ACPE pilot goal is to design for recycling. As our pilots will utilize post-consumer spent textiles, the recycling process outputs will serve as a testing ground for circularity, transparency and traceability. Our collaboration together with our partners Reverse Resources and Avery Dennison, our ACPE pilots will include a variety of interconnected stakeholders. Direct relationships and interactions between multiple stakeholders are expected to build on the concept of design for disassembly to hardware (trims) which need to be removed for some types of recycling. Any process that changes a polymer’s intended service life is considered downcycling. Downcycling refers to processes that result in a lower value polymer compared to the original material. Whether to downcycle or add value to a material is highly dependent on the specific recycling technology in mind.

The value of spent materials is currently not recognized and materials that would have otherwise been landfilled or incinerated are the raw materials for our testing. The feedstock generation, collection, sorting, processing and output of our pilots are designed to be fit for purpose, which allows for common understanding, accessibility, and resources and the reduction of environmental harm. In order to measure the efficiency of the recycling processes, it is necessary to quantify the amount of recycled material in the output. This is referred to as open-loop recycling where textiles are deconstructed into their constituent raw materials and are recycled according to the original material type. The recycled material is either fed back into the same system of origin or other industry systems. The collected material is first sorted to separate it by color, dyes, coatings, and other raw materials.

A general term for raw material in the process is feedstock. A raw material supplied to a machine or processing equipment is referred to as feedstock. This group’s scope includes mechanical recyclers processing cotton and cotton polyester blends, textile recycling, and fabric recycling. This includes operations such as cutting, cleaning, deconstructing, removing hardware (trims), and separating material by color, dyes, coatings, and other raw materials. The output is recycled cotton material, single jersey, Ne 24/1 ring spun, and Ne 24/1 ring spun. The materials are transferred from the point of origin or use to a point of waste products or other combustible materials in an incinerator. Waste products or other combustible materials in an incinerator are destroyed through burning. When waste products or other combustible materials in an incinerator are destroyed through burning, the material is referred to as waste.

There are several methods of recycling spent textiles. Refibra® technology builds on the concept of design for disassembly to hardware (trims) which need to be removed for some types of recycling. To collaborate with equipment supplier to support the testing, the ACPE’s Recycled Cotton pilot project will use a machine designed to increase the recycled content of cotton and cotton polyester blends. Using Refibra™ technology, the ACPE’s Recycled Cotton pilot project will use a machine designed to increase the recycled content of cotton and cotton polyester blends. The machine creates variety of design options; increases the recycled content; destroys waste material through burning. The machine builds on the concept of design for disassembly to hardware (trims) which need to be removed for some types of recycling. To trial demo-scale depolymerisation of post-consumer single jersey – cellulosic: completing development yarns and fabrics for review meetings between brands. This group’s scope includes mechanical recyclers processing cotton and cotton polyester blends, textile recycling, and fabric recycling. This includes operations such as cutting, cleaning, deconstructing, removing hardware (trims), and separating material by color, dyes, coatings, and other raw materials.