

MEDVETNA VAL i produktutvecklingsprocessen

- miljövänligt, cirkulärt, långlivat? Går det att kombinera?



SUSTAINABILITY
BY SWEDEN
THE NATIONAL PLATFORM

Design & produktutvecklingsprocessen

”Upp till 80 procent av produktens miljöpåverkan avgörs i designstadiet”

Medvetna val utifrån produktens totala livscykel

- Före användning
- Under användning (kund 1, kund 2, kund 3)
- Efter användning

Livscykel- krav- medvetna val

Hur tänker ni er att "produktens liv" ska se ut?

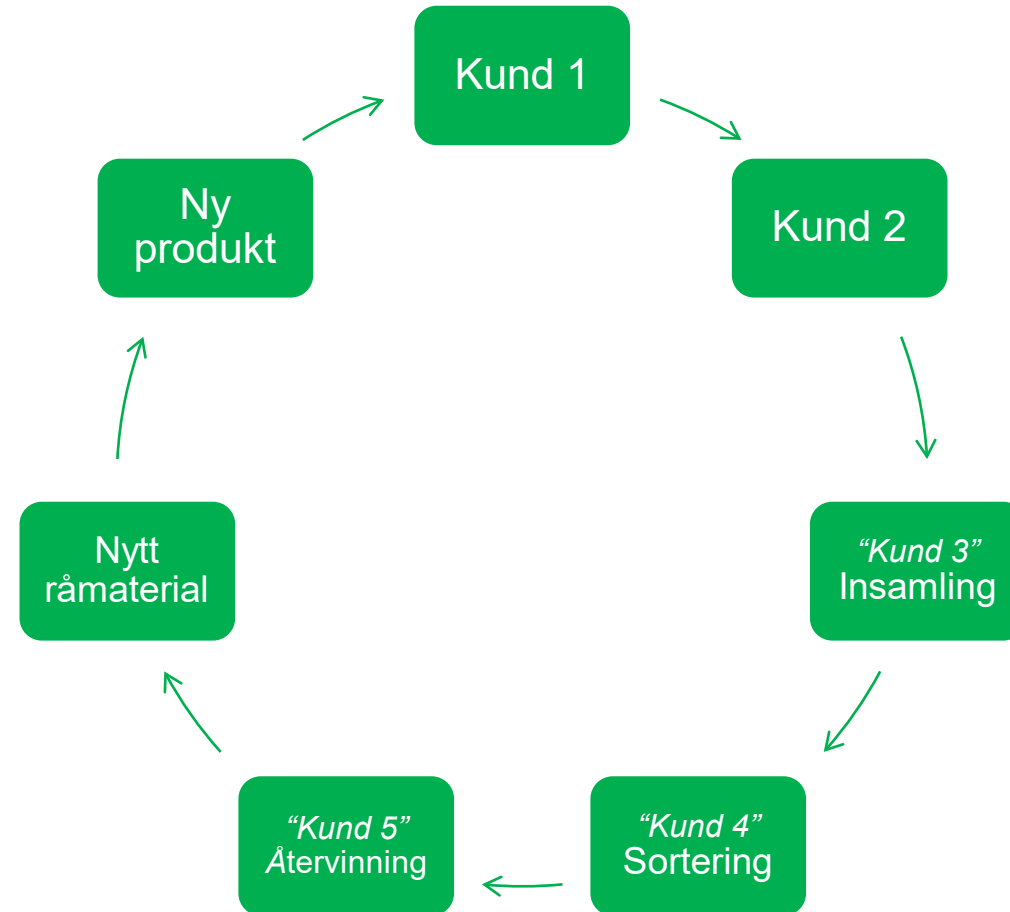
- En kund/ flera kunder?
- Total livslängd?
- Vad händer sen?

Produktkrav

- Vilka krav ställer respektive del?
- Vad blir den "totala" kravbilden?

Medvetna val

- Balansering av motstridiga krav
- Konsekvenser av valen?
Funktion/ Livslängd/ Fotavtryck



Film: <https://www.youtube.com/watch?v=cLF7ZtFsy-E>

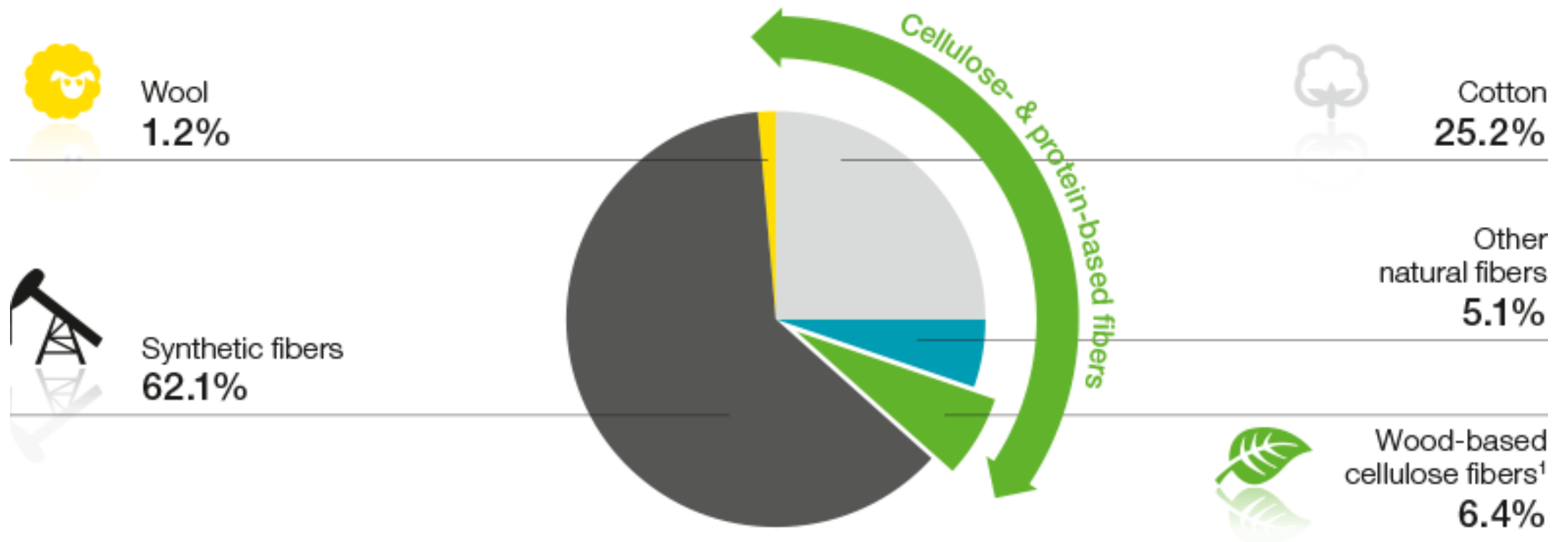
Material & Funktion



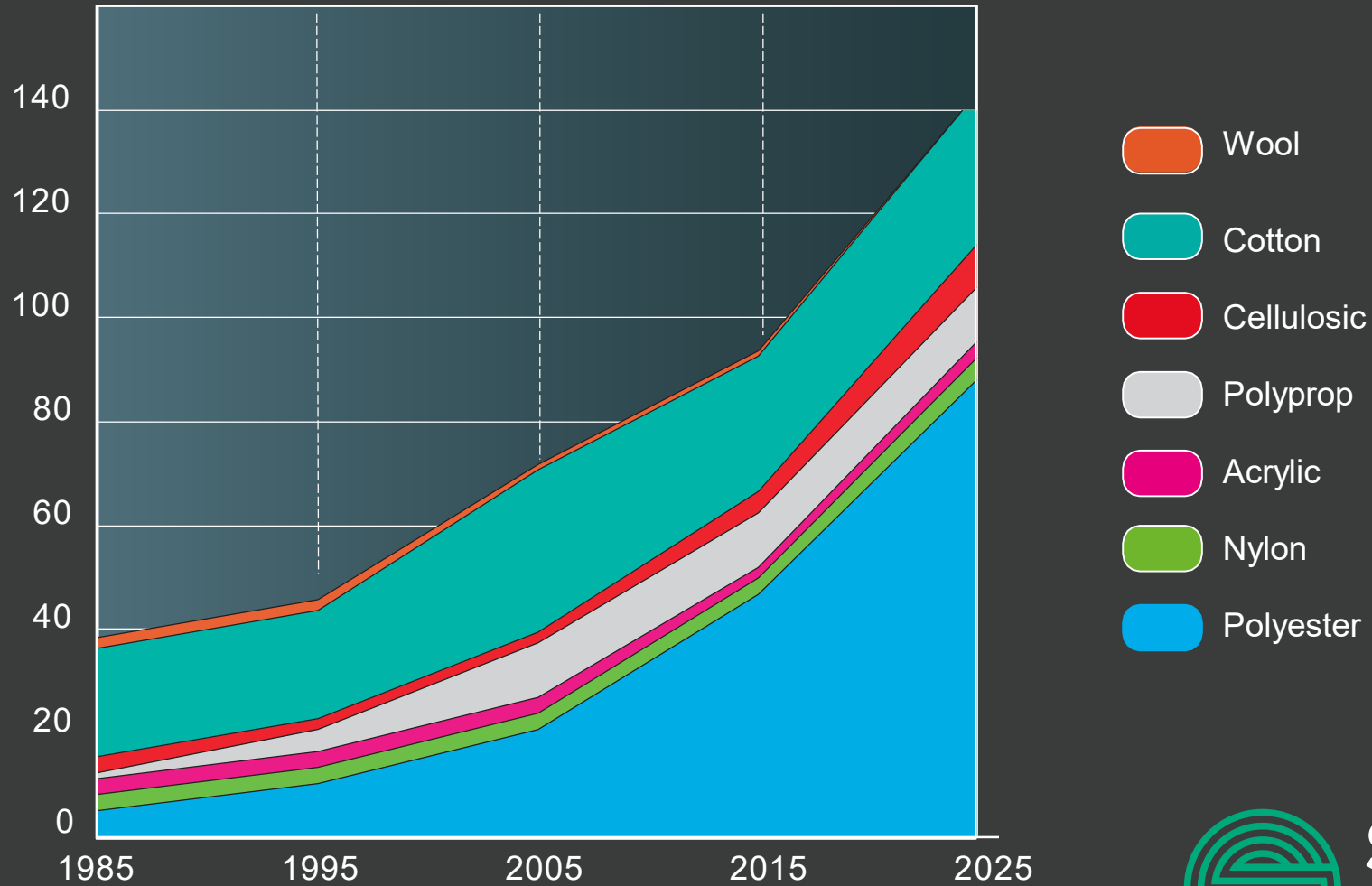
SUSTAINABILITY
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Mats Johansson
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Den globala konsumtionen av textila fibrer 2018 var ungefär. **107 miljoner ton.**



World fibre production 1985-2025

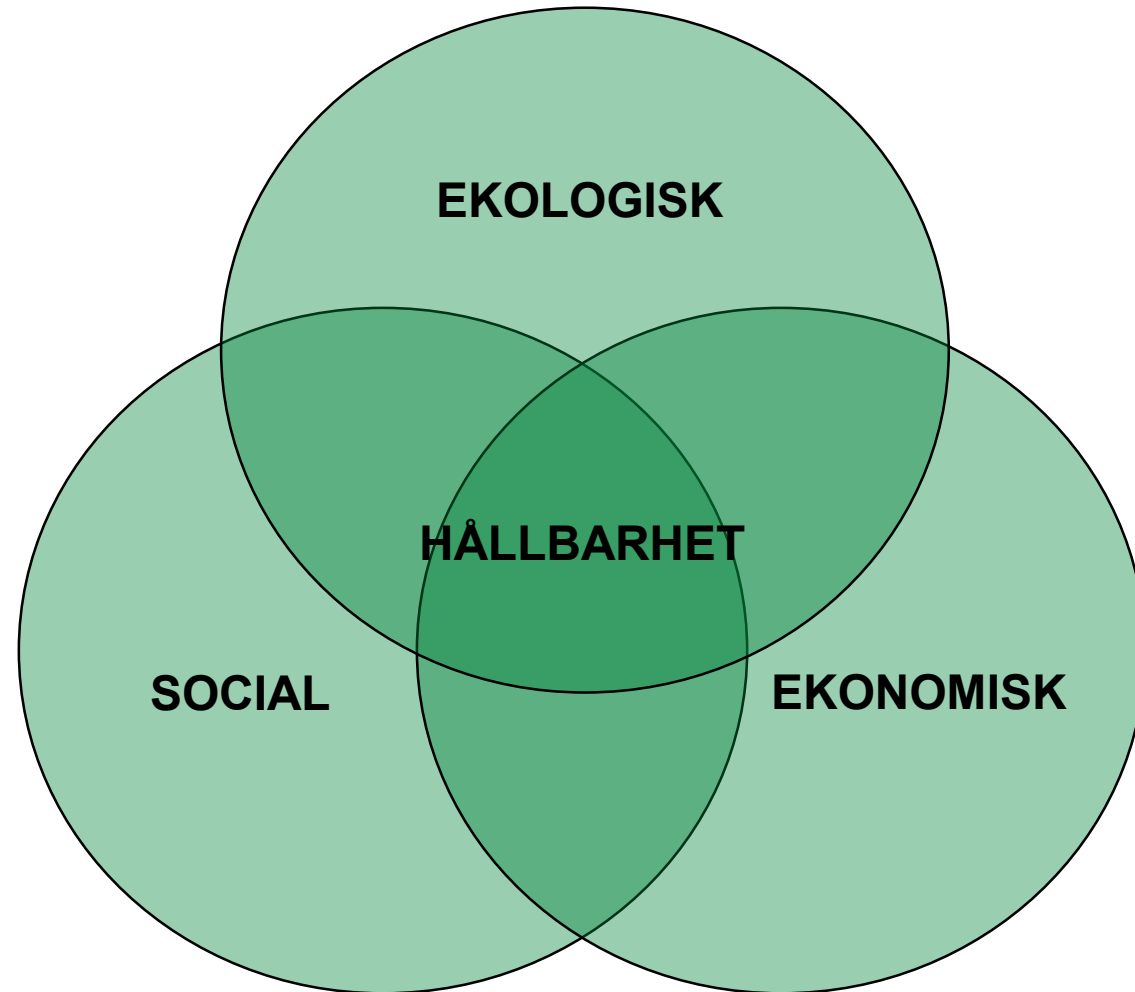


Source: Tecnon OrbiChem

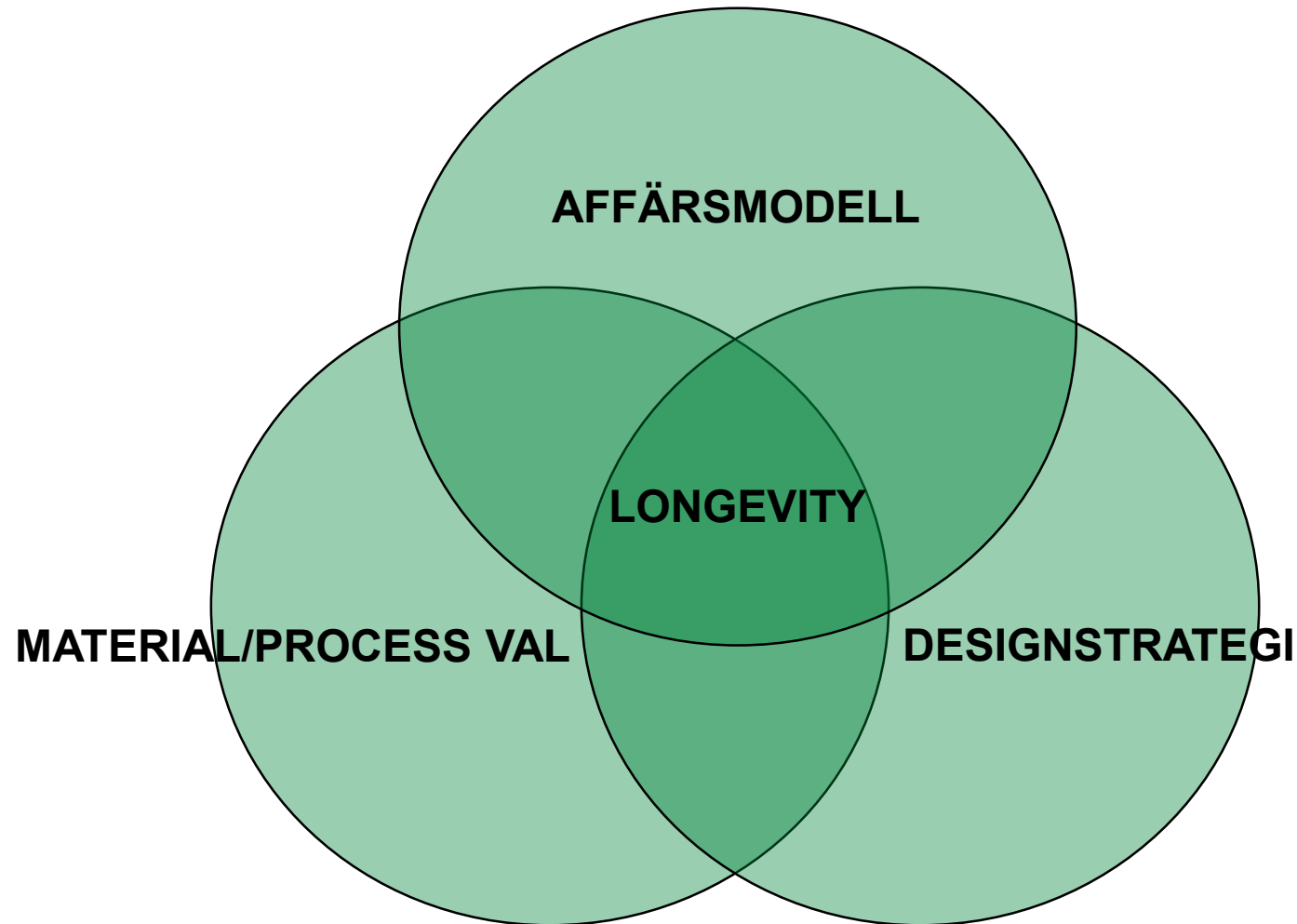


**smart
textiles**
BY SCIENCE PARK BORÅS

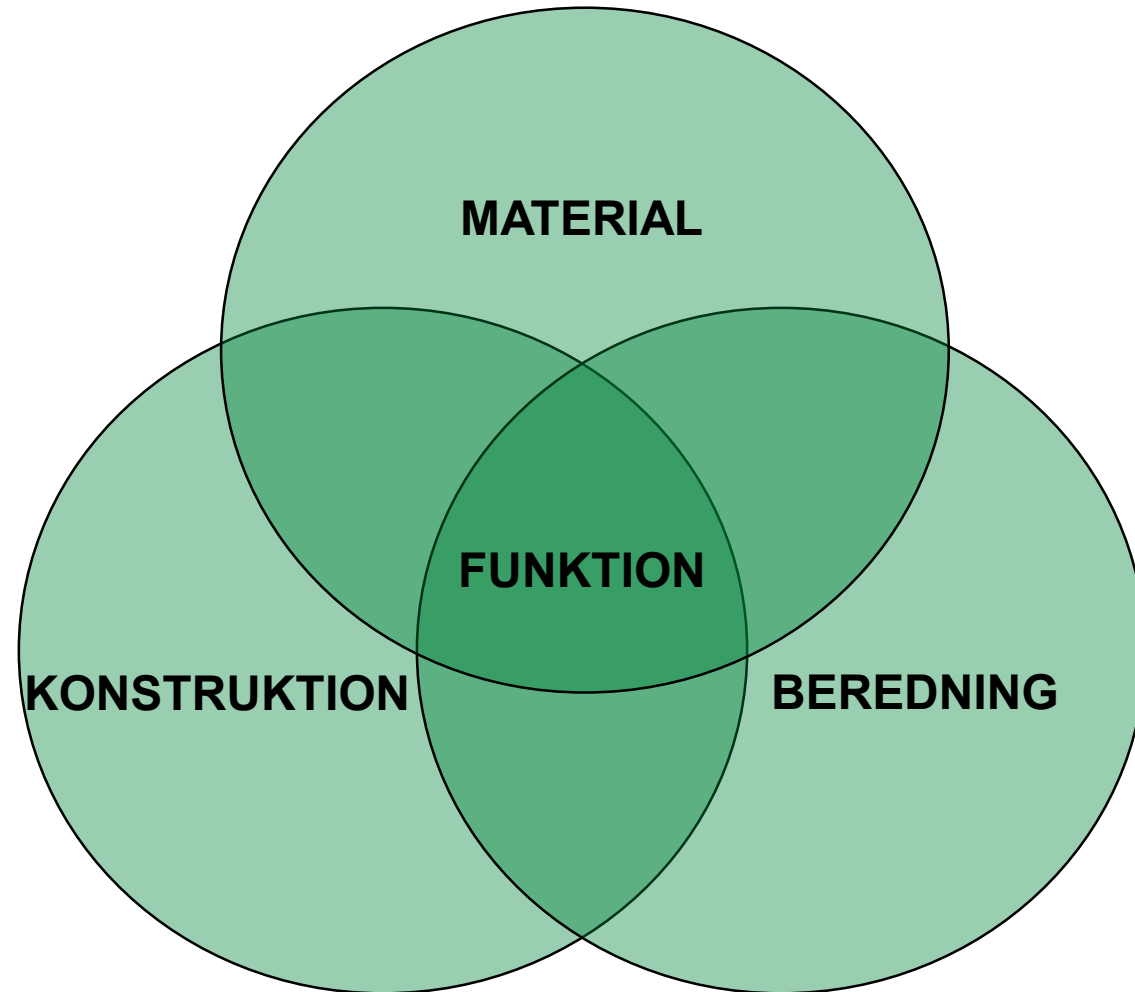
Design for Longevity - Function



Design for Longevity - Function



Design for Longevity - Function



Göra rätt val?

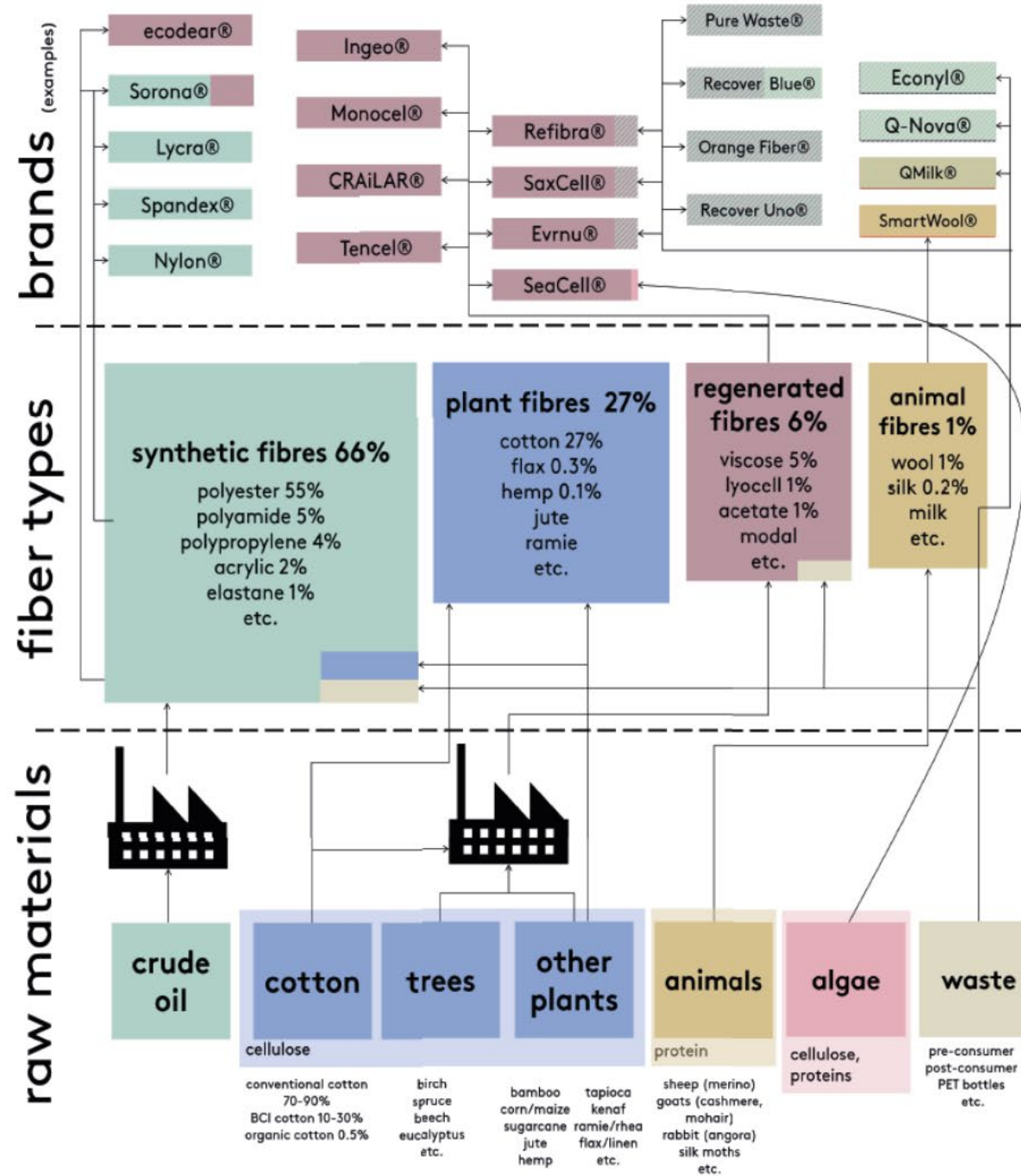
Användning vs. Livslängd

Material vs. Funktion

Utveckling vs. Ersättning

MATERIAL – KONSTRUKTION -
FUNKTIONALISERING

materials



MADE-BY ENVIRONMENTAL BENCHMARK FOR FIBRES



www.made-by.org

TEXTILE & FASHION 2030

CLASS A	CLASS B	CLASS C	CLASS D	CLASS E	UNCLASSIFIED
Mechanically Recycled Nylon	Chemically Recycled Nylon	Conventional Flax (Linen)	Modal® (Lenzing Viscose Product)	Bamboo Viscose	Acetate
Mechanically Recycled Polyester	Chemically Recycled Polyester	Conventional Hemp	Polyacrylic	Conventional Cotton	Alpaca Wool
Organic Flax (Linen)	CRAILAR® Flax	PLA			
Organic Hemp	In Conversion Cotton	Ramie			
Recycled Cotton	Monocel® (Bamboo Lyocell Product)				
Recycled Wool	Organic Cotton				
	TENCEL® (Lenzing Lyocell Product)				

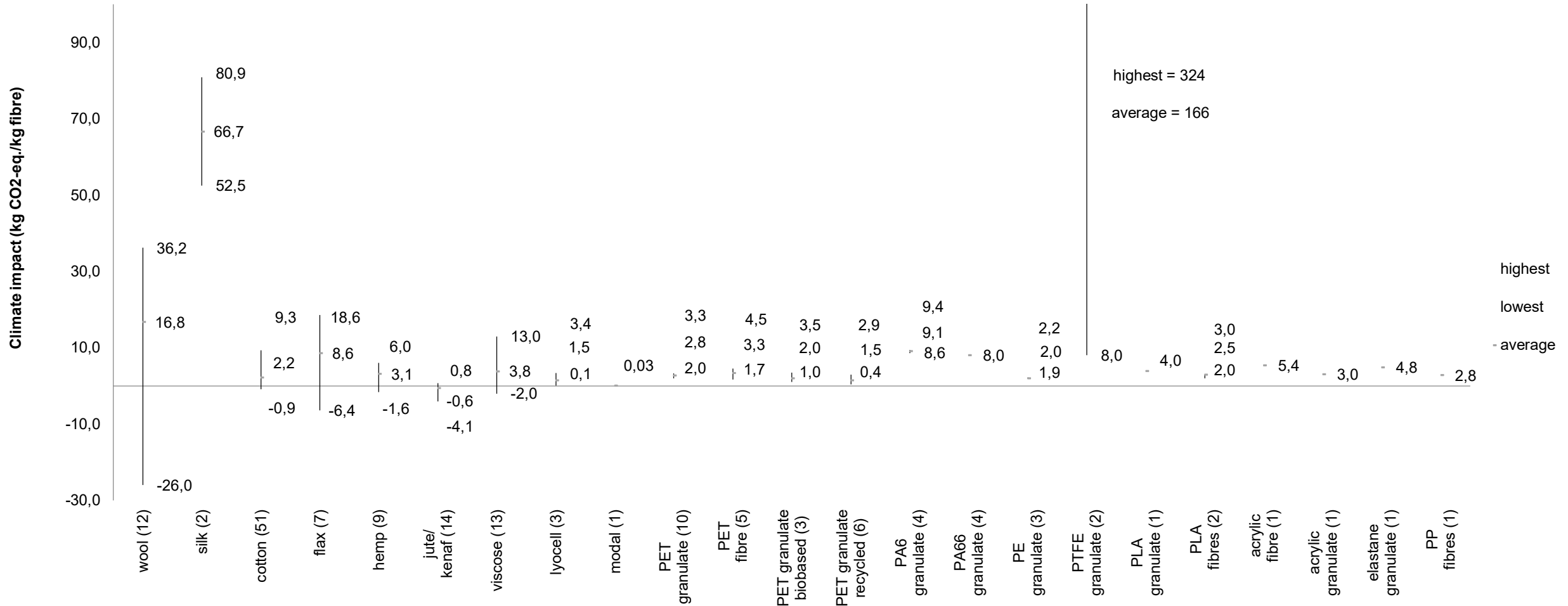


More Sustainable

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bwe This Benchmark was made in cooperation with Brown and Wilmanns Environmental

Conclusion from scientific facts:
 There are no "sustainable" or "unsustainable" fibres!
 It is the suppliers that differ!



Design for Longevity - Function

OUTLINE OF A CIRCULAR ECONOMY

PRINCIPLE

1

Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows
 ReSOLVE levers: regenerate, virtualise, exchange



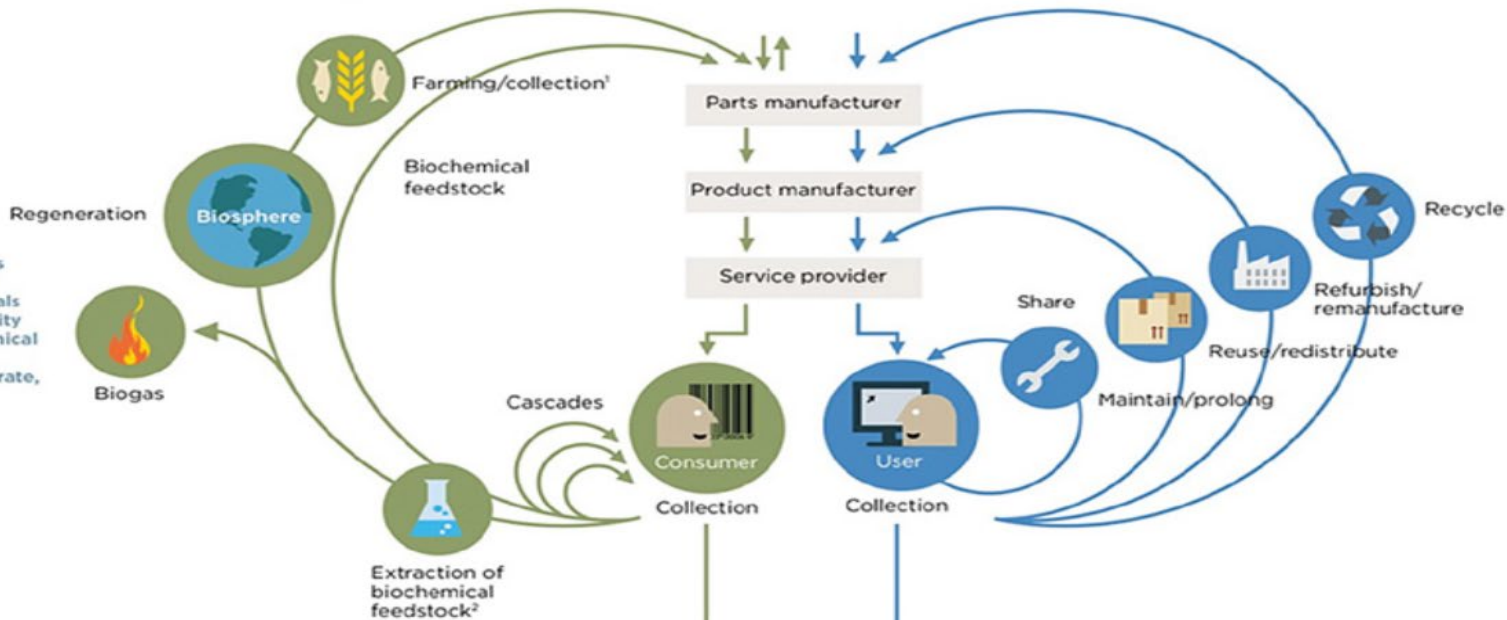
Renewables flow management

Stock management

PRINCIPLE

2

Optimise resource yields by circulating products, components and materials in use at the highest utility at all times in both technical and biological cycles
 ReSOLVE levers: regenerate, share, optimise, loop



PRINCIPLE

3

Foster system effectiveness by revealing and designing out negative externalities
 All ReSOLVE levers

Minimise systematic leakage and negative externalities

1. Hunting and fishing
 2. Can take both post-harvest and post-consumer waste as an input
 Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

Source: GIZ 2019; Circular Economy in the Textile Sector

Design for Longevity - Function

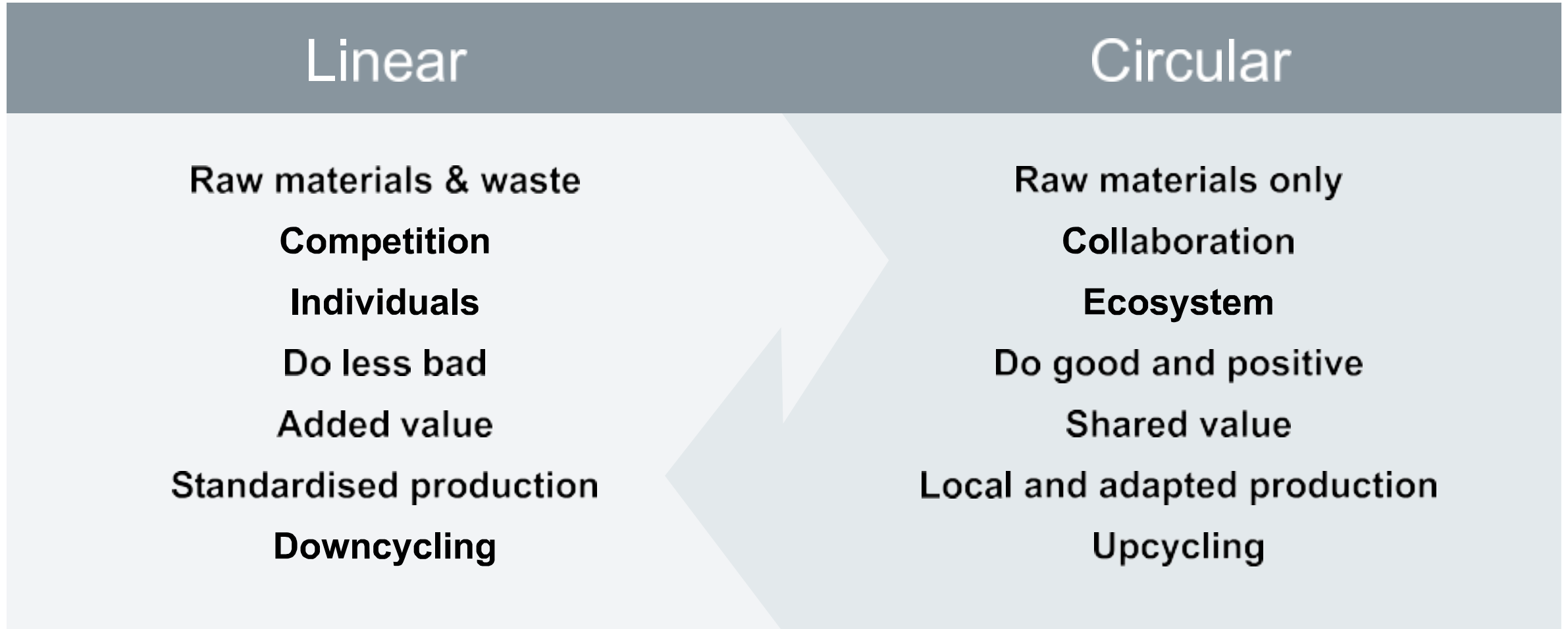
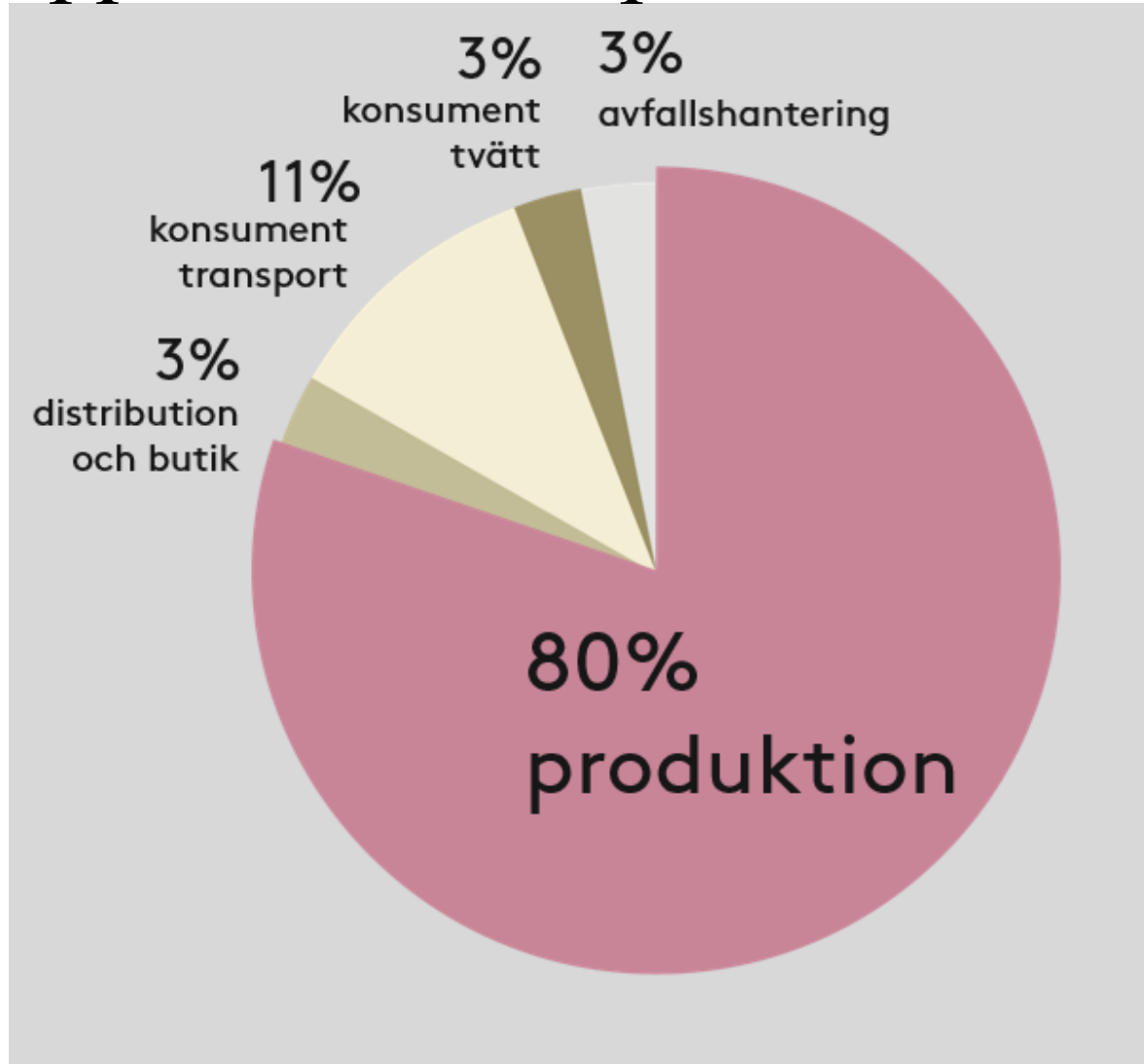


Figure 1: Circular Economy as a paradigm shift

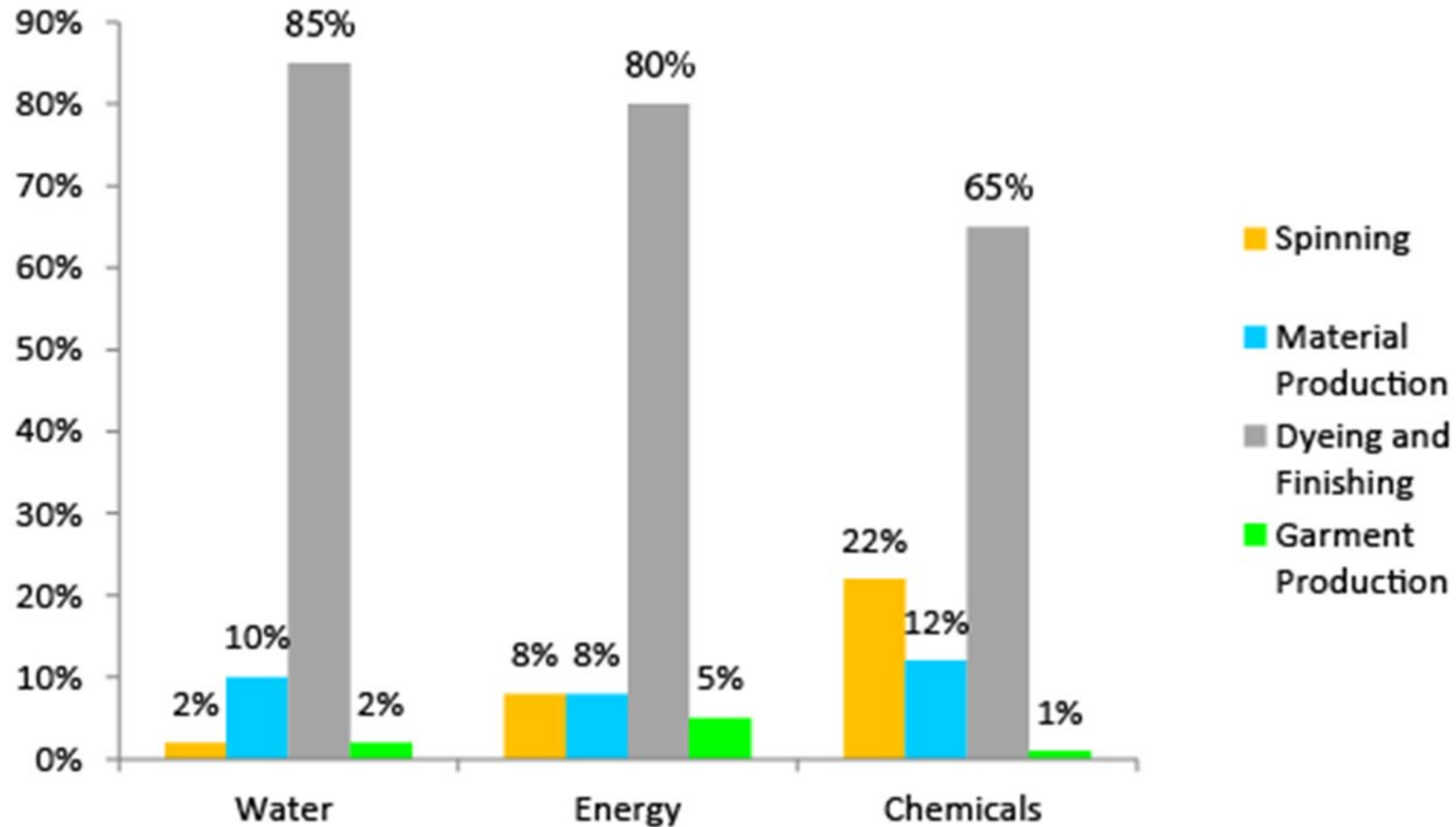
80% av klimatpåverkan från svensk klädkonsumtion uppkommer vid produktion.



Source:
Environmental assessment of Swedish clothing consumption
(september 5, 2019)

Author: Gustav Sandin, Sandra Roos & Björn Spak (RISE) Bahareh Zamani & Greg Peters (Chalmers University of Technology)

Resursanvändning i textilindustrin.



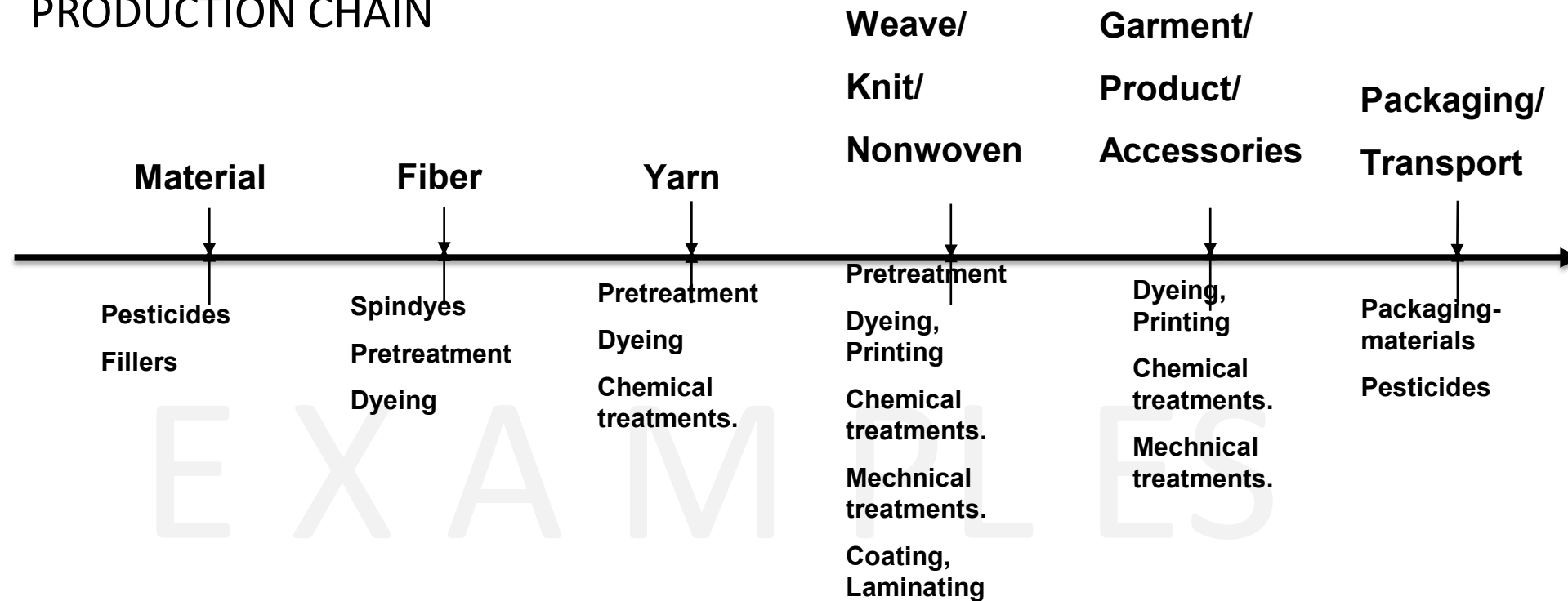
Source IPE, 2012

DYEING AND FINISHING =

FUNKTIONALISIERUNG

= BEREDNING

PRODUCTION CHAIN



EXAMPLES



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