



The Twente Case:
accelerating
transition to a
circular textile
economy

**Expert Network on Textile
Recycling**

Final Conference (webinar)

Interreg
CENTRAL EUROPE



European Union
European Regional
Development Fund

ENTeR



TEXPLUS

samen optimaliseren

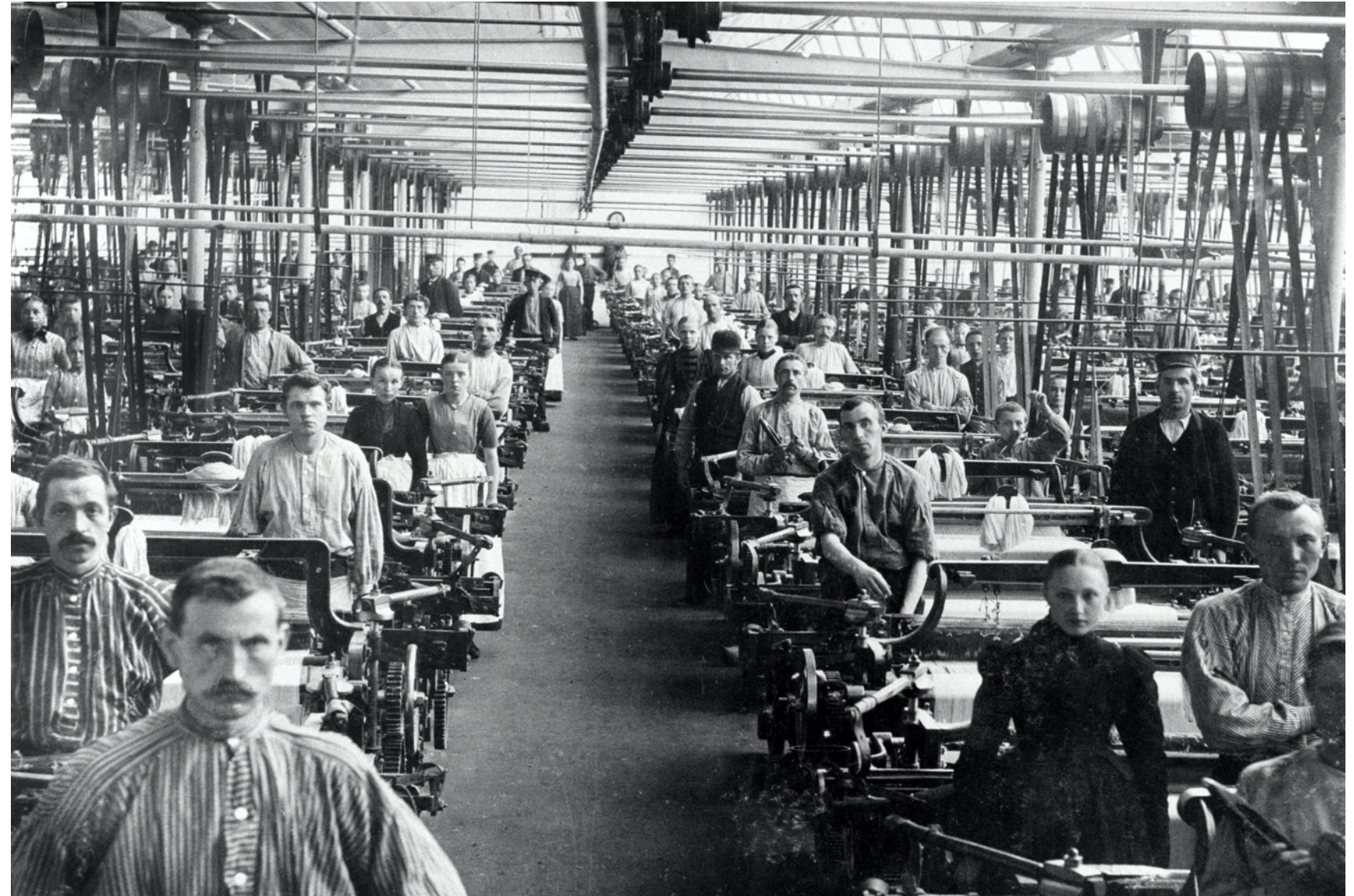


What is “Twente”? A region in the east part of the Netherlands



- ❖ The Netherlands: 17 million inhabitants
- ❖ Region Twente: 600.000 inhabitants
- ❖ City of Enschede: 159.000 inhabitants
- ❖ Borders on Germany

East Netherlands: since
19th century a cradle of
textile industry &
education





Circular Economy Action Plan

For a cleaner and
more competitive
Europe

The EU Challenges:

- ❖ 2023: 5% PCR textile in all Denim in NL
- ❖ 2030: 50% sustainable fibers in all textiles, >30% PCR in EU
- ❖ 2050: 100% energy neutral in EU.

Textiles are the 4th highest-pressure category for the use of primary raw materials and water, after food, housing and transport, and 5th for GHG emissions₃₀.

Less than 1% of material used to produce clothing is recycled into new clothing, representing a loss of EUR 100 bn worth of materials each year.

Some projects were initiated before the launch of the European Green Deal
They are just a preview of the many thousands which will follow !

TexPlus was selected as “best practice” among 200+
EU projects!



European Committee
of the Regions



#EUGreenDeal

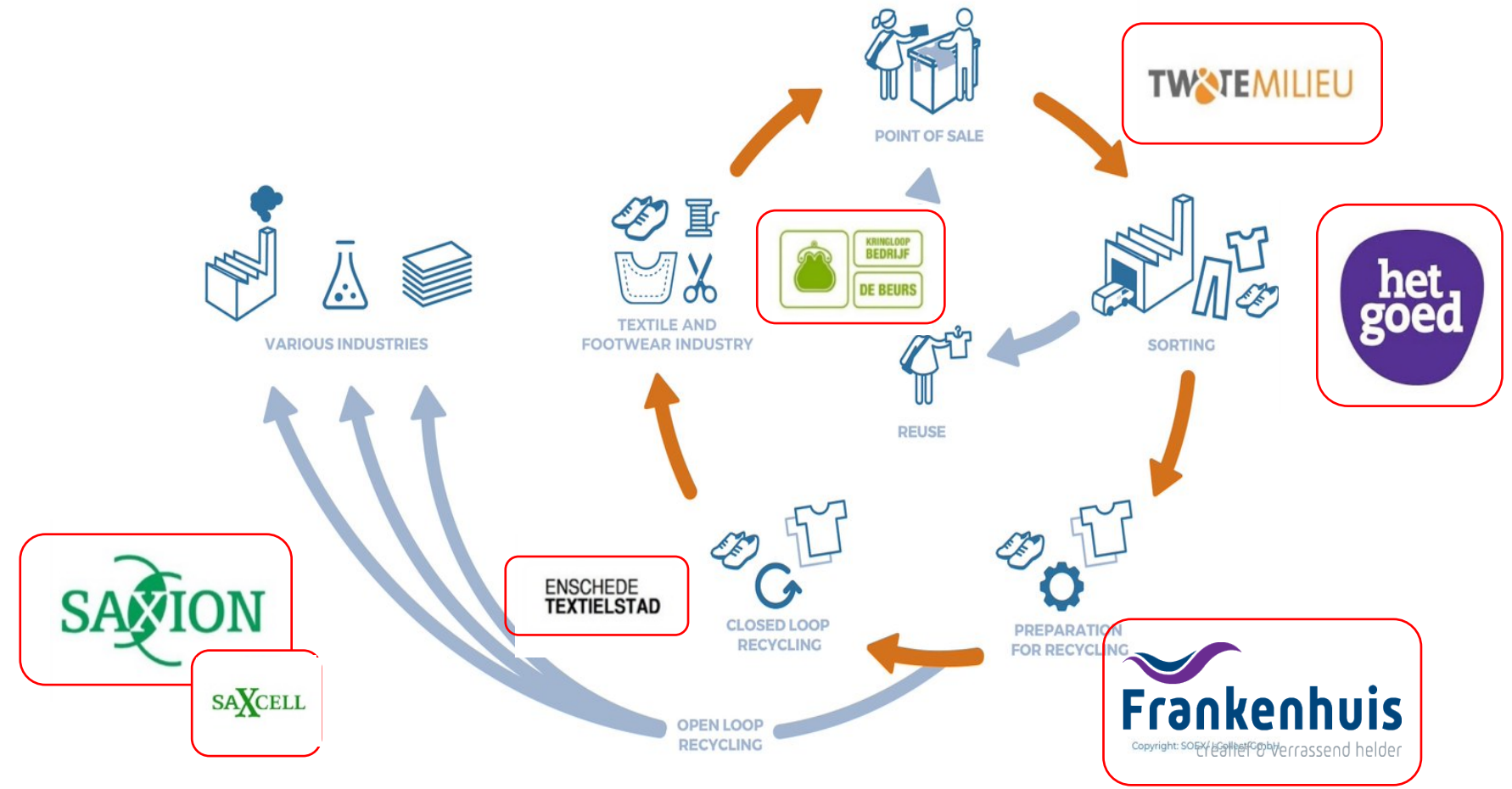
#Regions4Climate

Green Deal Going Local

What is TexPlus: a partnership of circular textile industries



Our partners in TexPlus: innovative organizations working together to close the loop from textile to textile.



The TexPlus Challenges:

- ❖ Post-consumer textile *collecting* volume: doubling from 1.400 to 3.000t
- ❖ Post-consumer textile *sorting*: from 2.100 to 4.000 t
- ❖ Mechanical & Chemical *recycling*: from 8.000 to 15.000 t of high added value source material

The result:

- ❖ 7,000 tons of PCR textile waste returned as high-quality raw material in three years;
- ❖ 7,000 tons less incinerated waste and reduction in GHG's



Challenge for post-consumer textile municipal “waste” collection:

- ❖ Reducing “waste” volumes by increasing awareness and influencing behaviour among citizens in “citizenlabs”
- ❖ **Result:** better quality reuse and recycle streams.



KRINGLOOP
BEDRIJF
DE BEURS



Challenge for textile sorting:

- ❖ Stimulating clothing reuse by providing “shop quality supply”; semi-automated sorting to improve (mono)material stream quality.
- ❖ **Result:** more reuse, higher throughput into monostreams. And a range of jobs in “makers industry” created.



Challenge for mechanical recycling:

- ❖ Development of new technologies that improve recycled fibre quality, a.o. for input in chemical/extrusion recycling.
- ❖ **Result:** identifying and developing new markets with added value.



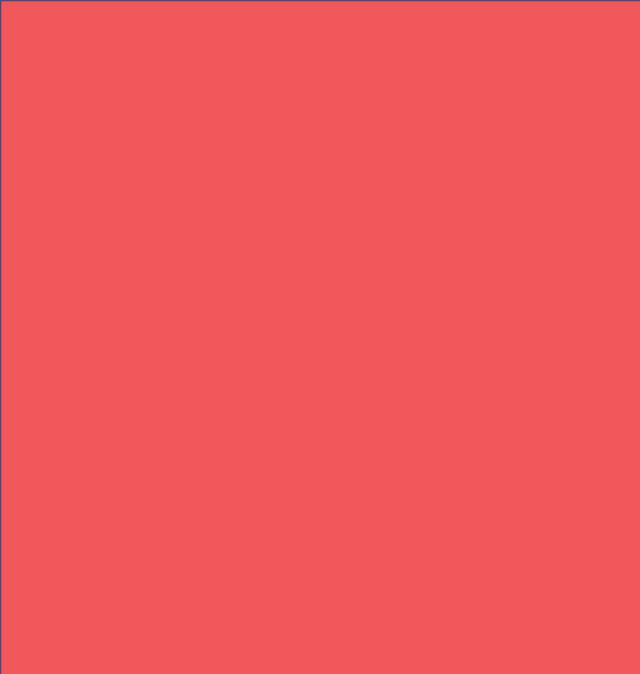
SAXCELL

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Challenge for chemical regeneration of cotton-based textiles:

- ❖ Demonstrate attractive (economical & ecological) upward potential for chemical regeneration of (post-consumer) cotton into high-quality cellulosics.
- ❖ **Result:** operating pilot plant November 2020.





ENSCHEDÉ
TEXTIELSTAD



Challenge for the weavers & designers:

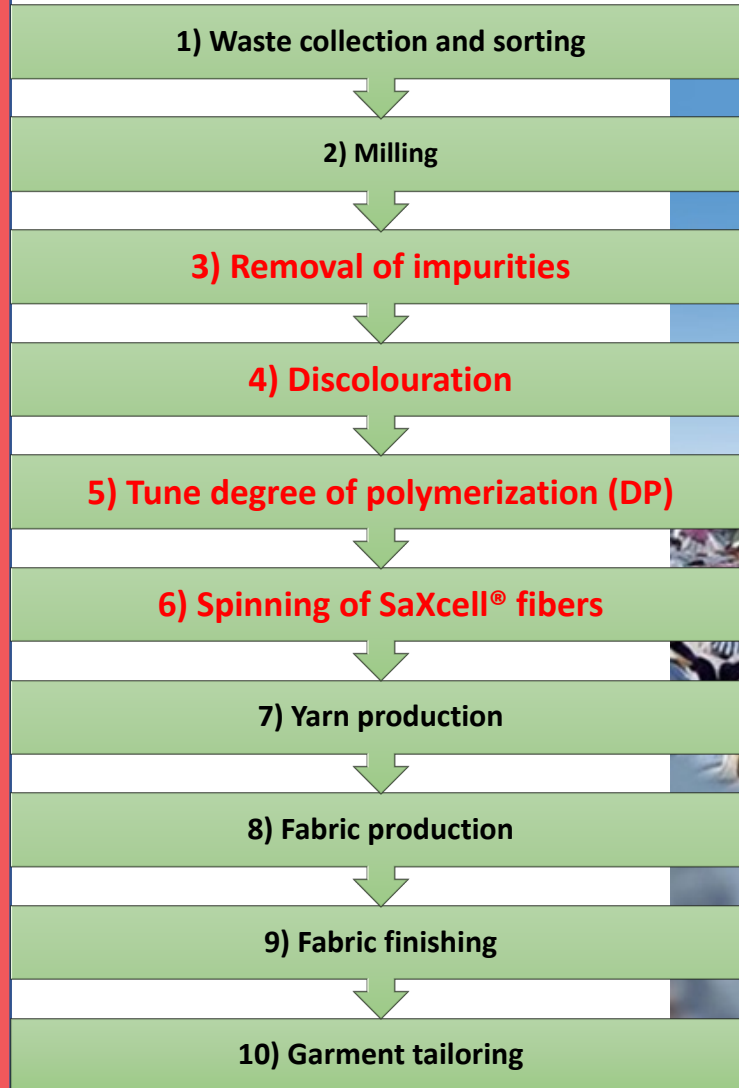
- ❖ Demonstrate that (post-consumer) recycling is *business as usual* in markets with substantial volumes.
- ❖ **Result:** Flexible production platforms, new businessmodels, new (eco)designed concepts



Challenge for circular textile innovation:

- ❖ Demonstrate upscaling potential for chemical regeneration of PCR cotton into textiles with high-quality cellulosics.
- ❖ **Result:** (inter)national Centre of Expertise & Innovation for textile recycling technologies & prototyping

From waste
to new
textile
products!



Outlook



- From ***local*** to national & ***European*** level:
- Demonstrate scalability.
 - Primarily polyester/cotton blends
- Identify ***new applications*** and markets.
- Increase ***track- & traceability***.
- Expertise & innovation “hub” on textile recycling
- Join forces with CE/Green Deal initiatives in EU.



Ministerie van Landbouw,
Natuur en Voedselkwaliteit



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Thanks to our sponsors
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Thank you for your attention

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ENERGY EFFICIENCY IN BUILDINGS
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CLIMATE NEUTRALITY CLEAN ENERGY
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