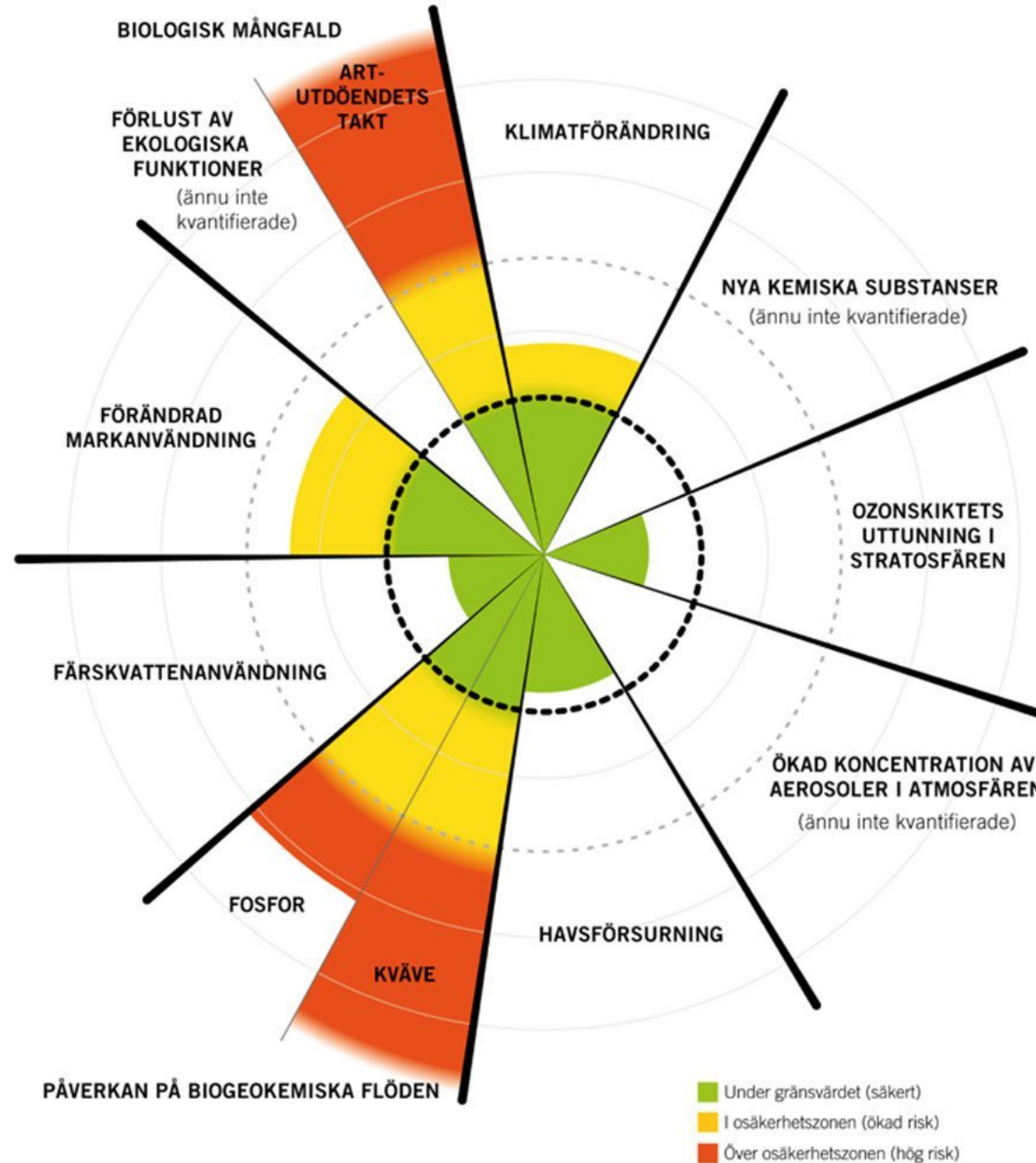


Designverktyg

Jonas.larsson@hb.se

Olika program/verktyg

- Livscykelanalyser
- Design and Development Module - Higg Index
- Environmental Product Declaration – The International EPD System
- Environmental Profit and Loss – Kering Group
- Natural Capital Evaluation – Hugo Boss
- EU PEF (Product Environmental Footprint)
- Houdini Planetary Boundaries Assessment



Hugo Boss – Natural Capital

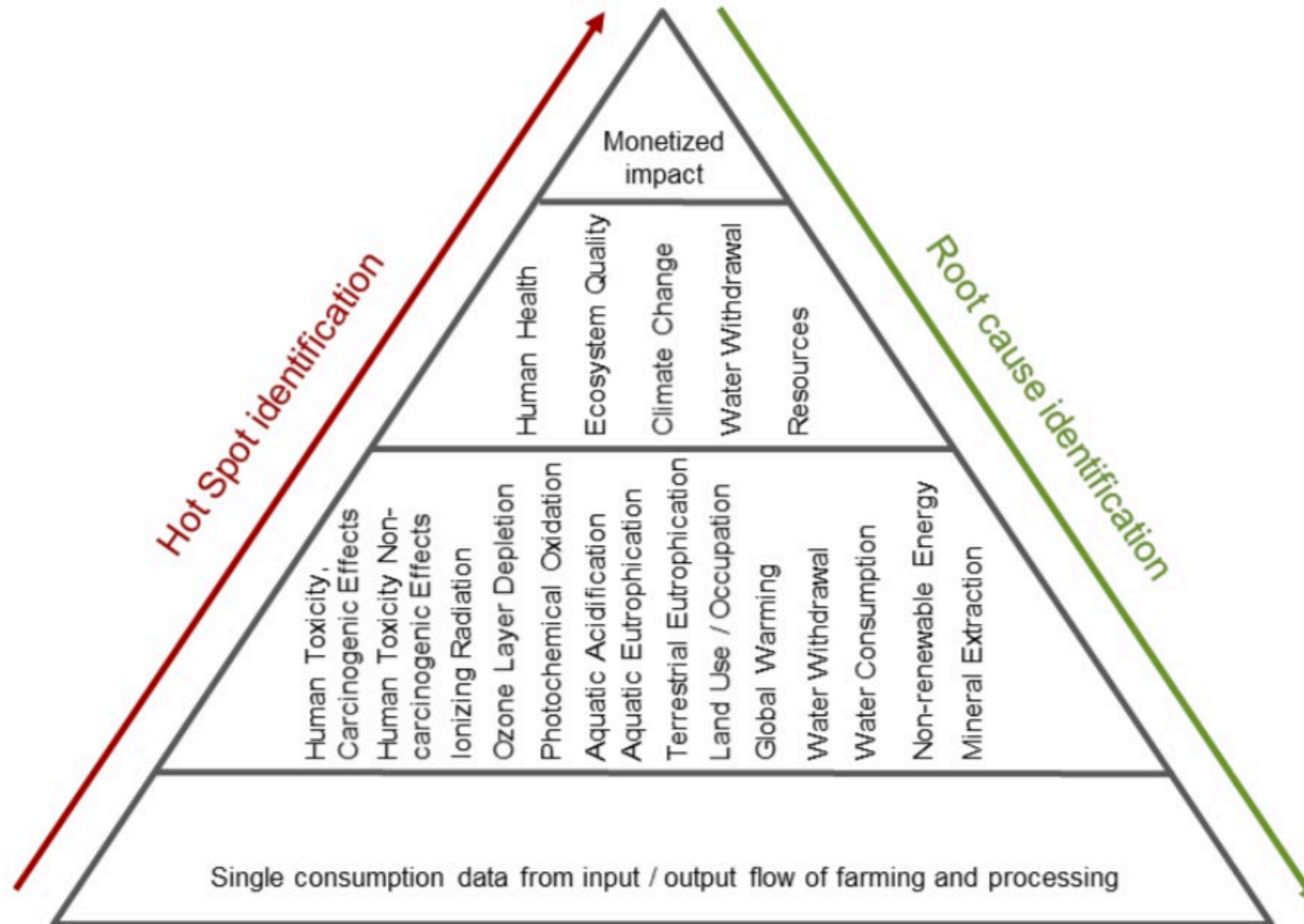
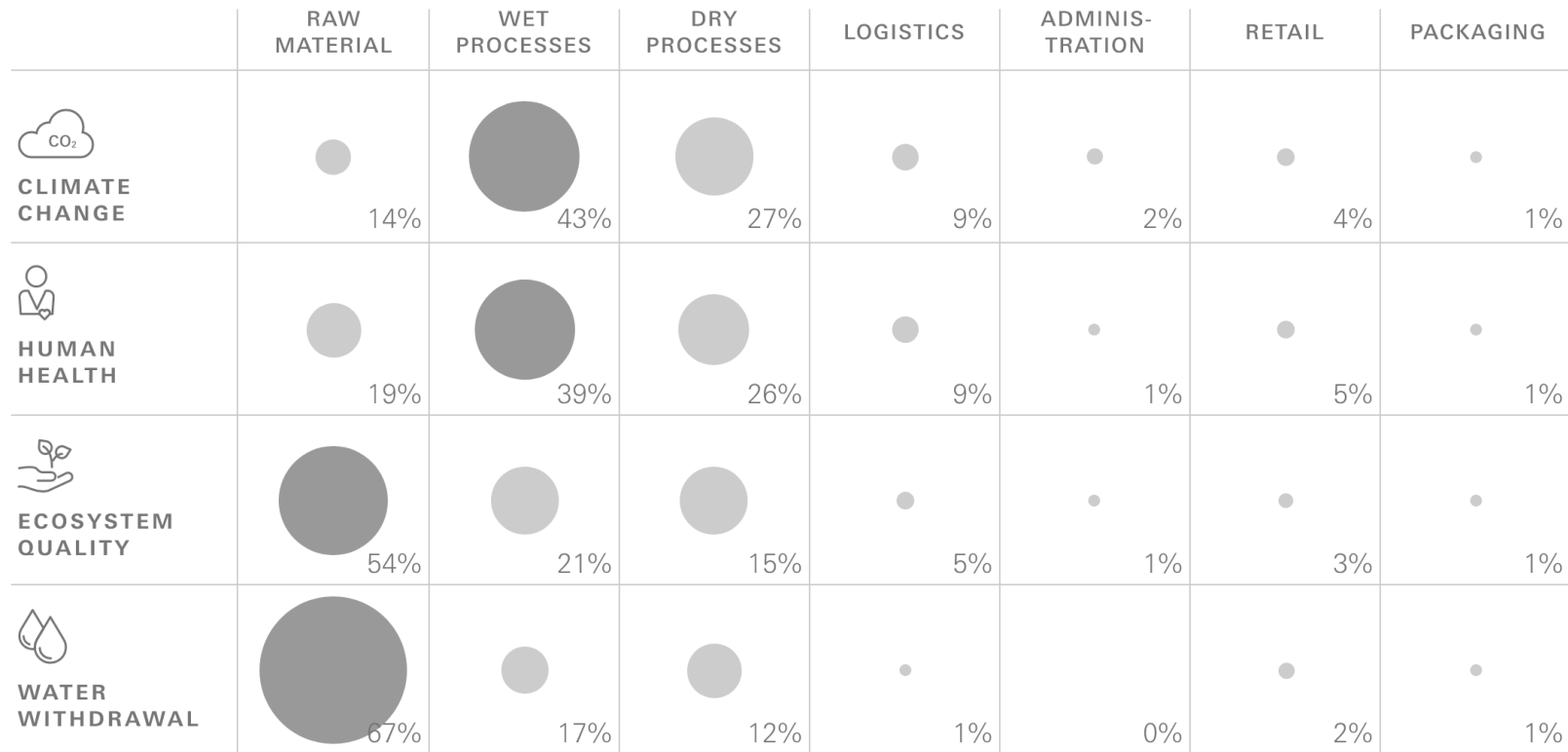


Figure 4: Aggregation levels of the natural capital valuation

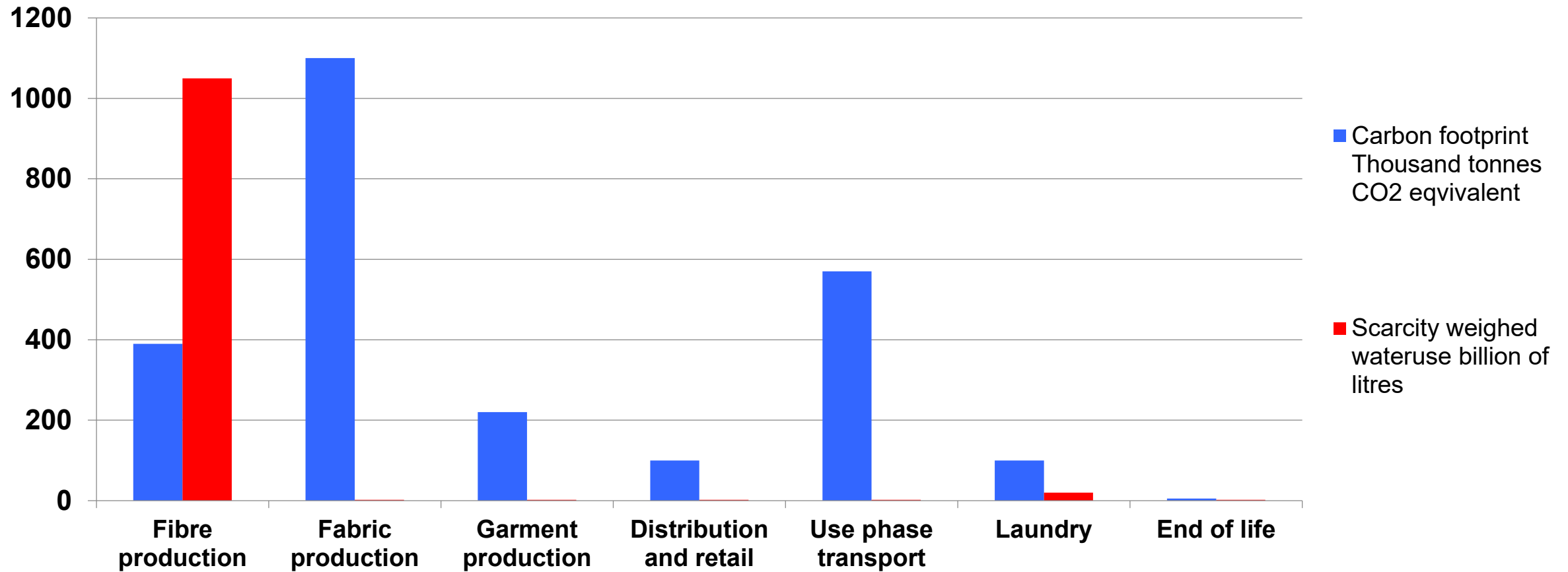
Hugo Boss – Natural Capital



State May 2018: Based on data collected in 2016 (please see 2nd edition of the White Paper) and data updates in 2018.

 HOT SPOTS

Livscykelanalys, Sandra Roos, 2016



Fristads EPD

PARAMETER		UNIT	TROUSERS	UPSTREAM	CORE	TOTAL
Global warming potential (GWP)	Fossil	kg CO ₂ eq.	2538 GRN	6.21	11.16	17.75
			232 LUXE	5.91	9.77	15.90
	Biogenic	kg CO ₂ eq.	2538 GRN	0.48	0.69	1.17
			232 LUXE	0.25	0.92	1.18
	Land use and land transformation	kg CO ₂ eq.	2538 GRN	0.029	0.033	0.063
			232 LUXE	0.030	0.034	0.063
	TOTAL	kg CO ₂ eq.	2538 GRN	6.72	11.88	18.98
			232 LUXE	6.19	10.73	17.15
Acidification potential (AP)		kg SO ₂ eq.	2538 GRN	0.0251	0.0412	0.0720
			232 LUXE	0.0326	0.0364	0.0724
Eutrophication potential (EP)		kg PO ₄ ³⁻ eq.	2538 GRN	0.0077	0.0229	0.0312
			232 LUXE	0.0099	0.0185	0.0288
Formation potential of tropospheric ozone (POCP)		kg C ₂ H ₄ eq.	2538 GRN	0.0017	0.0015	0.0034
			232 LUXE	0.0014	0.0015	0.0029
Water scarcity potential		m ³ eq.	2538 GRN	2.94	4.42	7.39
			232 LUXE	33.48	4.54	38.04



**GREEN CRAFTSMAN
TROUSERS 2538 GRN**
Art no 129663

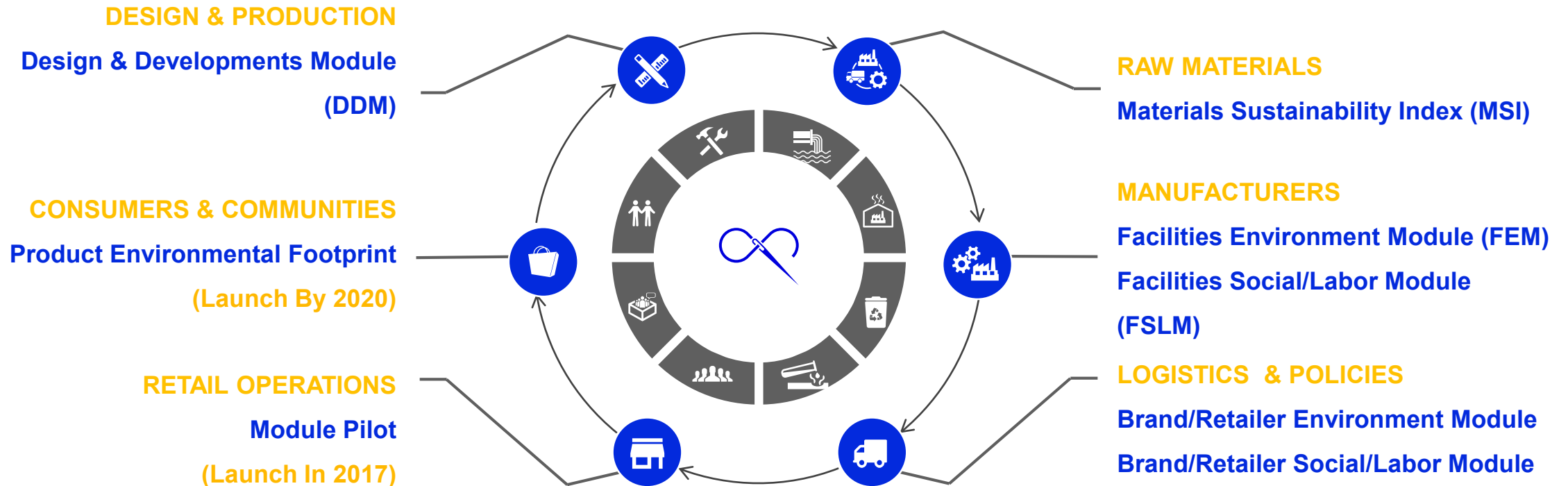
Materiality assessment

Sustainability aspects	Mgmt.	Marketing	Design & Product Dev.	Sourcing T1 Garment mfg.	Sourcing T2, T3, etc.	Sourcing Raw Materials	Own Operations	Human Resources HR	Sales	Use	End of life
Sustainability practices	Significant potential	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Significant impacts, etc., and very good programs	Significant potential	Significant potential
Environment - process	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs
EMS; ISO 14001	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant potential	Significant impacts, etc., and very good programs	Significant potential	Significant potential	Significant potential	Significant potential	Significant impacts, etc., and very good programs	Significant potential	Significant potential
Energy consumption & Carbon	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant potential	Significant potential	Significant potential	Significant impacts, etc., and very good programs	Significant potential	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant potential
Environment - product	Significant potential	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant potential	Significant potential	Significant impacts, etc., and very good programs	Significant potential	Significant impacts, etc., and very good programs	Significant potential	Significant potential
Ethics/social	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs	Significant impacts, etc., and very good programs
Ethics	Significant potential	Not relevant/ not assessed	Significant impacts, etc., and very good programs	Significant potential	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Significant potential	Significant potential	Significant potential
Human rights, social	Significant potential	Not relevant/ not assessed	Significant potential	Significant potential	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Not relevant/ not assessed	Significant potential	Significant potential	Significant potential

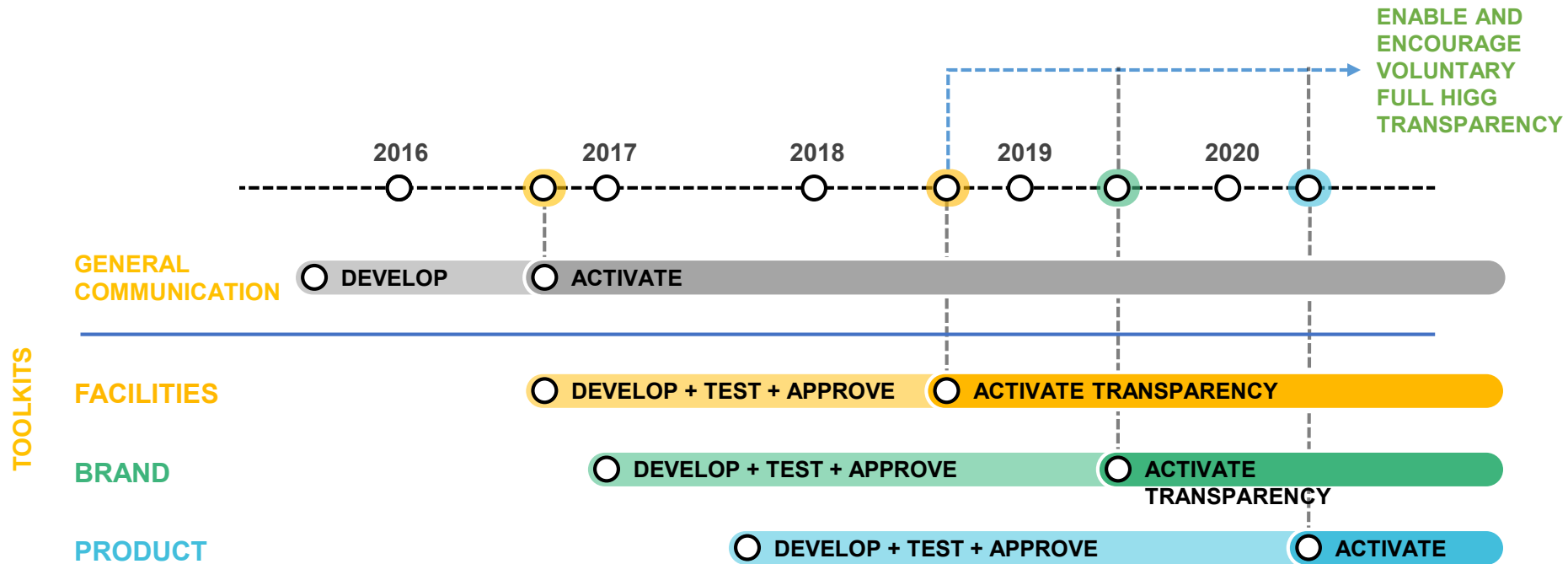
Significant potential
Neutral; some potential; Less relevant
Significant impacts, etc., and very good programs
Not relevant/ not assessed

Källa: Karin Ekberg, Leadership & Sustainability

Higg Tools for each step along the Supply Chain

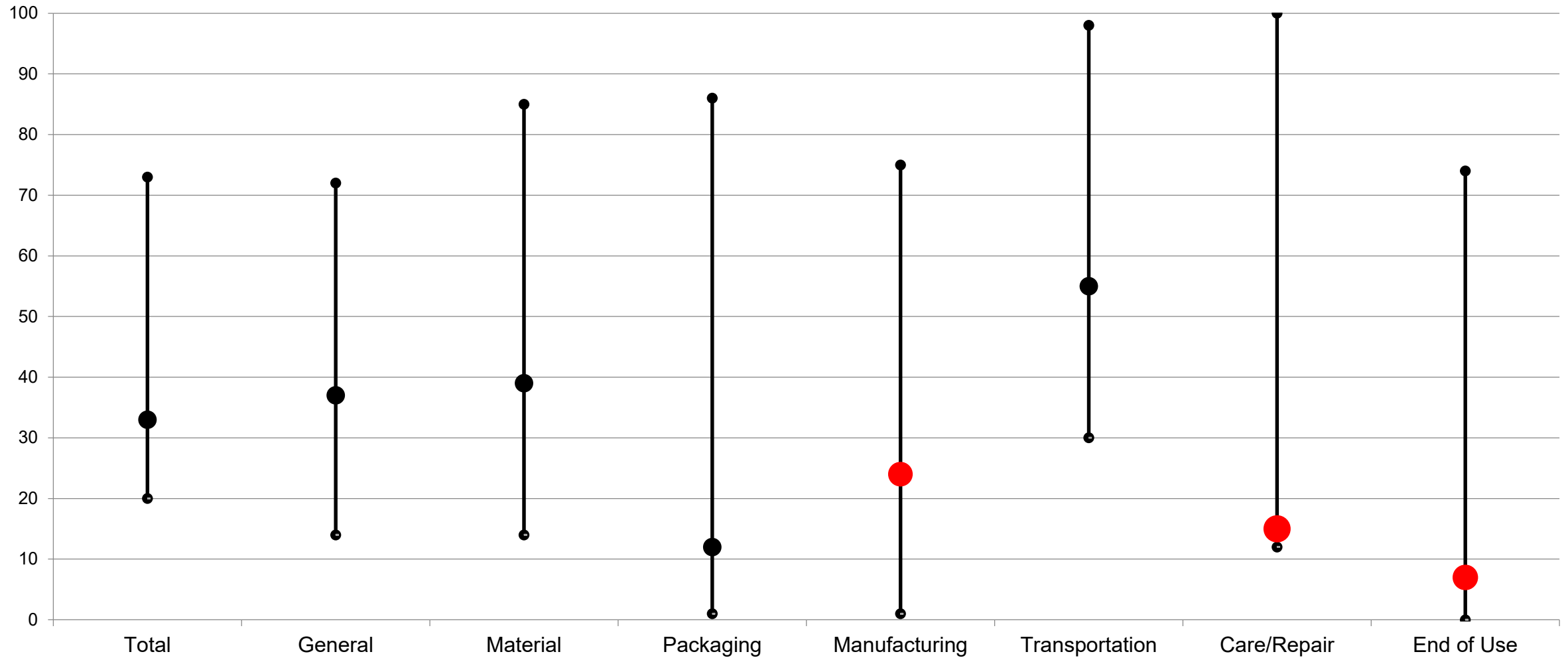


Transparens



TEXTILE CHALLENGE #2
12 SEPT!!!

Higg Index, Environmental Brand Moduule



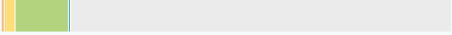
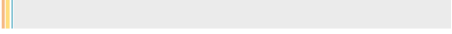
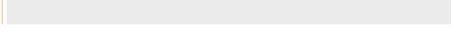
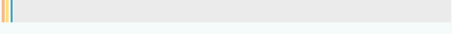
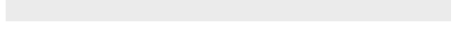
MSI – Impact categories

Impact Category	Unit	LCIA Method
Climate Change	kg CO2 eq	IPCC 2013 GWP 100a v1.00
Eutrophication	kg PO4--- eq	CML-IA baseline 2013 v3.01
Resource depletion, fossils and minerals	kg Sb eq; kg MJ eq	CML 2013 v4.3
Water resources depletion/Scarcity	m3	WSI Pfister et al. 2009 v1.01
Human Toxicity, cancer	CTUh	USE-Tox (Default) v1.03
Human Toxicity, non-cancer	CTUh	USE-Tox (Default) v1.03
Ecotoxicity	CTUe	USE-Tox (Default) v1.03
Land Occupation (Agri only)	m2a	ReCiPe v1.10

DDM – Material Sustainability Index

Compare	Material ^	Impact v	benchmark	impact	blend components
☐	 Acetate, Triacetate fabric	56		Textiles	
☐	 Acrylic fabric	52		Textiles	
☐	 Alpaca Fabric	283		Textiles	
☐	 Aramid fabric	71		Textiles	
☐	 Bast fiber fabric	95		Textiles	

MSI - Materialnivå

Production Stage	Used Process		Impact
Raw Material Source	Cotton fiber, conventional production Default	Swap ▾	60.6 
Yarn Formation Method	Spinning, cotton, for knit, ring-spun (200 DTEX-180 denier-30/1 Ne-50 Nm) Default	Swap ▾	9.2 
Textile Formation	Knitting, circular (200 dtex-180 denier-30/1 Ne), cotton Default	Swap ▾	1.0 
Preparation	Preparation for dye (scouring, etc), knit textile, natural fibers Default	Swap ▾	3.8 
Coloration	Batch dyeing (incl. piece, jet, jig, kier fiber, paddle, pad-batch, yarn) - Direct, sulfur, vat or reactive dyes Default	Swap ▾	10.2 
Additional Coloration and Finishing	None	Swap ▾	0.0 
Chemistry Certifications	None	Swap ▾	

MSI - Påverkan

Impacts			
	Impact area	MSI Score	Midpoint
	Global Warming	2.2	2.1711 kg CO ₂ eq
	Eutrophication	9.1	0.0091 kg PO ₄ -- eq
	Water Scarcity	47.6	1.4409 m ³
	Abiotic Resource Depletion, Fossil Fuels	1.7	22.6769 MJ eq
	Chemistry	0.0	Scored per material rather than production stage. Click on "Return to Material", and learn about Chemistry scoring under "Chemistry Certifications".

MSI - Datakvalitet

Data quality

Data Quality	Value	Description	
Precision	Good	10% to 20%	2
Time Representativeness	Excellent	Data are not older than 4 years with respect to the release date or latest review date	1
Geographical Representativeness	Good	The processes included in the dataset are well representative for the geography stated in the title and metadata	2
Technological Representativeness	Good	The technologies modeled are included in the mix of technologies covered by the dataset	2
			Average 1.75

DDM – Product Tool, Produkter

All Products (7) Apparel (7) Footwear (0) Textiles (0) My Products Only (7) Drafts Only (5) Product Templates (0)	Compare					Impact ▾		
	Product ▾	Status ▾	Category ▾	Season		benchmark	sections	materials & trims
	☐	 Invisible Shaping Soft Bra Swedish School of Textiles	Draft	Hosiery/Underwear	6.6		Hosiery/Underwear	
	☐	 Jacket Swedish School of Textiles	Final	Jackets	34.7		Jackets	
	☐	 Army Leather Heli Ski Ergo Grip Swedish School of Textiles	Draft	Other Apparels	10.5		Other Apparels	

Materials & Trims

Section Weight: 90%

Ytterfoder (43.0)

Untitled (0.0)

 Add Material / Trim

Part Name

Ytterfoder

Material

Cotton fabric

Is Proxy for (If Applicable)

Amount

350.0000

g



Cutting Efficiency (%)

80

Default cutting efficiency: 80%

Cutting Efficiency (%)

Your average cutting efficiency is 80%

Final product finishes (this section is unscored due to lack of data)

Have you included any of the following product-level finishes in your final product? Check all that apply

- | | |
|---|---|
| ☐ Acid Spraying | ☒ Laser Etching |
| ☐ Acid Wash | ☐ Ozone Bleaching |
| ☐ Chlorine Bleaching | ☐ Pigment Spraying |
| ☐ Digital Transfer Printed Graphic | ☐ Peroxide Bleaching |
| ☒ Distressing | ☐ Sandblasting |
| ☐ Enzyme Wash | ☐ Screen Printed Graphic |
| ☐ Garment Anti-microbial/Anti-Odor | ☒ Softener |
| ☐ Garment Desizing | ☐ Stone Wash |
| ☐ Garment Dyeing | ☐ Water Only Wash |

Care & Repair

Section Weight: 5%

Design for Low Impact Care

Are any of these high impact care instructions required for maintaining this product?

- ☐ Dry clean only
- ☐ Dry clean recommended
- ☐ Wash seperately
- ☒ None of the above

Design for Repair

Have you designed this product to be repaired through your repair program, by the customer, or by a tailor?

- ☒ Yes
- ☐ No



End of Use

Section Weight: 5%

Is this a monomaterial product compatible with a recycling and/or composting program/scheme at the end of its useful life (excluding trims and threads)?

- ☐ Yes
- ☐ No

Has this product been designed for disassembly to allow for recyclability and/or composting?

- ☒ Yes
- ☐ No

Quality & Lifetime

Section Weight: 0%

Quality and lifetime

How long will this product be guaranteed for?

5 years + (1.25 divisor) ▲

--

Unknown, no requirement, or legal minimum
(no score change)

Up to 5 years (1.1 divisor)

5 years + (1.25 divisor)

PLM + DDM + MSI

- Onödigt att ha "ett till" design/PLM-system
- Integrationsprojekt pågår

TECHNIA TRANSCAT

Information

- <https://product.higg.org/product-tools>
- <https://www.houdinisportswear.com/us/planetary>
- <https://group.hugoboss.com/en/responsibility/we-vision-strategy/natural-capital-evaluation/>
- <https://www.fristads.com/sv-se/fristads-green>
- <https://research.chalmers.se/publication/246361>
- <https://msi.higg.org/page/learn-more>
- <https://www.leadership-sustainability.com/>
- http://ec.europa.eu/environment/eussd/smgp/ef_pilots.htm
- <http://mistrafuturefashion.com/sv/hallbart-mode-ar-inte-en-fraga-om-fiber/>