From Fiber to System: Rethinking the Future of the Circular Textile Economy

Mandy Hinzmann*[1] and Doris Knoblauch*†[1]

[1]Ecologic Institut gemeinnützige GmbH – Germany

Abstract

A circular textile economy will not emerge from a single innovation-it will be built through the interaction of many solutions across the entire value chain. This is precisely the focus of the 16 research projects funded under the BMFTR research programme "Resource-efficient circular economy - circular sustainable textiles: development of holistic, practical solutions for closing loops in the textile industry". The keynote highlights the key insights that emerge from these diverse research activities. Rather than focusing on individual projects, it explores the overarching transformation pathways shaping the future of the textile industry: Design for Circularity, new business models, digital product information, innovative recycling technologies, and collaboration across the entire value chain. Drawing on selected examples, it demonstrates how technological innovation, digitalization, and new forms of cooperation reinforce one another, and which enabling conditions must be established for circular textile systems to work in practice. Looking beyond individual research outcomes, the keynote presents a holistic vision of the future circular textile economy. It illustrates why circularity is about far more than recycling and identifies the key steps needed to translate research into market-ready solutions and drive the large-scale transformation of the textile sector.

Keywords: (Design for) Recycling, (Design for) Longevit, (Design for) Circularity, Technical Textiles

*Speaker

†Corresponding author: