This project is co-funded by the European Union and the Republic of Turkey

Technical Assistance for Assessment of Türkiye's Potential on Transition to Circular Economy

EuropeAid/140562/IH/SER/TR

INTERACTIVE PANEL SESSION 2: Good Practices
2. Circular Economy Related Applications from EU

İrem Tuğçe ÇELİK– SaXcell B.V.

Activitiy 1.2.2. Circular Economy Workshops
4rd October, Ankara, Türkiye

SAXCELL

Revolutionary New fiber

saxcell.com

Increasing the Recycling of Textile Fibers is the Greener Choice.

The philosophy behind recycling is quite simple: discarded cotton is an excellent feedstock for regenerated cellulose fibers.

By using discarded cotton, domestic or industrial waste you don't need cellulose from forestry which is an environmental advantage.

SAXCELL

Highlights

A team of researchers from Saxion University of Applied Science in Enschede started in 2011 with the SaXcell Project.

Founding SaXcell BV

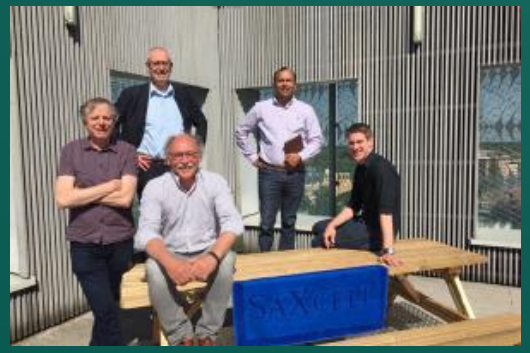
2015

The original inventors supported by Saxion founded the start-up company SaXcell BV, to further develop the technology towards commercialization

Upscaling of Recycled Cotton

2017

The first phase of production upscaling of SaXcell, proved to be successful.



Dutch and Turkish Partners Join Forces

2019

Group of investors (Sympany, Wevotex, Ugurlular, Selin Tekstil and Modeko) join SaXcell B.V.

Opening Pilot Plant

2020

During the production of SaXcell, every kilogram of recycled cotton yielded at least 980 grams of new yarn.

2023

We decided as our next step, to establish an SSPP with an annual capacity of 3000 ton of pulp.

SAXCELL

The impact of textile production and textile waste on the environment

Global fiber production has almost doubled in the last 20 years from 58 million tonnes in 2000 to 109 million tonnes in 2020.

The production of textiles has a major negative impact on the environment.

SAXCELL

Discarded textile to new product

Fibres based on the SaXcell process is the answer to fill the gap between waste and raw materials.

SaXcell is therefore the missing link in building a closed, circular textile value chain.

SaXcell fits within the existing Lyocell process,
the SaXcell fiber can be used immediately in the textile industry.

SAXCELL

Our Circular Supply Chain

Recycling Process

Collecting Waste

Consumer

Weaving Fabric

Yarn

Sorting & Cutting

Pulp

Wet-Spinning

SaXcell Fiber

SAXCELL Innovative Aspect

SaXcell fibers can be reproduced many times over, the fibers are stronger and more colorfast than the virgin fibers.
"*This is real renewal.*"

SaXcell fiber properties

- ✔ Air-gap spinning: 1,7 dtex, fiber length: 38 mm
- ✔ Strength: 43 cN/tex stronger than cotton and other regenerated fibers
- ✔ Elongation: 13%
- ✔ Hydrophilic
- ✔ Good dyeability
- ✔ Dye efficiency: higher that expected

SAXCELL

Sustainable Development

"Eco-efficiency" goes one step further when sustainable development focus on the needs of the present without compromising the needs of future generations.

CARBON FOOTPRINT

Carbon footprint is reduced, environmental assessment shows reduced global warming potential (GWP). Based on ecology life cycle assessment (LCA) textile recycling.

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SUSTAINABILITY

Recycling and reusing textiles, fibres and waste materials is an effective method to build sustainability in the apparel industry.

LESS WATER

Our process of recycling fibers uses less water and chemicals.

Combating Climate Change Through Recycling

SaXcell a circular resource that is not taken from newly grown and harvested cotton or newly grown and cut trees.

SaXcell avoids destruction of cotton in textile incinerators or landfills, stored CO_2 is retained.

Impact categories	SaXcell 100 % cotton	Sulphate pulp	Sulphate pulp sustainable[1]
Climate change (kg CO_2 eq)	0,48	0,54	0,58
Human toxicity (kg 1,4 DB eq)	0,107	0,234	0,194
Agricultural land occupation (m^2a)	0,01	4,82	0,83
Urban land occupation (m^2a)	0,004	0,031	0,005
Water depletion m^3	0,0100	0,0170	0,0251

[1] pulp made of eucalyptus wood from sustainable forest management

Partners

Birla Cellulose
Fibres from nature

Bossa

Shareholders

SYMPANY

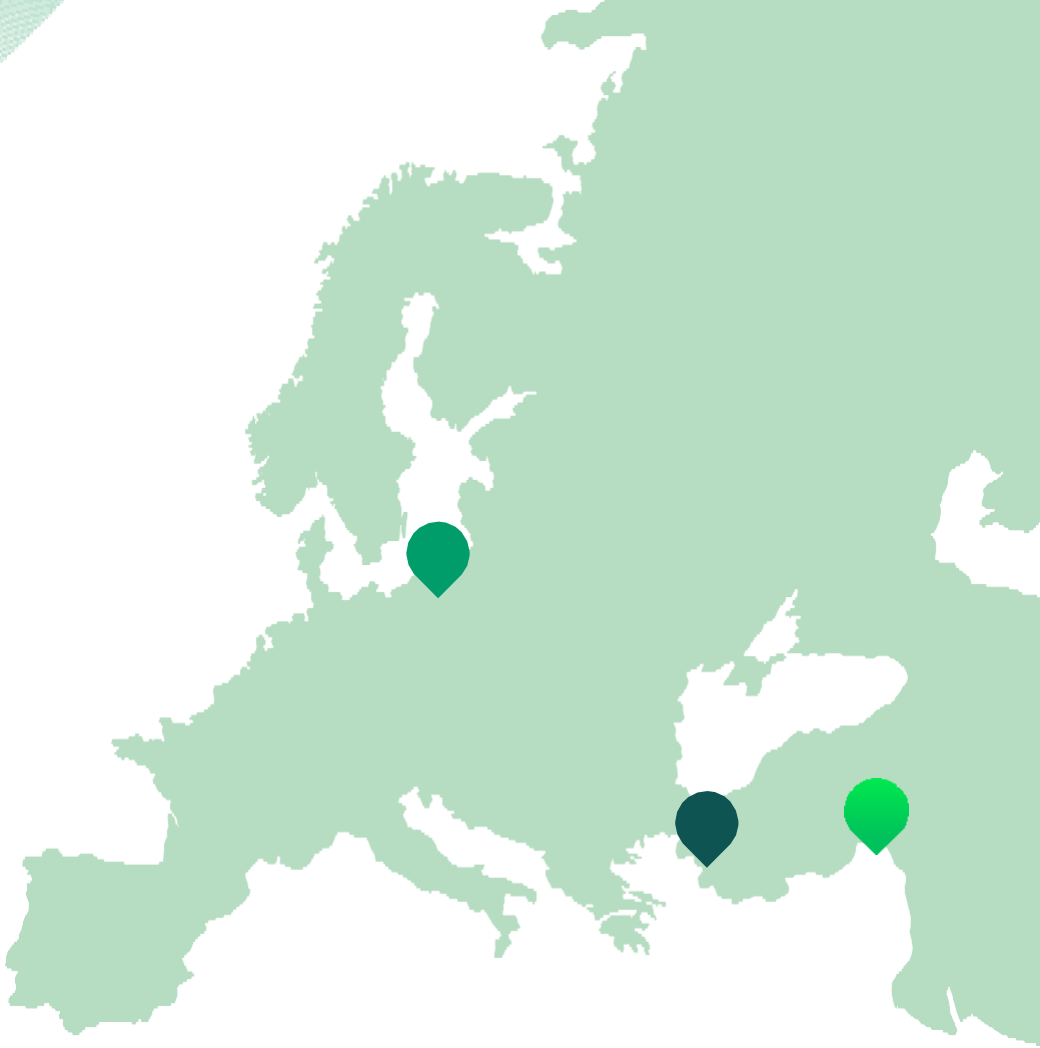
SELİN TEKSTİL

MODE CO

WEVOTEX

SAXION

UĞURLULAR



SAXCELL

Direction Board

Eric van der Weerd

CEO

Henk Goojier

CTO

Suleyman Kocasert

CMO

Contact Us

Our Solution

Learn more about Saxcell Circular Economy, our technologies, products and services.

Discover our system and join us. saxcell.com

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Thanks for your attention.

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REPUBLIC OF TÜRKİYE MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE

Environment and Climate Action Sector Operational Programme

deep Türkiye Circular Economy Action Plan

DAI