

End Market Taxonomy for Textile & Apparel Industry

Figure 1.

Key stakeholders for keeping waste materials in a closed loop system. Textile waste can be post-industrial or post consumer. It will then go an aggregator who sells materials to end market brokers, if brokers have a market for specific materials. This is contingent upon many factors: market conditions, material quality & quantity, chemical composition, fiber composition and mixing, technical capacity to recover and recycle materials.

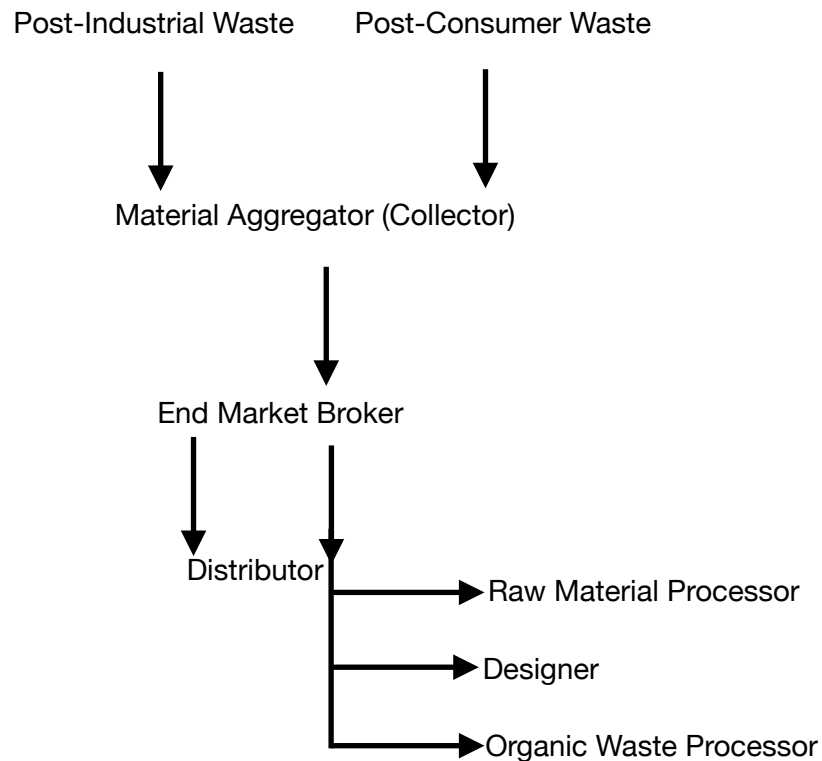


Figure 2. A closed loop life cycle of textiles.

A closed-loop textile life cycle that could be realized by integrating tracing mechanisms from a garment's incipency; closing the loop through reuse, recycling, remanufacturing, and composting of textiles. The most preferred closed-loop system is textile reuse (and repair) because it avoids landfilling and incineration with the least extra supply chain steps and consequent energy demands (Ilgin and Gupta 2009). The second preferred option is textile remanufacture where second-hand garments in good condition are consigned by designers who draw up plans to deconstruct them and transform them into newly designed pieces (Dissanayake and Sinha 2015). Finally, textile recycling takes post-consumer or post-industrial waste and mechanically processes it to become feedstock for new fibers (composting is a form of recycling) (Muthu 2015; World Health Organization n.d.). These closed-loop systems can be catalyzed by emerging second-hand markets eager to capitalize on opportunities from traceable and recoverable resources. This is all premised on close stakeholder collaboration and the responsible disposal of garments by consumers (Muthu 2015) who are empowered by information availability. (Rusinek, Zhang, Radziwill 2018)

