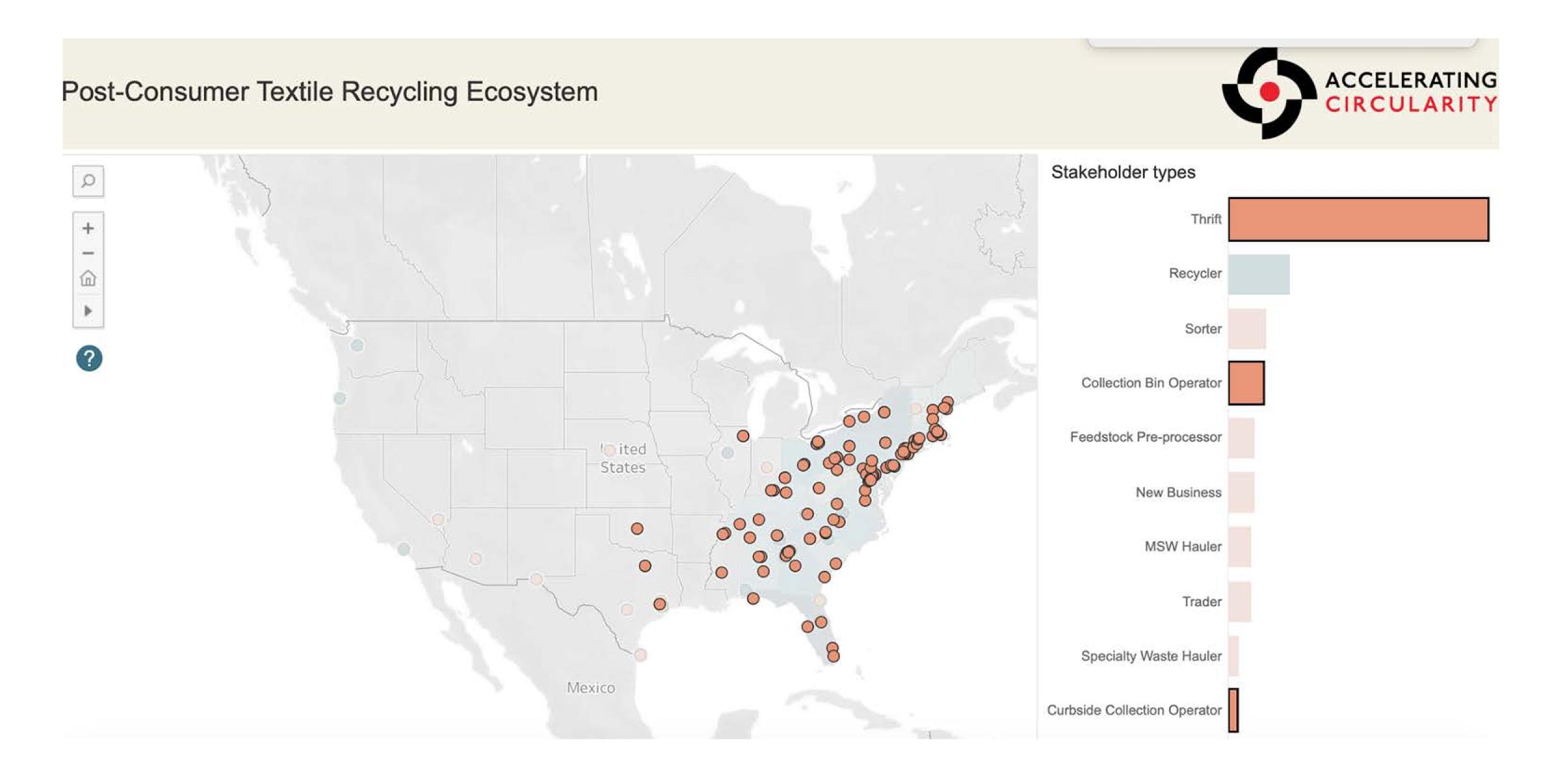


These materials contain pure cotton, pure polyester, and materials greater than 50% cotton with some level of polyester. Some degree of contamination is inevitable in post-consumer material, in order to be considered "readily recyclable," however, the material must contain little to no elastane.

These materials could be recycled with the commercialization of technologies that have a broader range of input specifications (ie: 1-20% elastane, man made cellulosics in a blend, nylon, etc.).

The materials with coatings, finishes, and those made from multiple materials and metallic fibers are difficult or impossible for existing recyclers to process. Materials that are too soiled by contamination with oils and other non-recyclable substances are not likely to be recycled.

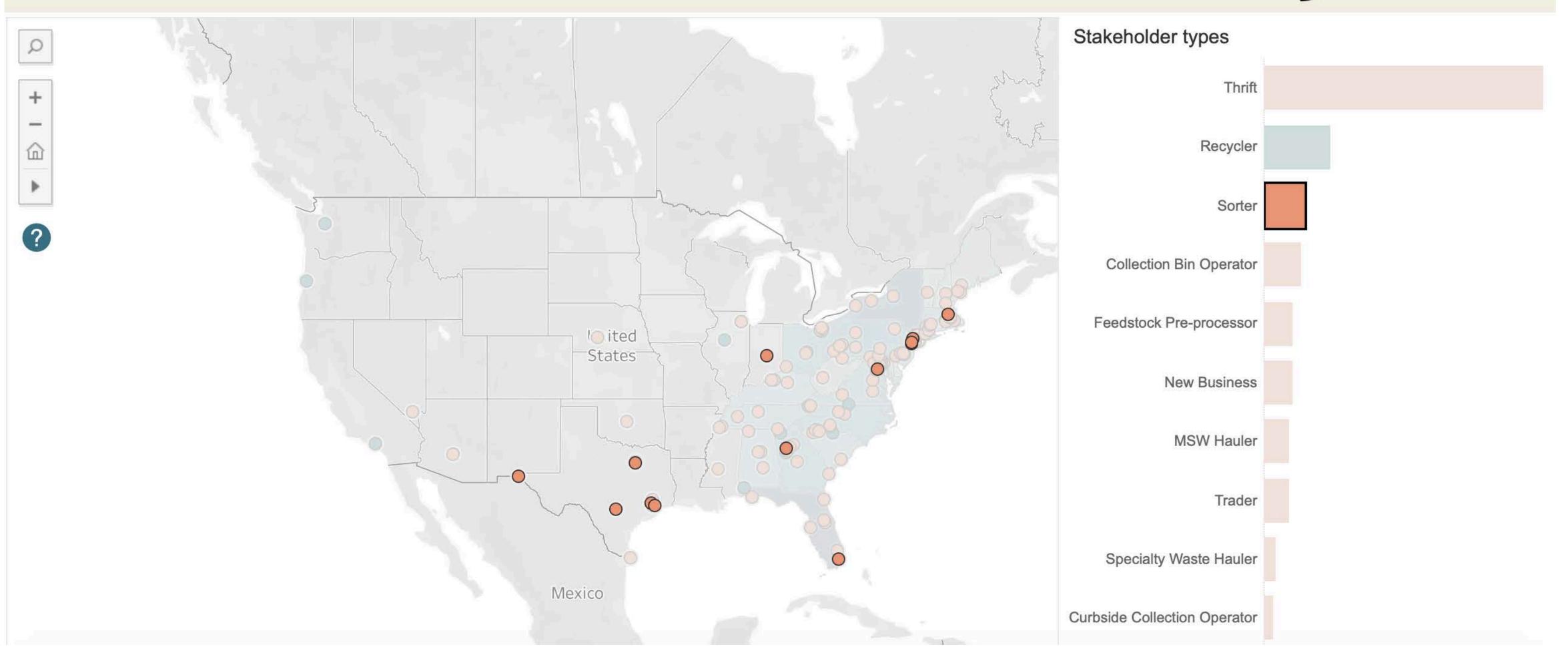
How do we collect & sort?



How do we collect & sort? - Sorters

Post-Consumer Textile Recycling Ecosystem

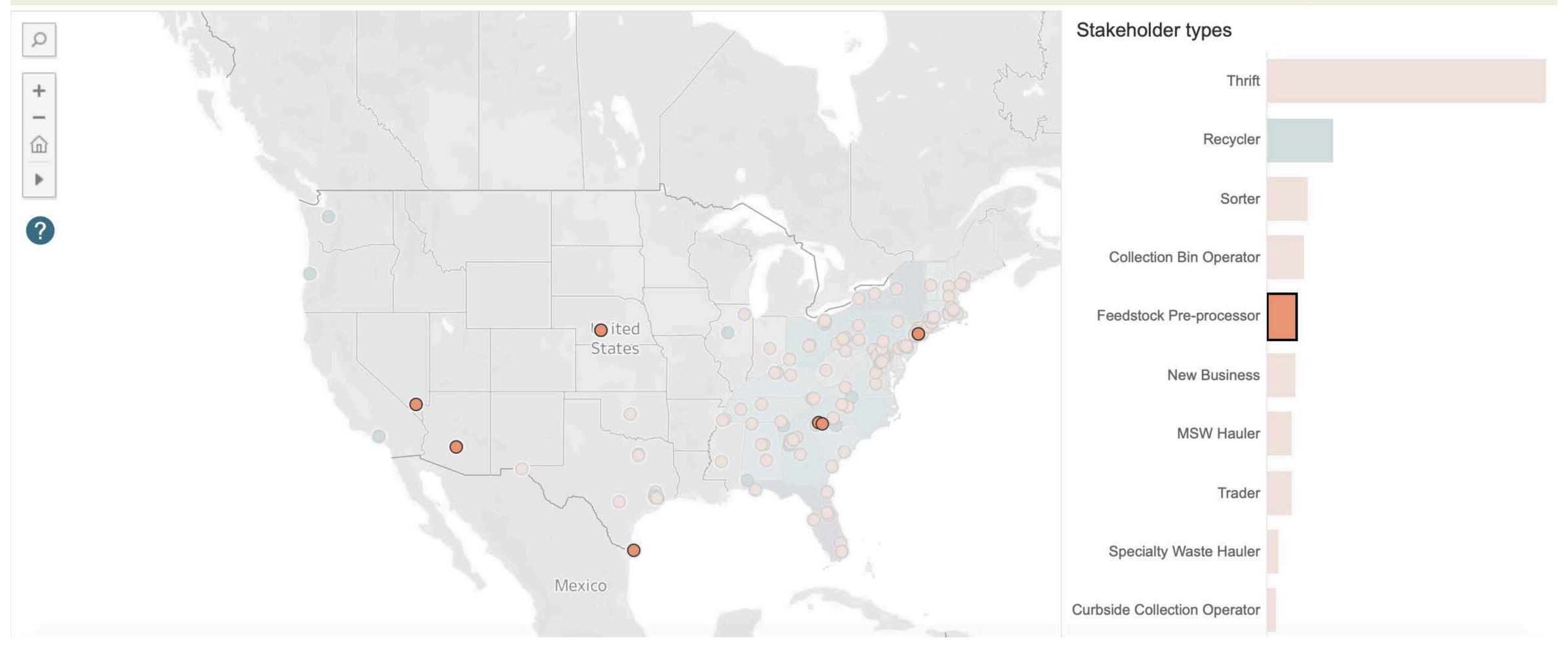




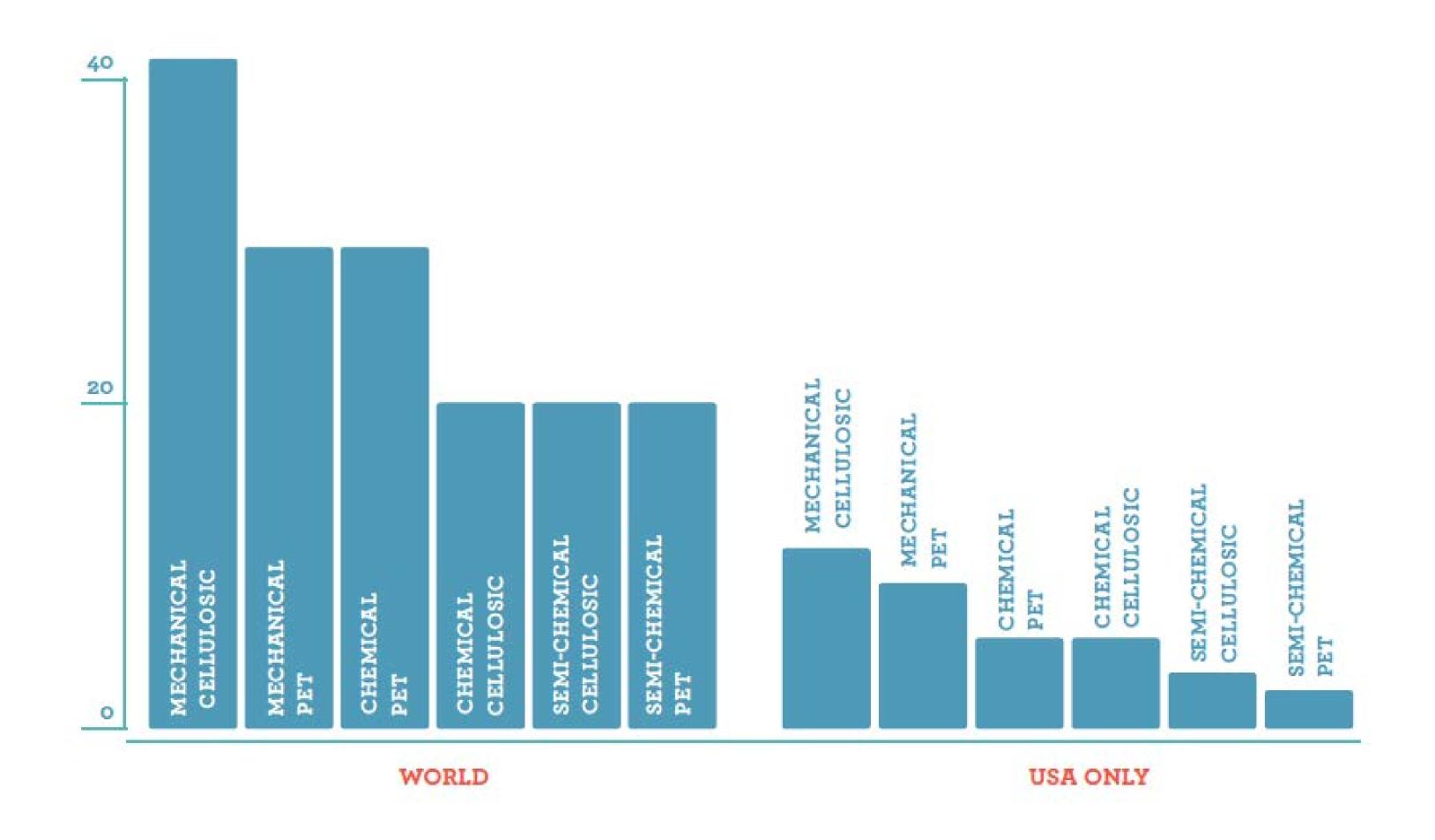
How do we collect & sort? - Preprocessing

Post-Consumer Textile Recycling Ecosystem





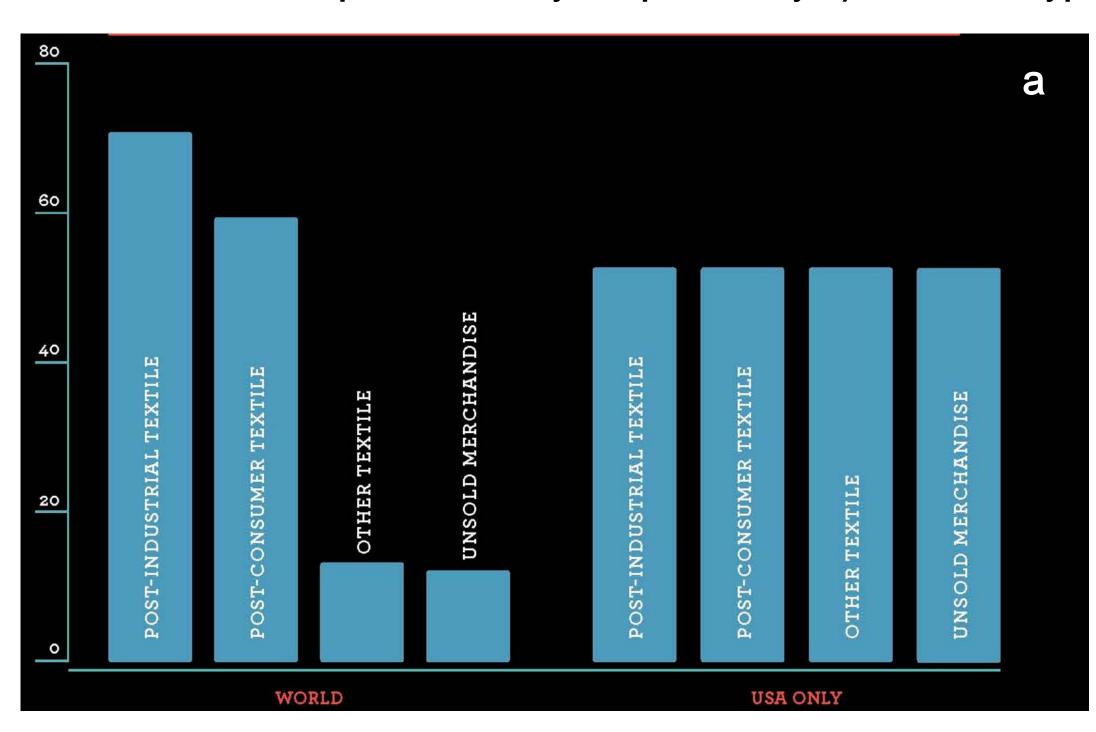
Who will recycle it?

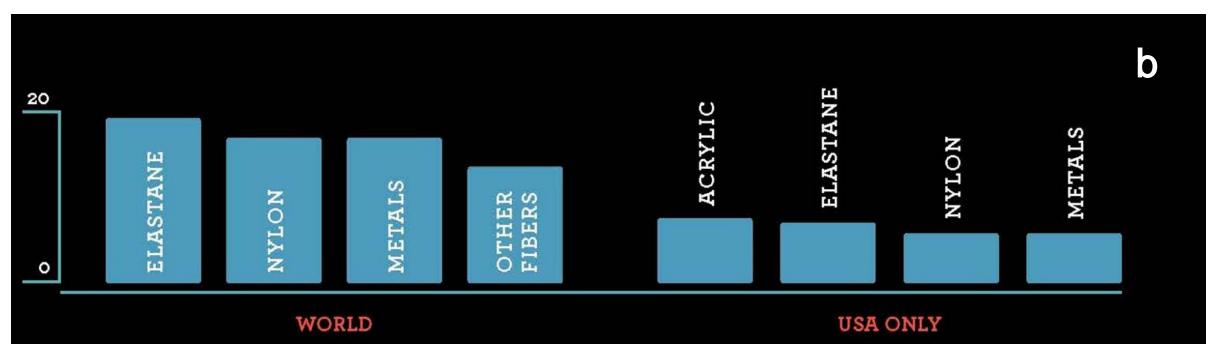




What can they recycle?

Global and US snapshots of recycler profiles by a) feedstock type and b) fiber restrictions





Other common restrictions include color, format, and construction



What will we make?

Recycler outputs

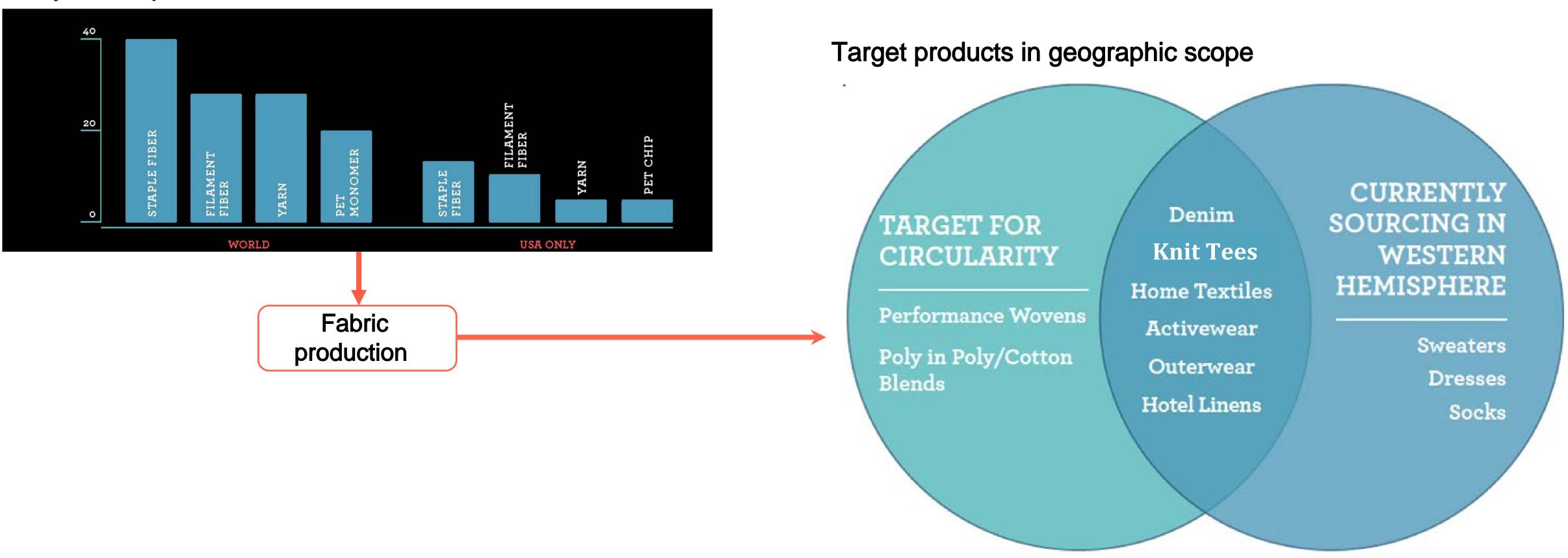








Photo by Anna Dziubinska on Unsplash

Our Ask

Brands & Retailers Collectors & Sorters Preprocessors Recyclers

www.acceleratingcircularity.org/research

We need collaborators who work on Design/Consumers/Policy







Karla Magruder

www.acceleratingcircularity.org