

Barriers and Innovative Approaches of the Transition towards Circular Economy Model in the Textile Industry

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In recent years, the textile industry has actively upgraded and transformed from its traditional linear production model to a circular production model. The circular supply chain not only gives new life to discarded textiles but also reduces the overall carbon emissions of the supply chain. However, the industry's transition to a circular supply chain model faces several barriers, including cultural, market, policy, and technological challenges. The purpose of this article is to provide reference approaches for companies facing barriers in transitioning to a circular model, with a specific focus on the textile industry. It summarizes successful case studies in circular textiles that have overcome these four major obstacles, analyzing innovative solutions for companies facing challenges in transitioning to a circular model.

According to the 2018 study "Barriers to the Circular Economy: Evidence from the European Union," the following conclusions were drawn: Cultural barriers are the most commonly mentioned obstacles by businesses and governments. These barriers primarily stem from customer acceptance and company culture. For circular products to succeed, they not only need to be accepted by end-users but also supported and embraced within the internal culture and workforce of the company. This requires integration with company goals, strategies, and key performance indicators. The second type of barrier is market-related. Businesses face difficulties in transitioning from a linear system to a circular system. These challenges are closely related to the costs associated with the supply chain for recycled materials. Policy barriers constitute the third type of obstacle. The lack of flexible and supportive policies for implementing circular models hinders progress. In fact, many policies obstruct the achievement of circularity. The final barrier is technological. It is the least frequently mentioned type, although it is perceived as a more challenging aspect to overcome. However, companies believe that technological solutions are relatively mature, while they find front-end product design more difficult in terms of technological implementation.

Successful cases of circular textile transition demonstrate that companies overcome the barriers of transitioning to a circular model integrate internal innovative resources and seek external collaboration and business opportunities. They provide

consumers with key circular products and services, creating long-term development opportunities on the path to the textile circular transition.

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