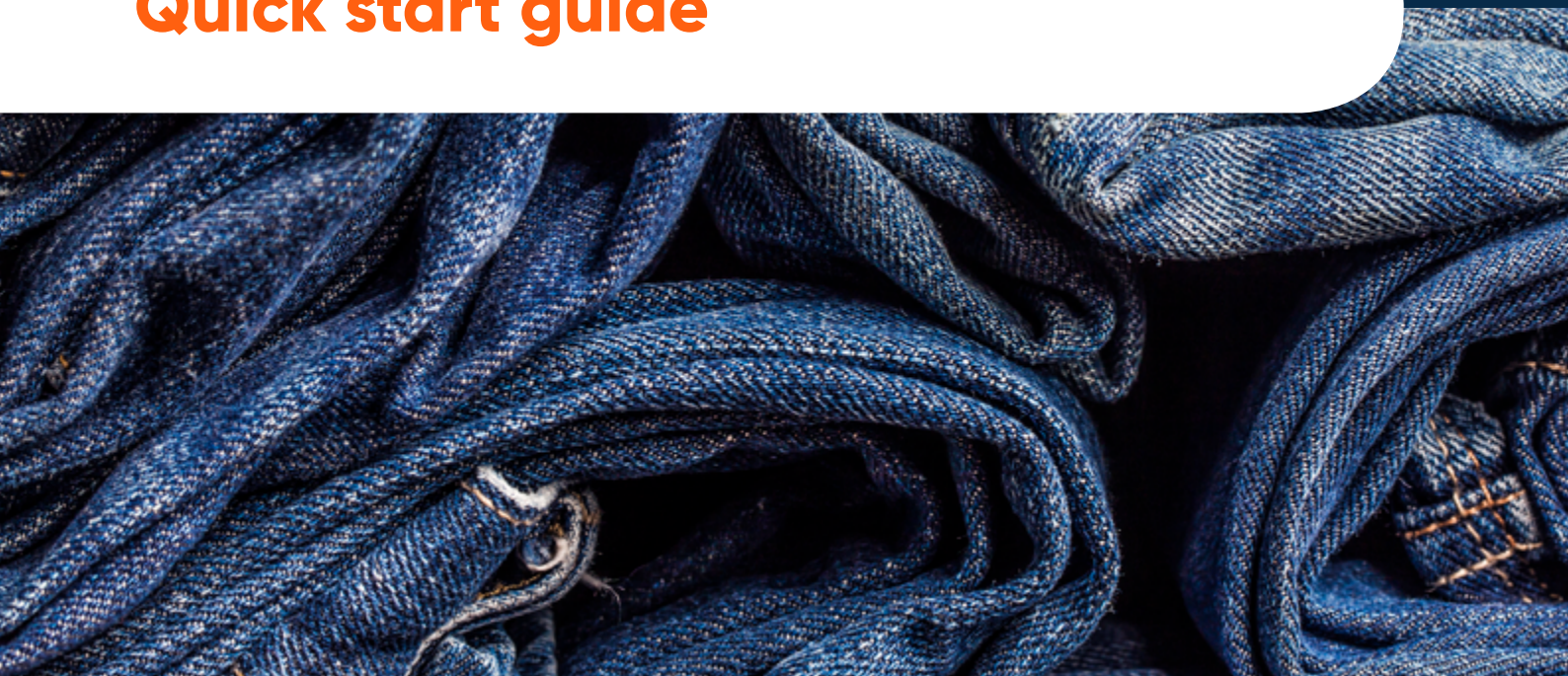
Ecochain

How to become the world's most sustainable fashion brand

Quick start guide



Can the apparel industry become more sustainable?

The fashion industry has some truly major sustainability problems in its midst: besides the fact that is a large contributor to climate change, it has to deal with a lack of (scientific) knowledge to support circular design principles; lack of accessible, quality data on the environmental impact of materials and production methods and the complexity of its supply chain.

The fashion industry is indeed one of the most complex global production networks. The complexity and fragmentation of its supply chain can make it difficult for brands to keep track of where and how their products are made.

Clothes are primarily designed with neither durability nor recycling in mind and produced in a linear system of "take, make, dispose", with 73% of the world's clothing eventually becoming waste.
At the same time consumer interest in transparency has increased.

According to an international study conducted by Unilever (2017), around 33% of consumers are now choosing to buy goods from brands they believe are contributing to the social or environmental good. Furthermore, 21% of the 20,000 surveyed people said they actively choose brands that clearly pointed out their sustainability credentials on their packaging and in their marketing campaign.

In response, more companies are starting to make traceability a part of their value proposition and their communication strategy.

Sustainability is no longer a nice-to-have for businesses, it has become routine for customers to ask for the sustainable and environmental performance of products. Companies have to be transparent about their production and the impact of their products by turning reliable data in actionable insights to avoid accusations of greenwashing. Nowadays fashion brands have an opportunity not only to increase their resilience, but also to drive competitiveness and growth through innovation. But let's be honest, creating the future is very different from problem-solving, some transformational changes will take cooperation among policy makers and stakeholders across the entire value chain.

We can only act on it if we understand the problem. This quick start guide will help you understand where the real problems in the apparel industry are and how companies can effectively address the issue to become more sustainable.

Impact

on climate

The following results illustrate the greenhouse gas emissions for seven different cycle stages in the life of garments. More than 50% of emissions come from three stages: Dyeing & Finishing, Yarn preparation and Fiber production

12%

1 FIBER PRODUCTION

Raw material extraction and processing of synthetic, cellulosic, cotton and natural fibers.

22%

2 YARN PREPARATION

Spinning of yarn from filament and staple fibers.

9%

3 FABRIC PREPARATION

Knitting and weaving of yarn into fabric.

28%

4 DYEING & FINISHING

Bleaching and dyeing of fabric as well as fabric finishing. The most energy intensive stage, dyeing has a high energy demand due to wet processes which require large amounts of heated water.

5%

5 ASSEMBLY

Cutting and sewing fabric into apparel products.

1%

6 DISTRIBUTION

Transportation from assembly location to retail stores.

23%

7 USE PHASE

The consumer use phase is where the product is handled, washed, repaired, and possibly passed on. The magnitude of this phase's impact involves assumptions about consumer behaviors, which vary widely in the real world. The main drivers are the energy and water consumption from washing, as well as energy-intensive drying.

8 END OF LIFE

0,2%

Collection and management of apparel products at the end of their useful life (incineration and landfilling).

Source: Quantis

APPAREL USE PHASE

IMPACT DRIVERS

Water	Medium	Washing the clothes
Energy	Big	Energy used for washing, drying, ironing
Chemicals	Medium	Toxicity of washing detergents, pollution of waste water (e.g. microplastics)
Waste	Medium	Longer product use avoiding waste, second hand clothing

The fashion industry
in numbers

350.000 km²
Land dedicated to cotton production alone

60 Level of global GHG emissions originating from the global apparel and footwear industry

93.000.000.000 m³
Water used by the industry every year - enough for 5 million people to survive

+40 %
Increase in the number of garments sold in the last 20 years

500.000 t
Microfiber dumped into the ocean every year - the equivalent of three million barrels

20.000 liters
Water needed to grow cotton for one pair of jeans and one t-shirt

8.000.000.000 m²
Textile fabric waste from the cutting process

37 % Brands that are publishing their supplier lists

33.000 t
Annual worldwide production of cotton

< 1 % Percentage of annual worldwide production of ecological cotton

18 % Brands that are transparent about their manufacturers

400.000.000.000 m²
Worldwide annual production of textile fabric

Challenges

SUPPLY CHAIN & MATERIALS

- Supply chain traceability
- Sustainable material mix
- Rising cost of materials

MANUFACTURING & DEVELOPMENT

- Efficient use of water, energy and chemicals
- Lack of scientific knowledge to support circular design principles

MARKETING & BRANDING

- Building a sustainable brand image
- Meeting transparency demands of conscious consumers

EXTERNALITIES

- Complying with constantly changing regulation
- Carbon taxation

Solutions

Meet transparency demands of conscious consumers

The fashion industry needs to meet the demands of increasingly environmentally conscious shoppers. Brands and retailers are taking this responsibility seriously, encouraged by consumers who are more conscious and concerned of the origins, composition, carbon footprint, and the overall consequences of what they purchase and wear. Brands that lack behind in disclosing the footprint of fashion products will fall further behind.
Ecochain enables you to report and disclose verifiable environmental data to customers because transparency is a win-win for both consumers, companies and the planet.

Enable fashion designers to interpret scientific data with ease and meet circular fashion principles

Science is critical to tackling environmental issues. The scientific approach to calculating the footprint and circularity of products is called life-cycle assessment. LCA is a long known applied methodology used in industrial product design, yet relatively unknown in fashion. For fashion design this would require a new scientific skill set. Ecochain supports fashion designers to calculate LCAs and to interpret data at a level that supports their designs, without having to be an environmental expert. This enables fashion designers to design circular fashion that is scientifically verifiable, with relative ease.

Develop a database with verifiable data to analyse material, production and supply chain footprints

Ecochain enables brands and manufacturers to assess the footprints of materials, production systems and their supply chain. This helps the fashion industry to develop (brand authentic) footprint data to use for integrated reporting. The insights can be applied to engage internal stakeholders and suppliers to cocreate lean and green business cases to optimize the value chain.

Unravel the complexity of supply chains

Each segment of the supply chain, from fiber ingredient production until after the product leaves the hands of the consumers, plays a relevant role in the industry's environmental impact. The responsibility to think in a more sustainable way across the supply chain falls on everyone of us.
Ecochain enables you to pinpoint supply chain hotspots and identifies the suppliers with the highest impact. This enables fashion labels to focus and engage suppliers with the highest leverage to make a positive impact.

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TALK TO AN EXPERT