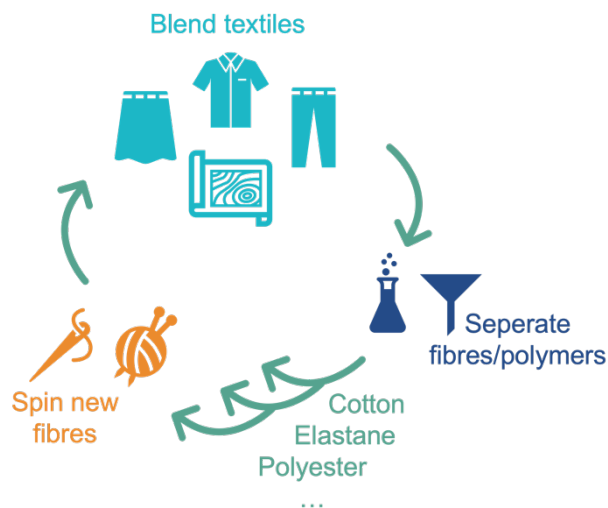


## Separation and recycling of mixed textiles

The worldwide consumption of clothing and textiles is growing drastically without any sign of diminution. This increase is driven by business models like fast fashion, i.e., more and more fashion collections are promoted, produced, cheaply sold and consumed within shorter time periods. Most of these textiles are disposed without further utilization, commonly even clothing that could still be worn. An increasing textile market is therefore associated with huge amounts of waste. Furthermore, the demand for resources and CO<sub>2</sub> emission for the production and transport of textiles immense. But not only clothing textiles are disposed, also industrial and household textiles like carpets or furniture have a share. Recycling of textile is often complicated by the fact that many textiles are blends, made from different fiber materials, either synthetical polymers, like PET or elastane and cotton. The separation of these blends is not trivial and therefore inefficient and uneconomic for many textile producers. Together with CENTEXBEL and Ghent University we try in one of our research projects to find a novel solution to separate fiber materials from textile blends with biobased and eutectic solvents, to spin new fibers from used textiles. We have already developed a process to separate elastane from cotton and PET and will be able to reuse the single components for new applications in near future.



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