

FINIX

sustainable textile systems

Interaction coordinator Sini Suomalainen

Sini.Suomalainen@aalto.fi

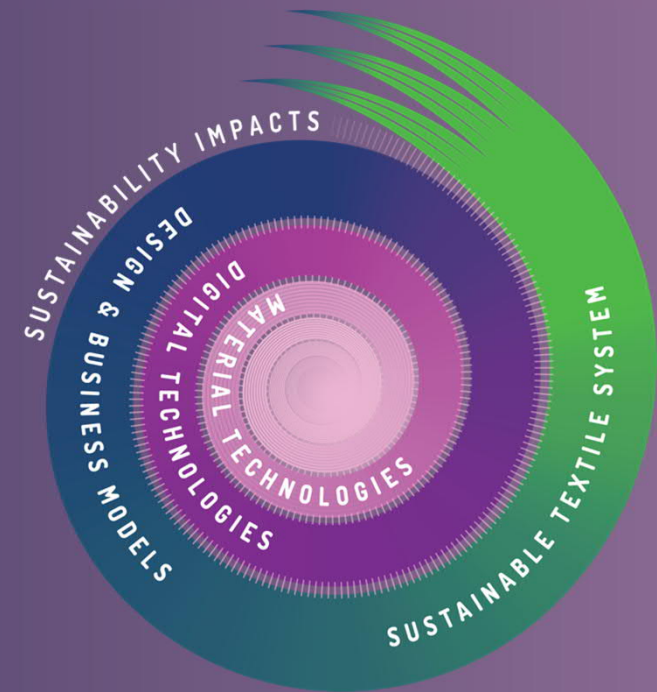
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We solve global challenges in textile business

- The world calls for a sustainability revolution in how we make, use and dispose of textiles.
- We combine top scientific research on sustainability aspects of textile systems.
- We help co-creating circular economy based textile business in Finland in ways that promote global sustainable development.



Finix consortium & partners



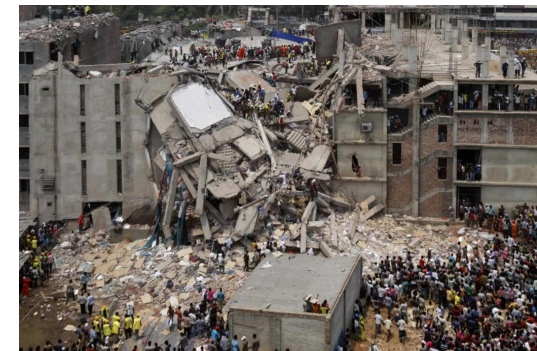
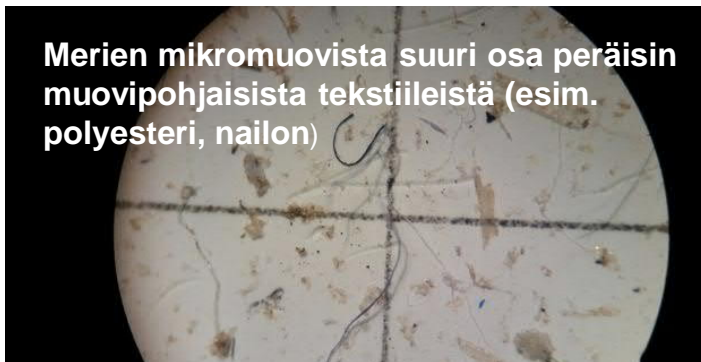
Partners



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Why?



CO2: United Nations Economic Commission for Europe. (2018) "UN Alliance aims to put fashion on path to sustainability". <https://www.unece.org/info/media/presscurrent-press-h/forestry-and-timber/2018/un-alliance-aims-to-put-fashion-on-path-to-sustainability/doc.html> | Wastewater: Kant, R. (2012) Textile dyeing industry an environmental hazard. *Natural Science*, 4, 22-26. doi: 10.4236/ns.2012.41004. Cited in: Ellen MacArthur Foundation. (2017) A new textiles economy: Redesigning fashion's future. <http://www.ellenmacarthurfoundation.org/publications> | Microplastics: International Union for Conservation of Nature. (2017) Primary microplastics in the oceans: A global evaluation of sources, p.21. Cited in: Ellen MacArthur Foundation. (2017) A new textiles economy: Redesigning fashion's future. <http://www.ellenmacarthurfoundation.org/publications> | Freshwater: World Bank, AQUASTAT, and FAO. (2014) Dataset: Annual freshwater withdrawals, total. Cited in: Ellen MacArthur Foundation. (2017) A new textiles economy: Redesigning fashion's future. <http://www.ellenmacarthurfoundation.org/publications> | Pesticides: Rodale Institute. (2014) Dig deeper: Chemical cotton. Cited in: Ellen MacArthur Foundation. (2017) A new textiles economy: Redesigning fashion's future. <http://www.ellenmacarthurfoundation.org/publications>

TEKSTIILITEOLLISUUDEN SYSTEEMISET HAASTEET

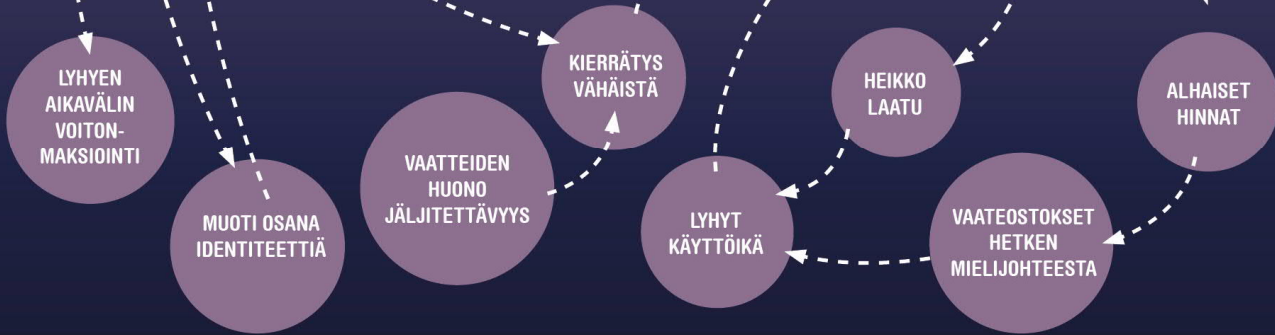
MAKRO



META



MIKRO



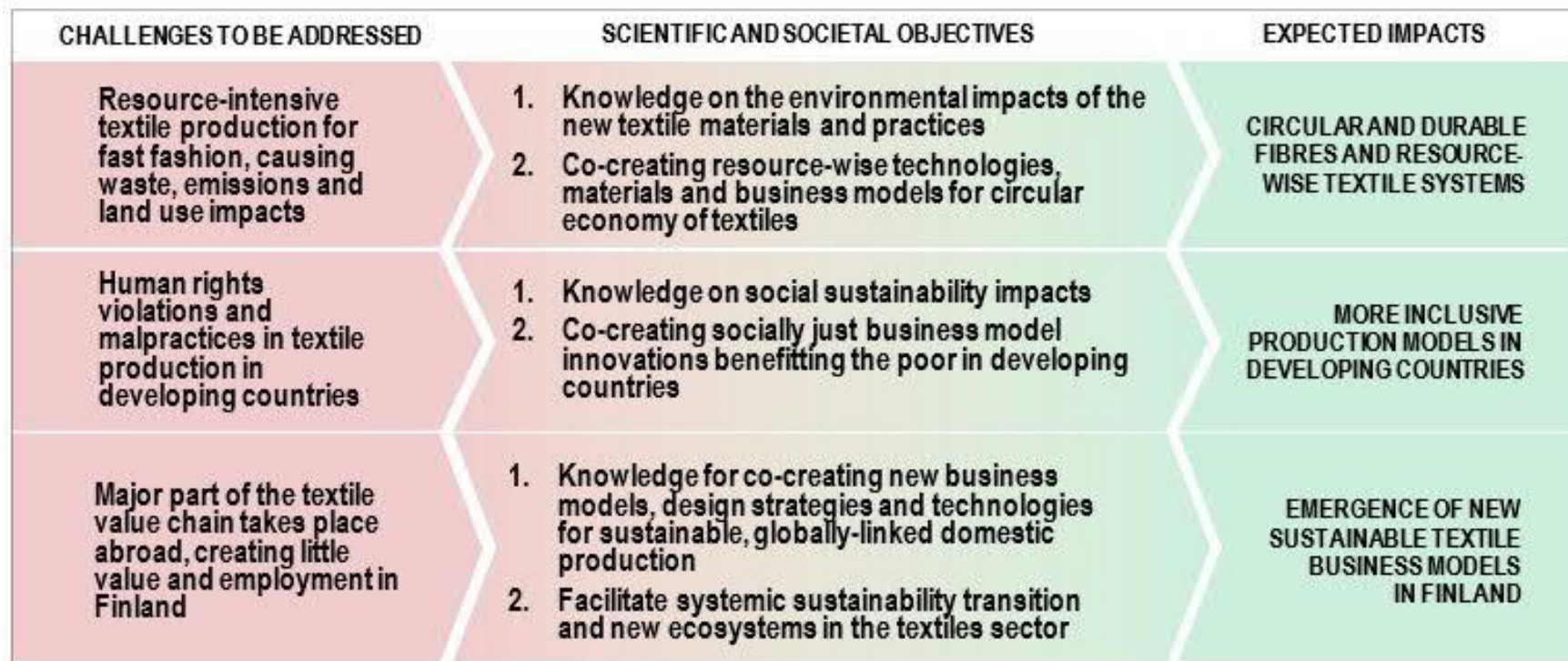
Finix vision

Currently worthless **materials** become valuable through novel sorting, treatment and processing technologies that enable upcycling textile waste, using agricultural and other waste for fibre-making, and closing chemical loops. Development of **digital technologies** for tracking and traceability make possible design for multiple lifetimes and new service-intensive **business models**. With new forms of **ecosystem governance**, these make up a textile system, where fibres remain in circulation through long use lives.



Interlinked breakthroughs across the consortium disciplines.

Challenges, objectives and expected impacts



Work package 1: Materials

WP1 concentrates on the investigation, development and evaluation of sustainable textile materials.

The focus is on:

- (1) novel cellulosic Ioncell textile fibres
- (2) developing tools for future machine vision
- (3) understanding the behavior of chemicals in textile recycling and their potential risks
- (4) defining textile quality criteria leading to new knowledge of product lifetimes.

Work package 2: Design and business models

WP2 seeks to transform design strategies and business models based on cutting-edge technologies and innovative services, all powered by information about product lifetimes and transparency.

The goal is to foster design aiming for multiple lifetimes, life-cycle orientation, quality understanding and recyclability of products. This can catalyse the emergence of new business models enabling resource-wise textile systems.

(A) Sharing: the digital information from garments' "activities" will be available and enable easier garment fleet management for sharing models; (B) Longevity: the information of product longevity can inform consumers the higher quality and give reason for higher price. Consumers with ethical interest have a possibility to invest on longevity; (C) Eco-efficiency: the lifetime information workwear sector can be connected to model "product as a service"; (D) Closing the loop: recycling and textile waste form new business opportunities, (E) Business model X: new information and digitalization will provide an opportunity to construct a totally new kind of business model for resource wise system.

Work package 3: Assessment

WP3 assesses the environmental and socio-economic impacts of the new textile materials and practices studied in WPs 1, 2 and 4.

The analyses will bring about the most critical sustainability aspects of the new materials and design and business strategies, will shed light over the areas where improvement is needed, and propose those improvements in iterative co-creation process with the stakeholders and WPs 1-2.

Work package 4: Governance

WP4 focuses on polycentric governance, investigating how it enables and promotes systems change in the textiles sector towards more sustainable practices.

Identify how new governance innovations can facilitate the transformation to a sustainable textile systems.

1. Policy analysis and recommendations for policy makers sustainable textile economy.
2. Focus on 3 ecosystem models: (1) closed-loop textile supply chains with digitally assisted material traceability, (2) social business ecosystems involving low-profit enterprises, non-profit organizations (e.g. recycling centres, NGOs) and consumers, and (3) industrial symbiosis systems, where textiles materials may be reused in completely new contexts or textiles materials may be manufactured from new raw materials.

Join our seminar!

- In Finnish, online
- on March 23rd 13-15
- Register here:
<https://link.webropolsurveys.com/EP/8EE1B199235440E1>



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Please contact



Sini Suomalainen

Interaction coordinator, Rhea Solutions Ltd

sini.suomalainen@aalto.fi



Minna Halme

Principal Investigator, Aalto BIZ

minna.halme@aalto.fi