RETRAKT – Circular Textiles. Resilient Future.

Nicole Espey*†[1], Thomas Mühlbradt[2], and Marcel Völkoi[3]

[1]ITA - Institut für Textiltechnik der RWTH Aachen University – Germany
[2]FOM Hochschule für Oekonomie Management – Germany
[3]HumTec (Human Technology Center) der RWTH Aachen University – Germany

Abstract

"From linear to circular" – The textile and fashion sector is facing fundamental changes. One priority on the EU's legal agenda: promoting resource-efficiency and circular production principles for consumer goods like textiles and apparel. Central elements on the way to a circular economy are the Ecodesign for Sustainable Products Regulation (ESPR) and the introduction of the Digital Product Passport (DPP), establishing new requirements for durability, repairability, recyclability, transparency, and resource efficiency in textile products. This requires not only technical and economic transformation – it is always up to people to implement new obligations. Within the research project RETRAKT ("Resilient Transformation Management for Circular Economy in the Textile Sector") we take a human-centred perspective to implement this transformation. The six project partners jointly research and test how the textile industry can shape its transformation toward a circular economy according to the new EU textile legislation while strengthening organizational resilience across the global textile value chain. The aforementioned transformation process in textile companies is a complex endeavour due to multiple tasks and requirements to be performed simultaneously in the upcoming years. While currently products are manufactured in a traditional linear manner for the existing market requirements, new eco-design specifications have to be integrated in the existing linear processes. At the same time, the companies will need to collect and provide a variety of data for the new Digital Product Passport (DPP). A strategy for managing this complexity is to strengthen the overall "organisational resilience" by drawing on staff's in-depth knowledge of production processes and to encourage them to incorporate new "circular" requirements into their existing daily tasks. In this way, we enhance the working capacities of the team and intensify the overall "organisational resilience" to adjust the system's functioning prior to, during, or following any kind of unforeseen changes, disturbances, and opportunities and thereby sustain required operations under both expected and unexpected conditions.

Keywords: Circular Economy, EU Legislation, Ecodesign for Sustainable Products Regulation (ESPR) for textiles, Digital Product Passport (DPP) for textiles, Resilience Engineering

*Speaker
†Corresponding author: nicole.espey@ita.rwth-aachen.de