



Fibersort Project Updates

Project partners Smart Fibersorting and Valvan are busy setting up the new colour scanners and automated feed-in system in the Fibersort machine at the sorting facility, whilst project partner Reshare Leger des Heils, is developing the Fibersort Business Case. Procotex has undertaken the next steps from recycling Fibersorted materials to testing the potential to spin yarns out of the recycled fibres. Worn Again continues to develop their technology for recycling polycotton blends and has recently been recognised with the AN-

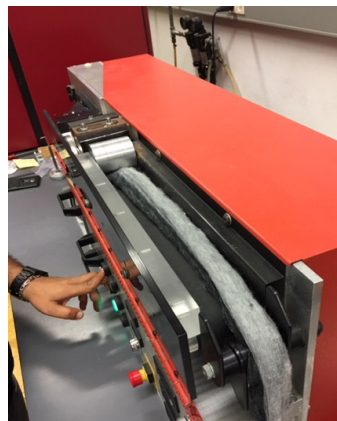
DAM Innovation Award. Finally, Circle Economy in collaboration with all project partners have published an overview of current and potential end-markets for Fibersorted materials, as well as recommendations for policymakers at regional, national and European level to ensure automated sorting technologies live up to their full potential. Further, the partners have spent the past months on the road, spreading the word and demonstrating the potential of the Fibersort technology.

Validating the potential of Fibersorted Materials

After receiving results from the latest recycling trials that show the Fibersort is sorting with a high-degree of accuracy, project partner Procotex, has taken the next steps to test the potential of these Fibersorted post-consumer textiles. Procotex investigated the opportunities to integrate a certain percentage of recycled Fibersorted textiles into a final yarn through two different technologies: open-end and ring spinning.

First Test

During July, the partner visited DITF Institute in Germany. After several open-end spinning tests, it could be concluded that, through this spinning process, a 12 Nm wool/acrylic yarn with 50% recycled post-consumer content could be developed. As well, yarns up to Nm 20 were obtained. Possibilities could be extended when testing at an industrial facility.



Further, finer counts could be achieved by lowering the percentages of recycled content. Innovation in the way yarns are spun and twisted could also result in a variety of fantasy yarns for furniture, curtains, seats and even new clothing.



Procotex visit to DITF Lab, to test Fibersorted Materials through open-end spinning technologies.



Yarns developed through ring-spinning during Procotex second testing with Spanish spinner.

Second Test

In September, Procotex received the resulting yarns from the ring spinning tests conducted by a Spanish spinner. The material used for this testing included a bale with 70% wool content and another one with 90% wool content. The spinner has found that it is possible to ring spin the fibers into a new yarn with 60% recycled post-consumer Fibersorted textiles, busting the myth that post-consumer mechanically recycled textile fibres are only able to be spun by open-end spinning. The spinner is also positive that the yarn has the potential to be commercialised in the market. Hence, the next step for the consortium will be to assess the applications that this yarn could serve when knitted into a fabric.

The partner will continue testing the potential of these yarns to be developed into fabric. In this regard, project partner Nicolas Douchy, managing director of the recycling division at Procotex, says: "The first steps have been taken with two well known flat-knitting Belgian companies in order to create new fabrics. The first goal is to create a jersey fabric. In case this would seem too difficult then double-knitted fabrics will be produced in order to show that the yarns provided by Procotex can be used in future sustainable designs. Both knitting companies' expectations are very high. High tension for the results...the circular loop is nearly closed!"

Recent Publications

Exploring End Markets for Fibersorted Materials

In the textiles recycling landscape, As more and more high-value recyclers are popping up and existing technologies are scaling up their production in the textiles recycling landscape, the Fibersort project has mapped the high-value recyclers landscape, providing more insight into the current and potential end markets. The overview of high-value recyclers and the types of materials that they process are available open-source through this [link](#).

We encourage all organisations to enrich this document by providing feedback, suggesting other high-value recyclers or more detailed information on their operations. Please reach out to: natalia@circle-economy.com with your suggestions. This research builds on publicly available information on recycler's websites or reports and the document will be regularly updated until project end in March 2020.

RECYCLERS MAPPED PER MATERIAL TYPE



Polycottons	11%
Other Materials	13%
Wool + Wool 80% blends	18%
Polyamide	18%
Polyester	22%
Cotton	33%

Overview of the type of materials that textile-to-textile recyclers process.



Enabling the full potential of automated sorting

While the challenges and opportunities of used textiles are increasingly in the spotlight of governments, industry, and civil society, considerable system changes are required to transition towards a circular economy for textiles.

The Fibersort project has recently published a report focusing on recommendations for policymakers to ensure the successful implementation of automated sorting technologies. The policy recommendations outlined are formulated showing the legislative, economic and soft instruments that regional, national and the European governments have at their disposal to allow the Fibersort, as well as similar technologies, to live up to their full potential.

The Interreg NWE Fibersort consortium hopes the European, national and regional governments will explore the policy interventions outlined in this report. As a next step, the consortium will illustrate the potential of automated sorting technology for different actors throughout the future closed loop value chain of used textiles in its upcoming Case Study report, to be published at the end of this Interreg project in March 2020.

Fibersort on the road

ITMA

ITMA is one of the premier events and exhibitions to showcase innovation and new technologies in textiles, especially for manufacturers and (recycling) technology developers. This event happens once every 4 years, and was held this year in Barcelona, where more than 1700 exhibitors from approximately 45 countries converged. Fibersort project partners travelled to showcase the innovative sorting technology by fibre composition through near-infrared technology that scans the garments fed to the machine.



Valvan showcasing the Fibersort technology at ITMA Exhibition Stand.

Project partner Valvan brought the demo machine to show the attendees how the technology works. Further, Circle Economy presented the Fibersort project and technology at the Innovation Lab Speakers Platform, a space that encourages information sharing and knowledge dissemination on future trends, innovation insights and strategic solutions.



Circle Economy presenting the Fibersort at ITMA Speakers Platform.

Plastic Free World Conference

This two-day conference and exhibition is aimed at businesses looking to reduce their plastic consumption, find and source highly sustainable alternative bio-based materials, and create a more circular economy throughout their supply chain.

Fibersort project manager, Hilde Van Duijn, delivered an engaging presentation on how to create a zero waste textile industry, focusing on the key role that the Fibersort can play to turn used textiles (containing around 65% of polyester) into feedstock for recyclers. This is due to the Fibersort's ability to recognize the composition of textiles in the sorting process. The event was attended by a vast amount of relevant recyclers, hence a perfect opportunity to connect and assess whether Fibersorted materials are suitable to use as feedstock for recycling.

Worn Again wins ANDAM Fashion Award

Congratulations to project partner Worn Again, who won the Fashion Innovation Prize last June, another milestone in the continued development of their polymer recycling technology. This technology enables capturing the value of non-rewearable textiles made out of cotton/polyester fibre blends, which today remains a recycling challenge.