

# Using Tools to Understand Environmental Impacts in the Fashion Industry

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Can the Circular Economy Save the Textile Industry?

15th February 2016

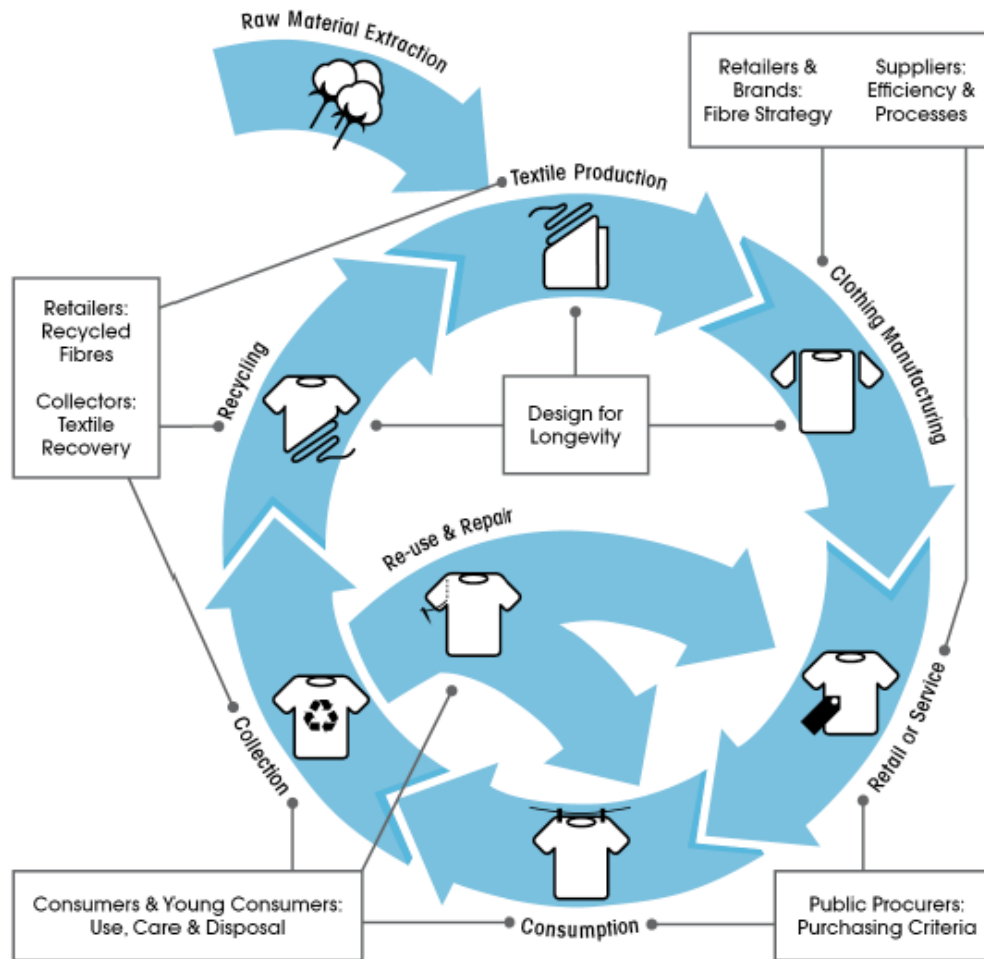


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[www.made-by.org](http://www.made-by.org)

# Identifying opportunities to close the loop



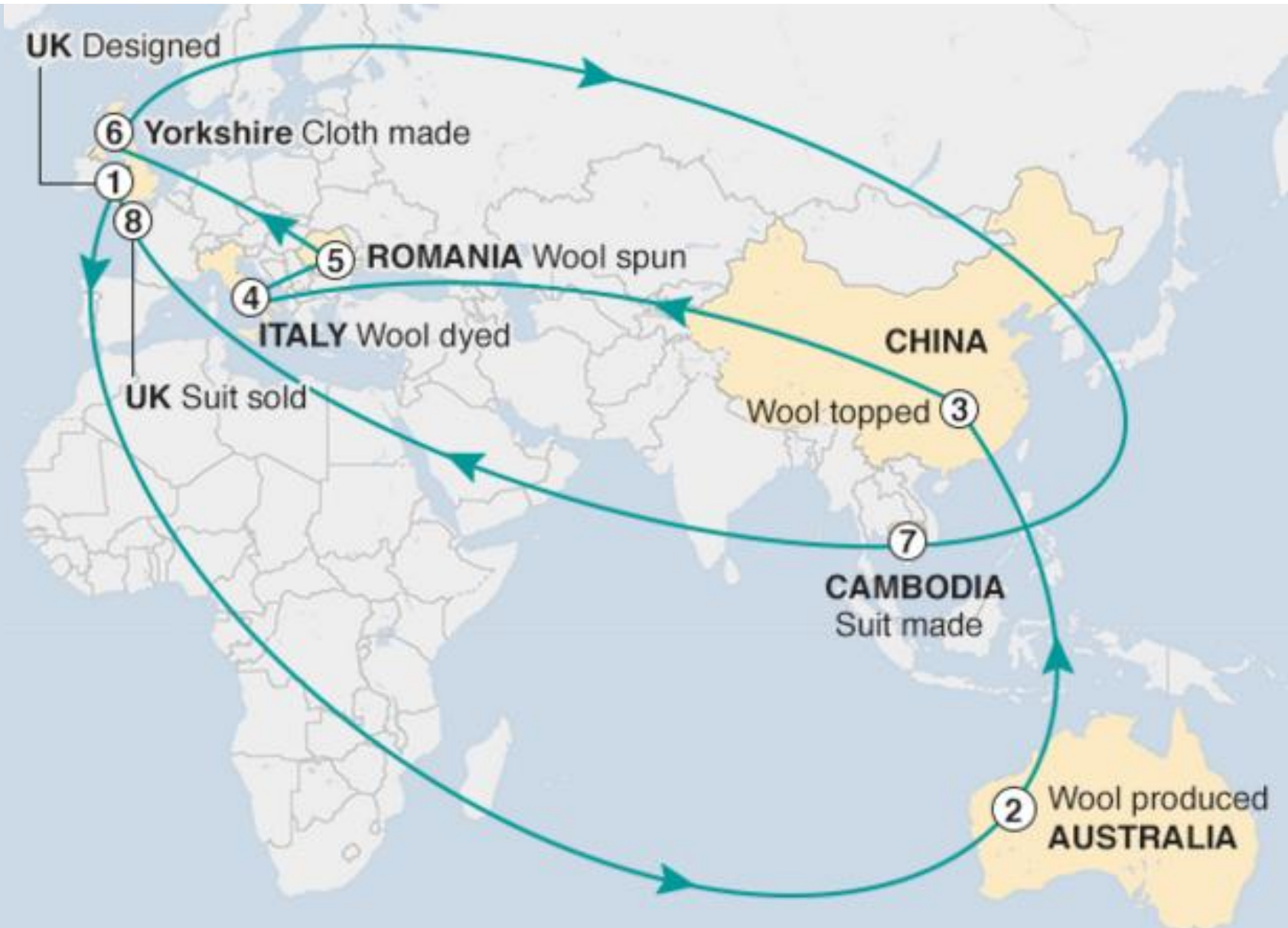
To understand the opportunities that exist for a more circular business model its important to first understand your key impact hotspots/bottlenecks and prioritise accordingly

# Understanding Impact in the Supply Chain

- The broader environmental impacts and issues associated with the apparel industry are largely acknowledged:
  - Carbon
  - Water
  - Waste
- However, at brand level many find it difficult to measure and prioritise impacts
- Many brands struggle to understand and baseline the hotspots in their supply chain
  - Multiple suppliers
  - Complex and often limited data sets
- The fashion supply chain is largely opaque
- A large proportion of the environmental burden sits with the consumer- use & disposal
- An estimated 350,000 tonnes of clothing ends up in landfill each year in the UK



# The England Suit



# Tools for Measuring & Communicating Impact



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- Tools are only as good as the data available
- Impact and opportunities have to be communicated clearly and concisely
- Must be relevant to the needs of the industry
- Allow for modelling and benchmarking



# SCAP Footprint Calculator



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Front Page | User guide | Data Entry | Headline Results | Detailed Results | Improvement Opportunities | **Improvement Analysis** | Improvement Roadmap | Reporting

Detailed Improved Results Analysis | Export Mass Flow Diagram | Give Feedback

Back | **Improvement Analysis** | Next

Show results for:  all clothing sold  Per tonne of clothing sold

Impact	Unit	Baseline Scenario	Improved Scenario	No Cha
Carbon	tCO2e	26	26	No Cha
Water Footprint	m <sup>3</sup>	17,400	17,400	No Cha
Waste	tonnes	2	2	No Cha

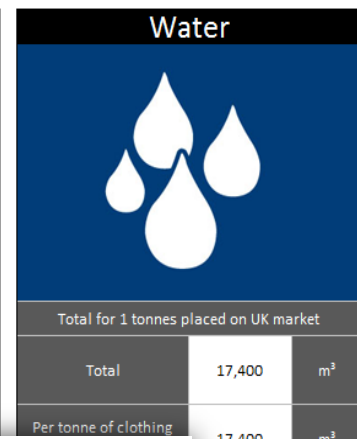
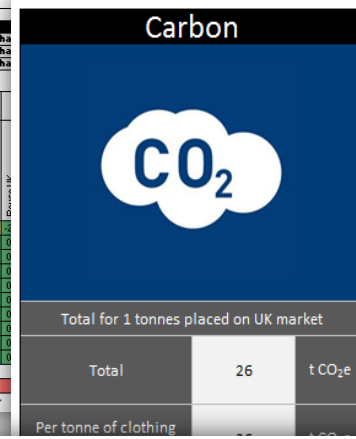
**Available Scenarios**

- 1. Conventional Cotton to BCI Cotton: 20%
- 2. Conventional Cotton to Organic Cotton: 20%
- 3. Conventional Cotton to CMA: 20%
- 4. Virgin Polyester to Recycled Polyester: 20%
- 5. Viscose to Lyocell: 20%
- 6. Cotton to Polycotton: 10%
- 7. Eco-efficiency in raw material/fibre prod.: 10%
- 8. Eco-efficiency in yarn production: 10%
- 9. Eco-efficiency in fabric production: 10%
- 10. New fabric dyeing: 10%
- 11. Eco-efficiency in cutting and making-up: 25%
- 12. Longer lifetime for new clothing: 100%
- 13. More UK reuse of pre-owned garments: 100%
- 14. Change in consumer laundry behaviour: 100%
- 15. Increase in collection for reuse/recycling: 100%
- 16. Hire and repair services dematerialize: 100%
- 17. Novozymes Biopolishing: 100%
- 18. Korbond - Repair - Low - 10%: 6%
- 19. Korbond repair - High - 30%: 3%

**Impact Heat Map**

Cotton	Raw Materials			Processing							In Use				
	Extraction	Processing to fibre	Trans. to yarn producer	Pre-spinning	Spinning/Winding	Trans. to fabric producer	Weaving/Knitting	Wet treatment	Finishing	Trans. to garment producer	Making up	Transport to UK	Washing	Drying	Ironing
Cotton	##	3%	0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	##	15%	0%
Wool	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Silk	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Flax/Linen	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Viscose	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Polyester	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Acrylic	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Polyamide	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PUPP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Increasing proportion of overall impact →



**WRAP** SCAP Footprint Calculator

2015/16 version - Active until 01/07/2016

Sustainable Clothing Action Plan

**Start in...**

I have read and agree to the terms of the confidentiality agreement below

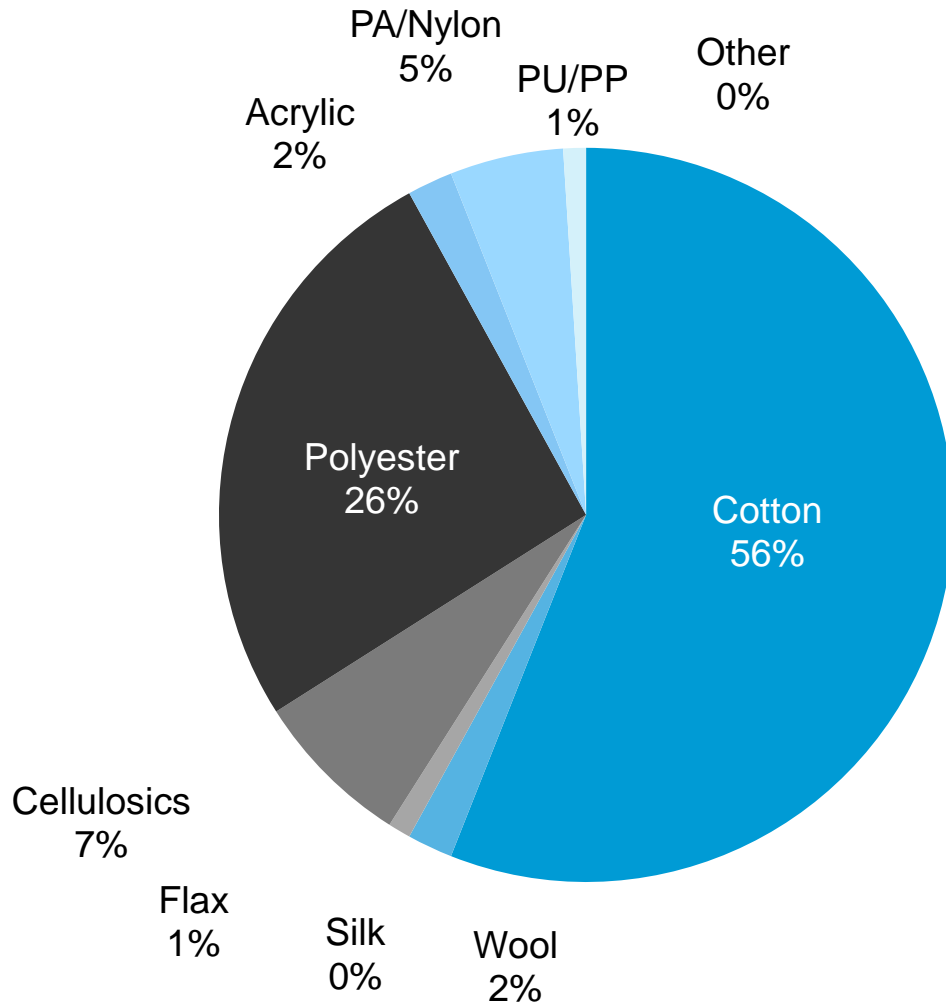
Retailer Mode

Retailer Reporting Mode

End of Life Mode



# Fibre Mix of a Small/Medium UK Brand



Available Scenarios		
<input type="checkbox"/>	1. Conventional Cotton to BCI Cotton	20%
<input type="checkbox"/>	2. Conventional Cotton to Organic Cotton	20%
<input type="checkbox"/>	3. Conventional Cotton to CMiA	20%
<input type="checkbox"/>	4. Virgin Polyester to Recycled Polyester	20%
<input type="checkbox"/>	5. Viscose to Lyocell	20%
<input type="checkbox"/>	6. Cotton to Polycotton	10%
<input type="checkbox"/>	7. Eco-efficiency in raw material/fibre production	10%
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<input type="checkbox"/>	14. Change in consumer laundry behaviour	100%
<input type="checkbox"/>	15. Increase in collection for reuse/recycling	100%
<input type="checkbox"/>	16. Hire and repair services dematerialise	100%

# The Higg Index



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**Higg 2.0 - Facility Module**

Download the Higg 2.0 Facility Module

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A banner image showing a close-up of a white Brother sewing machine in a factory setting. In the background, two workers in blue shirts are visible, one operating a machine. A semi-transparent dark grey box is overlaid on the left side of the image, containing the text and a blue button.

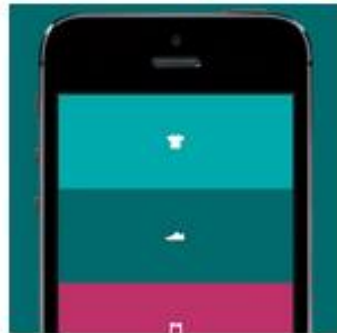
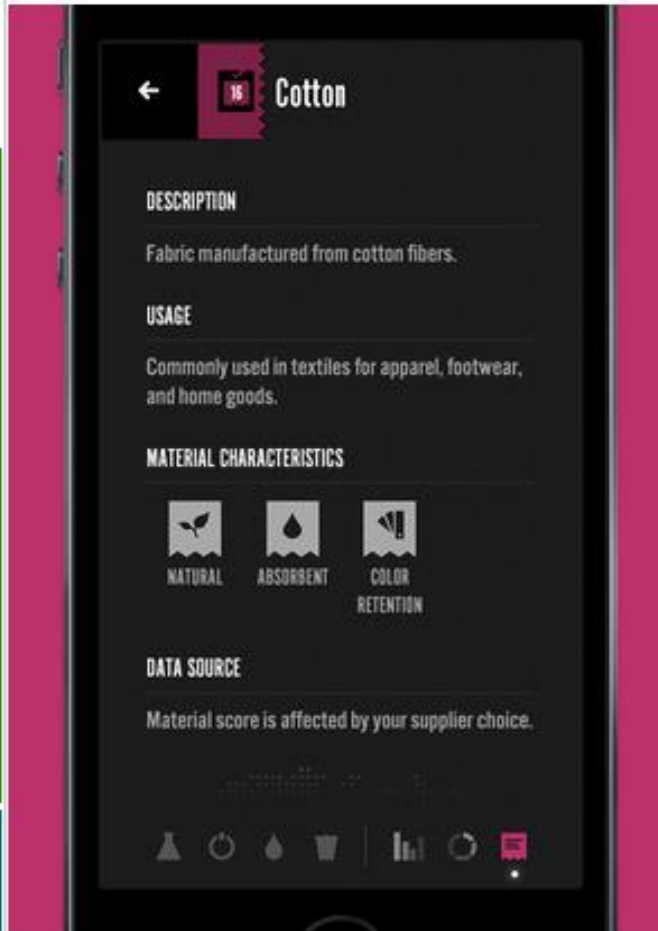
**Higg 2.0 - Brand Module**

Download the Higg 2.0 Brand Module

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A banner image showing stacks of folded blue denim jeans on a wooden shelf in a warehouse or factory. A semi-transparent dark grey box is overlaid on the left side of the image, containing the text and a blue button.





# MADE-BY Environmental Benchmark for Fibres



## MADE-BY ENVIRONMENTAL BENCHMARK FOR FIBRES



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	Poly-acrylic	Conventional Cotton	Alpaca Wool
Organic Flax (Linen)	CRAILAR® Flax	PLA	Virgin Polyester	Cuprammonium Rayon	Cashmere Wool
Organic Hemp	In Conversion Cotton	Ramie		Generic Viscose	Leather
Recycled Cotton	Monocel® (Bamboo Lyocell Product)			Rayon	Mohair Wool
Recycled Wool	Organic Cotton			Spandex (Elastane)	Natural Bamboo
	TENCEL® (Lenzing Lyocell Product)			Virgin Nylon	Organic Wool
				Wool	Silk
More Sustainable			Less Sustainable		

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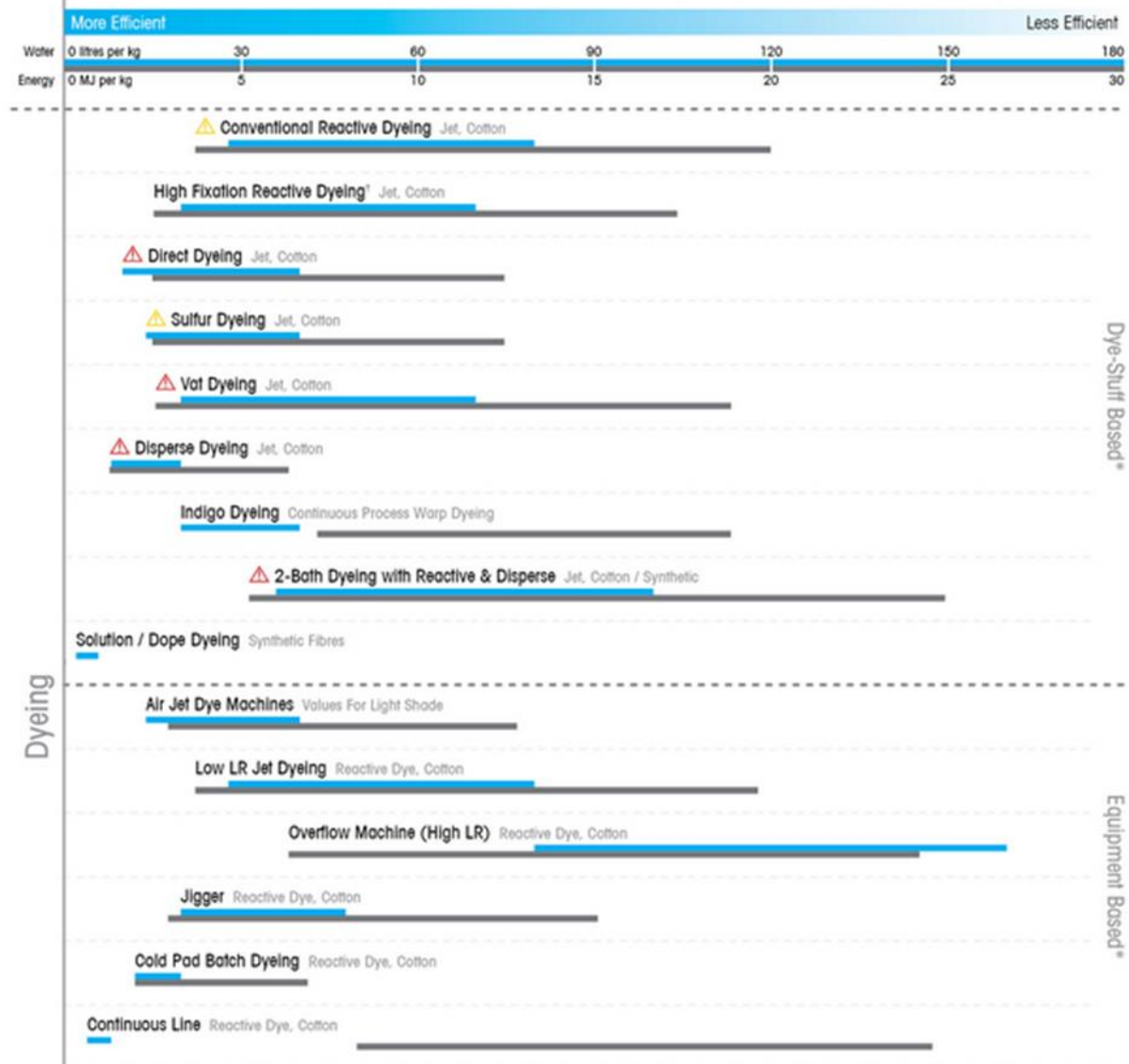
**bwe** This Benchmark was made in cooperation with Brown and Wilmanns Environmental, LLC. For further information on this Benchmark see [www.made-by.org/benchmarks](http://www.made-by.org/benchmarks)

# MADE-BY Wet Processing Benchmark



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## Wet Processing Benchmark: Dyeing



# Examples

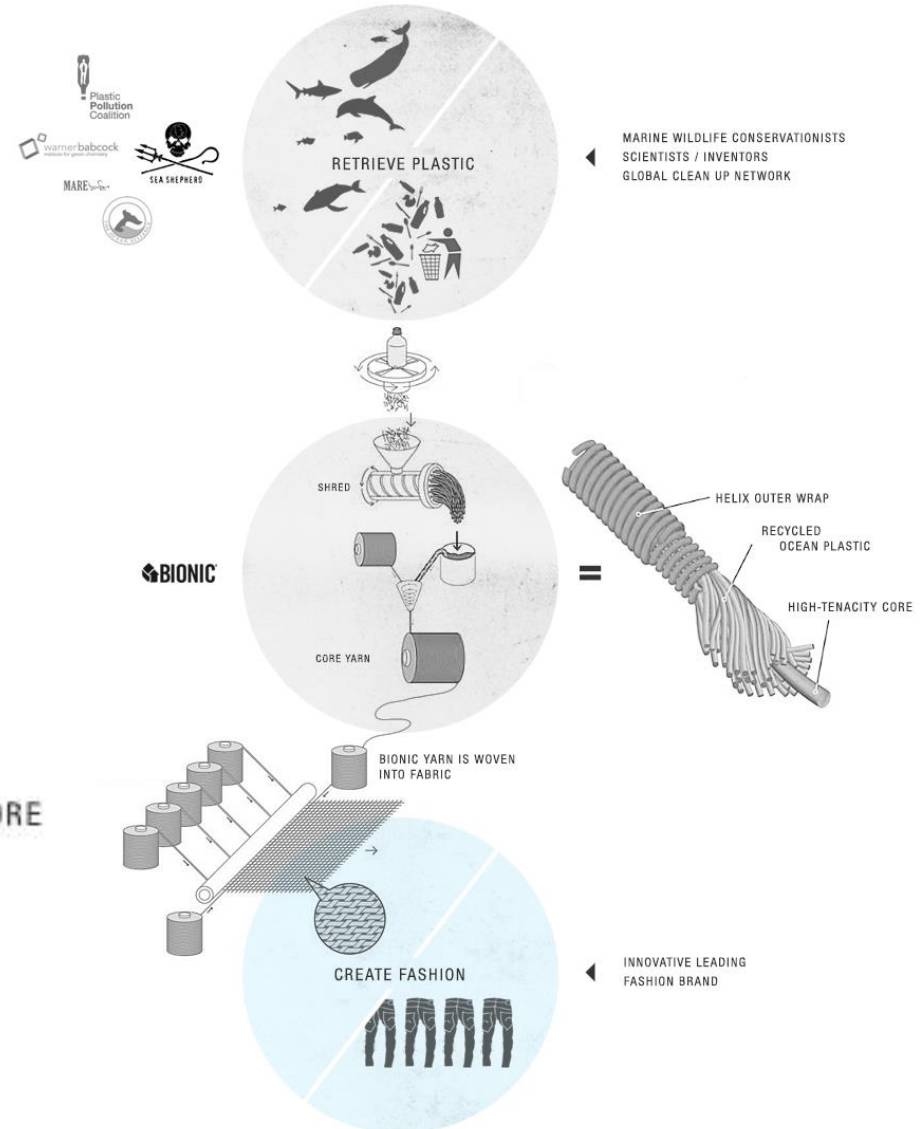
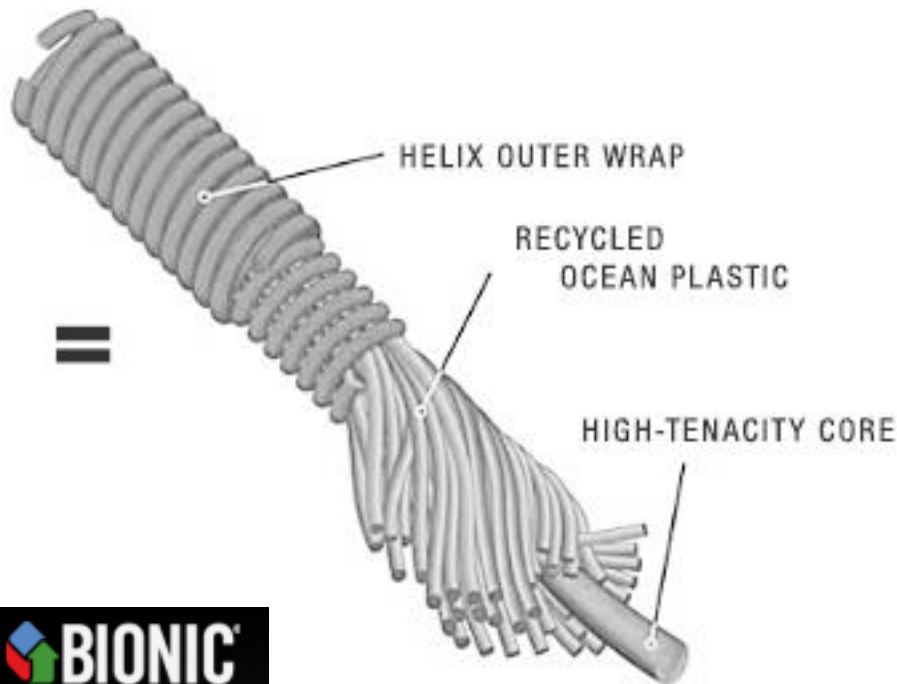
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# Recycled Polyester



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“Raw for the Oceans“ denim collection from G-Star and Bionic Yarn containing yarn spun with fibers from **recycled plastic waste recovered from oceans and coastlines**



# H&M Recycled Denim Capsule Collection



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This denim is made with **20% recycled cotton** and **28% recycled polyester**.

Its recycled polyester used to be **3.1 PET bottles**.

The recycled cotton is generated from **no longer wanted clothes**.



This way, it helped **keep fashion from ending up in landfill**.

To make it out of recycled material only, more **technological innovation** is needed to ensure highest quality demands.

We are working to overcome this challenge and our goal is to create a **closed loop for textile fibres**.



## Mud Jeans – ‘Lease a Jeans’

- Launched January 2013
- Organic + Recycled Cotton
- Jeans are leased, making sustainable denim more affordable for all consumers
- Leased jeans costs an initial fee of 20 Euros and a monthly fee of 5 Euros during the one year leasing period
- Throughout the full term of the lease, the jeans will be repaired for free.
- After one year, the consumer can bring the jeans back to the brand. Mud Jeans will then decide if the jeans can be re-used, repaired or recycled.
- Since expanded: Lease a Fleece & Lease a Bag



# Thank you

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