

# Textile Sustainability & Circularity

Some strategic, technological and practical considerations

Lutz Walter, Textile ETP

Conference 'Leading the transition to a circular textile & fashion industry'  
Borås, 26/ 04/ 2023

# What is the Textile ETP?

## The largest Community of Textile Research & Innovation Professionals in Europe

Objective: ensuring longterm competitiveness of the EU Textile & Clothing Industry through collaborative and market-oriented research & innovation.

- Brusselsbased
- Launched as an industry-led initiative in 2004
- Non-profit organisationsince 2013

185

associatedmember  
organisations from 29  
Europeancountries

150+

Masterclass & community  
subscribers

1300+

connectedexperts



# Our Services



## Networking

- In-person conferences and workshops
- Webinars and online events
- Members community platform
- E-newsletters
- Social media



## Learning

- European Masterclasses & Communities
- Collaborative development of research roadmaps, strategies, position papers
- EU project results sharing



## EU Funding Access

- Advocacy for more EU funding of textile research & innovation
- TEPPIES Brokerage system to set up EU projects & finding partners Europe-wide
- Selective participation in EU projects to strengthen competences & cross-sectoral network

# Strategic Agenda



## Ready to Transform

*A Strategic Research and Innovation Agenda  
to underpin the EU Strategy for  
Sustainable and Circular Textiles*

May 2022



**Foreword**



**Executive  
Summary**



**The Transformation  
of the European  
Textile and Clothing  
Industry**



**The Strategic  
Innovation Themes  
and Research  
Priorities**



**Human Resources  
and Skills for a  
Successful  
Transformation**

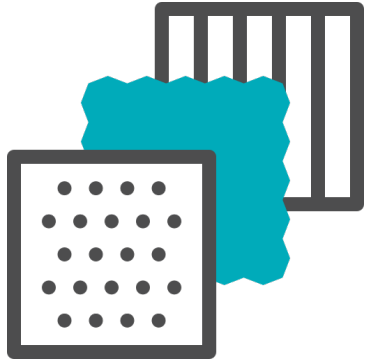


**Policy  
Recommendations**



**About**

# 4 Strategic Innovation Themes



Smart, high  
performance  
materials for  
new growth  
markets



Digitised  
materials,  
products,  
manufacturing,  
value chains and  
business models



Durable, circular  
and biobased  
materials and  
processes



Safe, low  
footprint  
products,  
processes &  
responsible  
supply chains

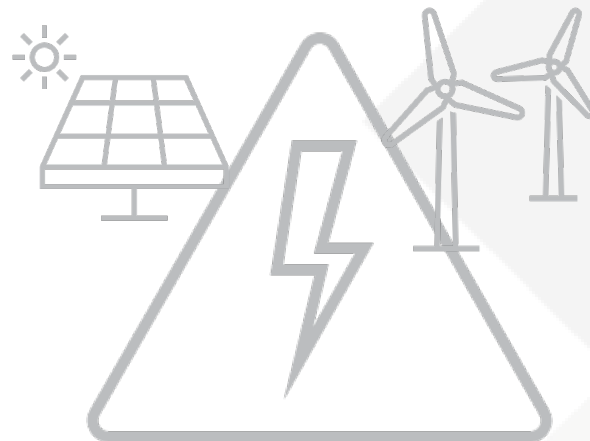
Download the strategic agenda here:

<https://textile-platform.eu/what-we-do>

# The 3 big challenges



**Defossilise &  
Biobase**



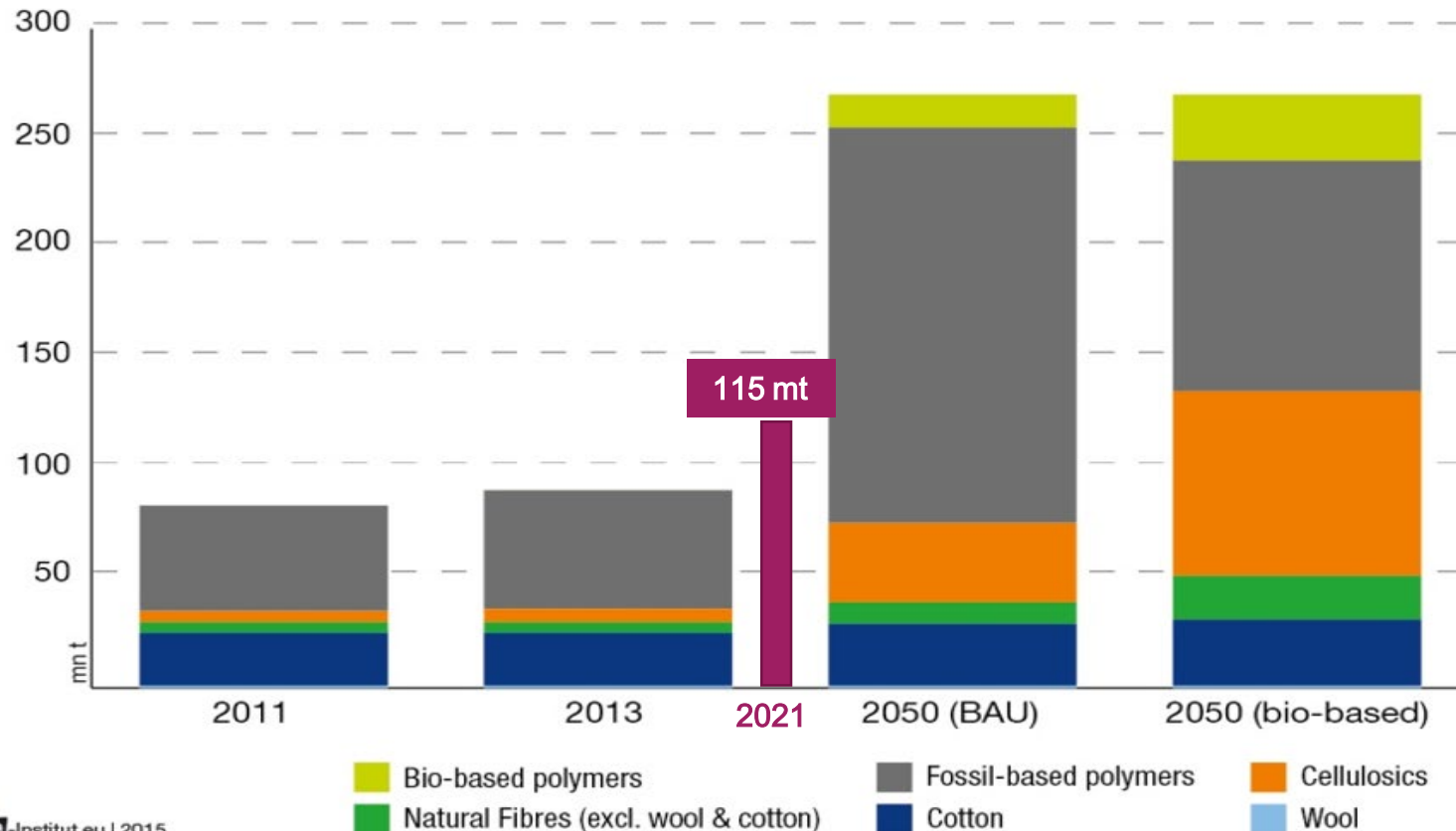
**Renewably Electrify**



**Digitise &  
Automate**

# Challenge 1: Defossilise & biobased the material supply

Consumption of fibres in the global textile market by fibre type 2011–2050, mn t (BAU and bio-based scenario)

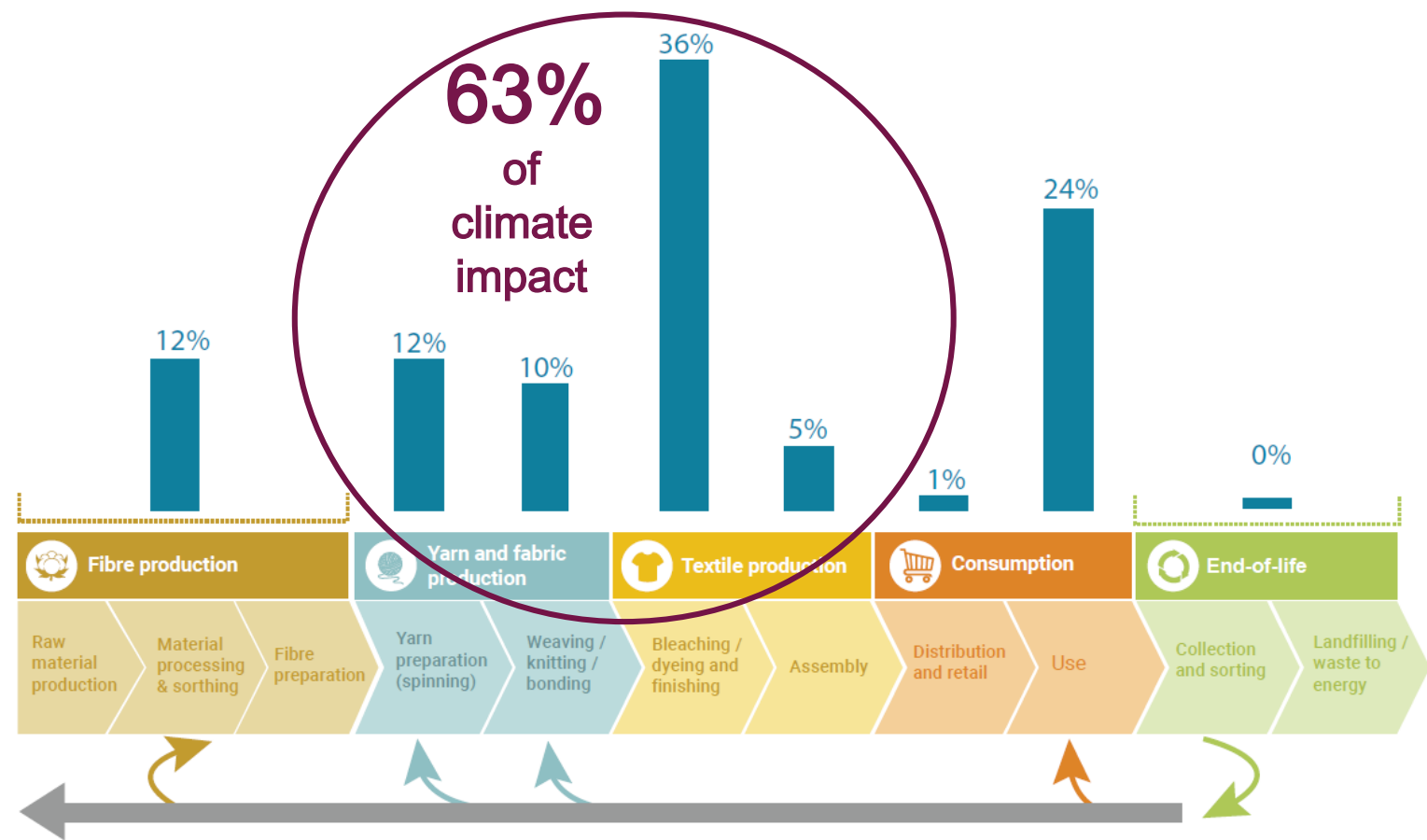


- \* Global fibre demand will continue to grow
- \* 100% of fibre demand growth is ex-EU
  - Consumers in the Global South
  - Fibres for technical textiles & nonwovens
- \* 3 future feedstocks
  - Biobased (natural + man-made fibres)
  - Post-consumer textile waste
  - Captured CO<sub>2</sub>



# Challenge 2: Electrify all production processes & build CO<sub>2</sub>-neutral energy supply

Figure 8: Climate impact across the global apparel value chain



Source: Sustainability and Circularity in the Textile Value Chain, UNEP, 2018

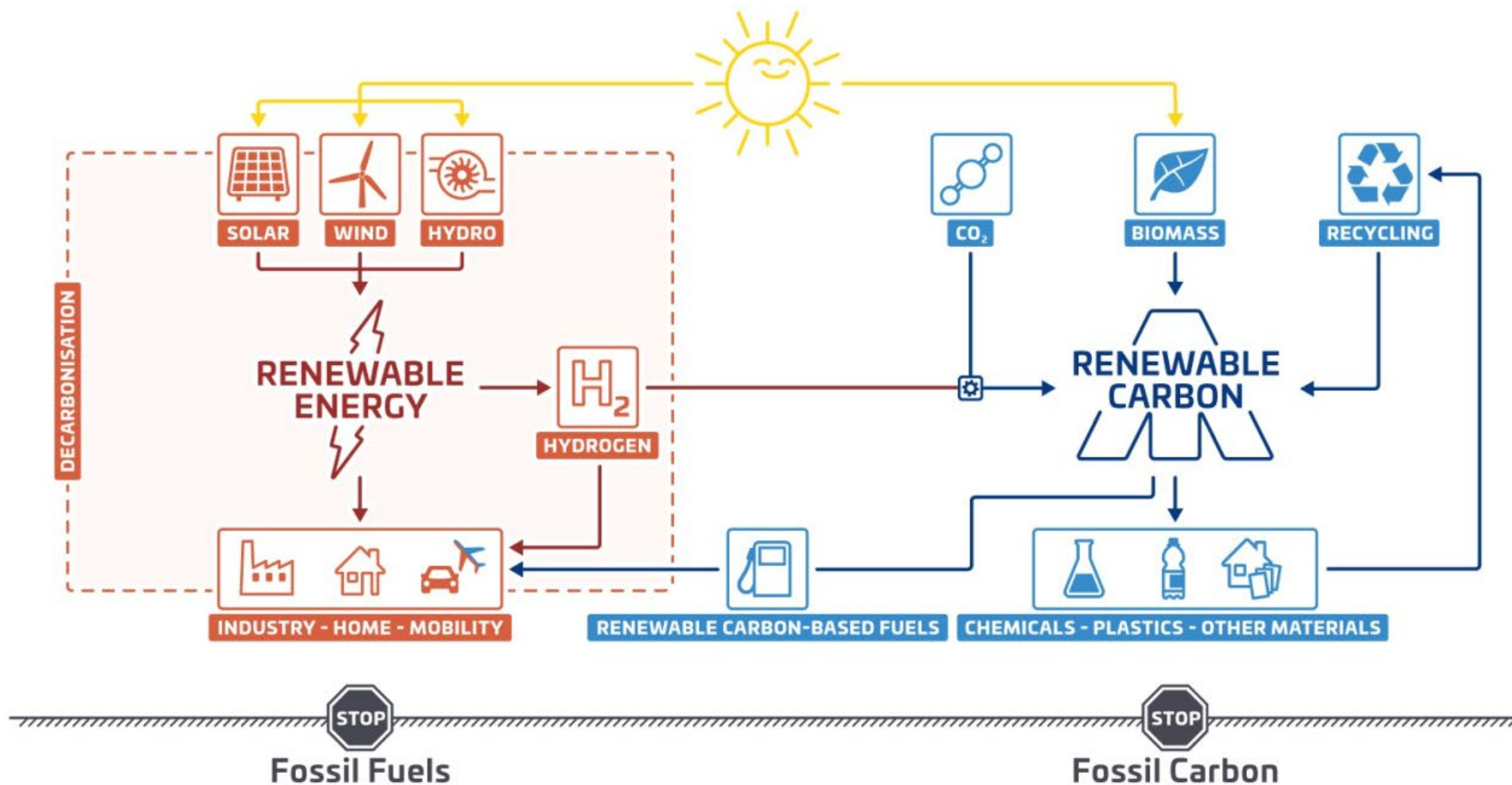
EUROPEAN TECHNOLOGY PLATFORM

Country	Carbon Intensity of Electricity in 2020 gCO <sub>2</sub> e per kWh
Indonesia	625
India	624
China	546
Vietnam	477
Bangladesh	476
Cambodia	424
World	422
Turkey	410
Pakistan	294
European Union (27)	251
Italy	221
Portugal	207
France	57
Sweden	45

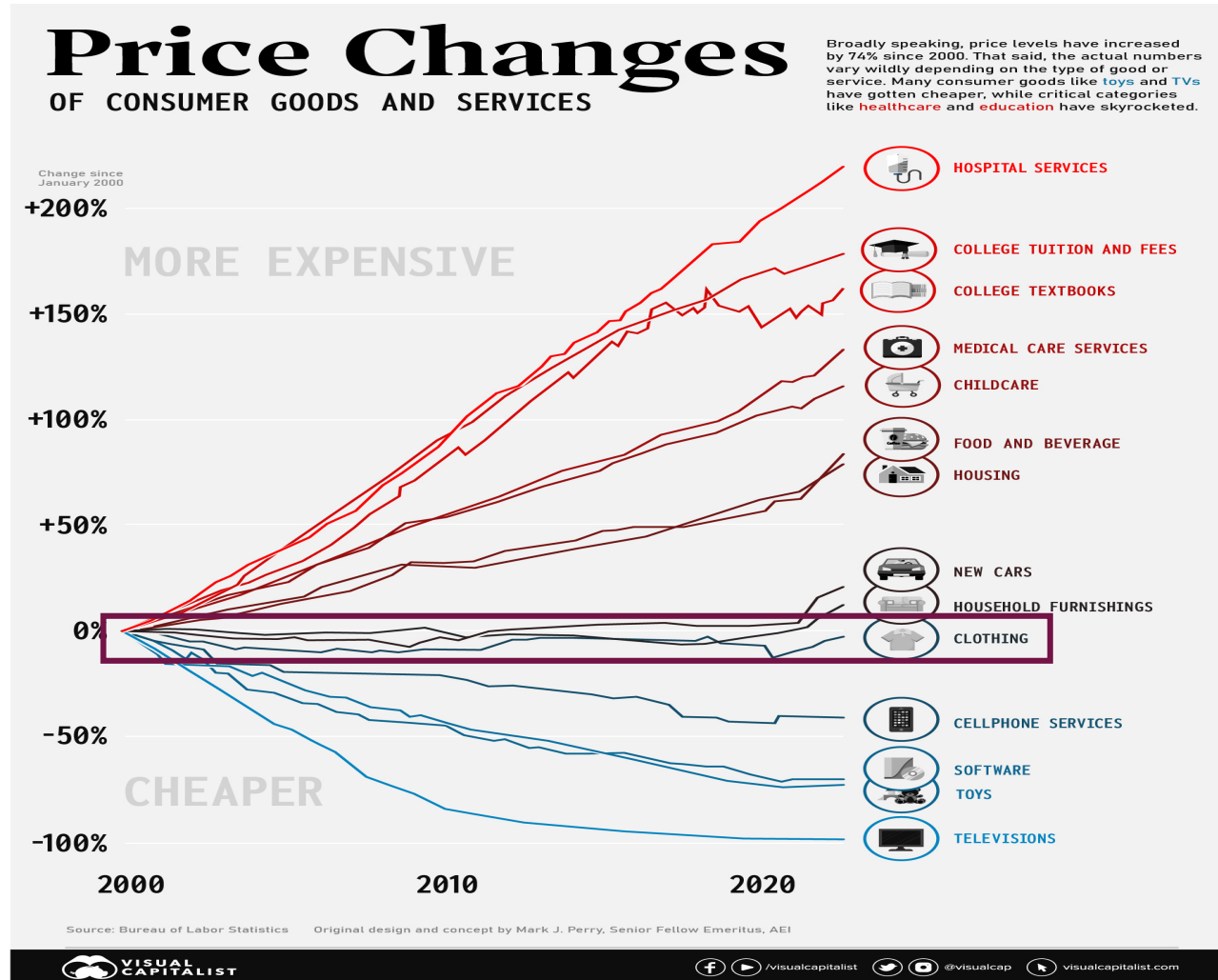
Source: Amplifying Misinformation The Case of Sustainability Indices in Fashion, V. Bates-Kassatly, D. Baumann-Pauly, 2023



# Renewable Energy and Renewable Carbon for a Sustainable Future



# Challenge 3: Digitise, automate & regionalise textile & clothing production



- Consumer price inflation of clothing from 2000-2020 was **ZERO** thanks to automation in textiles and offshoring of clothing production = **enabler of mass market apparel brands and fast fashion**
- But costs of supply chain & compliance start to outweigh relocation benefits
- To maintain affordability & sustainability of clothing consumption:
  - Full digitisation & automation of production incl. garment making
  - On-demand, low-risk/low-waste production close to point of consumption
  - Efficient digital direct-to-consumer (DTC) operations incl. takeback, rental, repair & other services



*We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run.*

- Roy Amara

By 2030 the textile industry will not look much different from today

But by 2050 the global textile industry will:

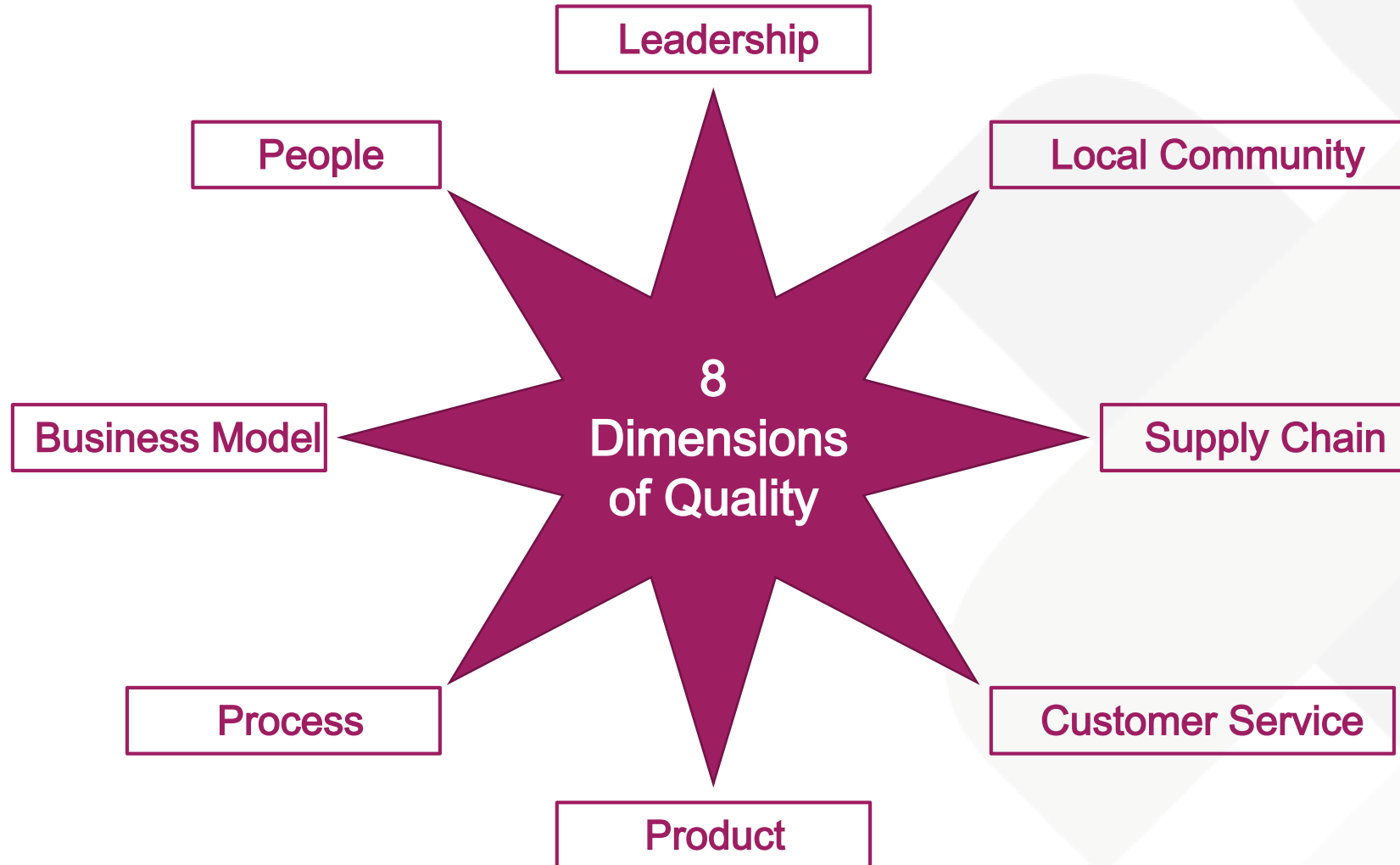
- process biobased or otherwise renewable materials,
- produce with 100% low-CO<sub>2</sub> energy, and
- manufacture its products in highly automated digitised factories located close to the point of final consumption.

To enable this, we need **25 years of relentless innovation & smart investment**



In practice:

# Sustainability is all about QUALITY



Thank you for  
your attention

@TextileETP 

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