SUSTAINABILITY

The Future of Fashion

2022

DeSL

The bitter truth about the fashion industry is that it is one of world's most significant contributors to carbon emissions and waste. Analysts have estimated that the global fashion industry emits more carbon than the combined economies of France, Germany, and UK [McKinsey]. Valued at close to 3 trillion dollars, the textile and garment industries represent an immense global system [Fashion United]. And with the booming growth, draws greater attention to the negative impacts it is responsible for.

When examining the challenges that fashion companies must face today, we cannot separate the joint requirements for sustainable products and ethically produced products. Both areas must be addressed simultaneously to minimize the negative impact on our climate and environment while protecting the rights and safety of those people involved in producing the products. A common method of representing these ideas is using ESG or environmental, social, and governance criteria.

ESG - ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

ENVIRONMENTAL

Climate Change Strategy
Carbon Intensity
Water Management
Energy Efficiency
Recycling Processes

ESG

SOCIAL

Health and Safety
Working Conditions
Human Rights
Employee Benefits
Impact on Local Communities

GOVERNANCE

Ethic Standards
Compliance
Board Diversity
Shareholder Democracy

Sustainability can be described by the triple bottom line – People, Planet, and Profit. This approach requires businesses and institutions to give a full accounting of all their practices – financial, environmental, and social – in an effort to measure total cost, not just financial profit or loss.

[Maricopa Community College]

Carbon emissions in the manufacturing and procurement processes are only part of the problem. Issues with fashion products' end of life are a concern due to disposal of materials and products ending up in landfills. How do we design with circularity in mind to reuse and recycle materials and products? Choosing the right vendor and manufacturing partners is key to meeting sustainability goals. With that, brands and retailers have a vital role in ensuring workers in facilities have fair, safe, and healthy working conditions. Consumers have often been shocked by manufacturers not providing living wages or not adhering to essential health and safety standards.

Brands and retailers now realise that they must take proactive steps in order to address the concerns of their consumers. Buying habits are evolving, and climate change is becoming recognized as a priority. The new generation of consumers are much more discerning than previous generations when it comes to protecting our environment and opting for products with a verifiable, sustainable, and traceable lineage. Going forward, brands and retailers will be asked to show how they are tackling climate ensuring compliance with social and human rights requirements, not just in their organisations, but, more importantly, their entire supply chain, from fibre to finished product.

CORPORATE SUSTAINABILITY IN HIGH DEMAND ACROSS GENDER AND GENERATIONS

Percentage of respondents who said that it is "extremely" or "very" imporant that companies implement programs to improve the environment. [Nielsen]

81%
OF GLOBAL RESPONDENTS

80%
OF MEN

81%
OF WOMEN

GEN Z 15 - 20	80%
MILLENNIALS 21 - 34	85%
GEN X 35 - 49	79%
BABY BOOMERS 50 - 64	72%
SILENT GENERATION 85 +	65%

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

There are many ways that brands and manufacturers can work together to reduce the negative climate impacts such as: minimizing waste, switching to renewable energy, biodegradable packaging, more efficient transportation, reducing physical samples as well as researching and developing more sustainable materials. With the global shift centering on sustainability, many groups are putting together guidelines and systems for tracking and monitoring improvement moving forward. The **U.S. Cotton Trust Protocol** brings verifiable standards to material production, which closely aligns with the **United Nations Sustainable Development Goals**.

However, technology can also now play a major role in the overall goal of sustainability management.
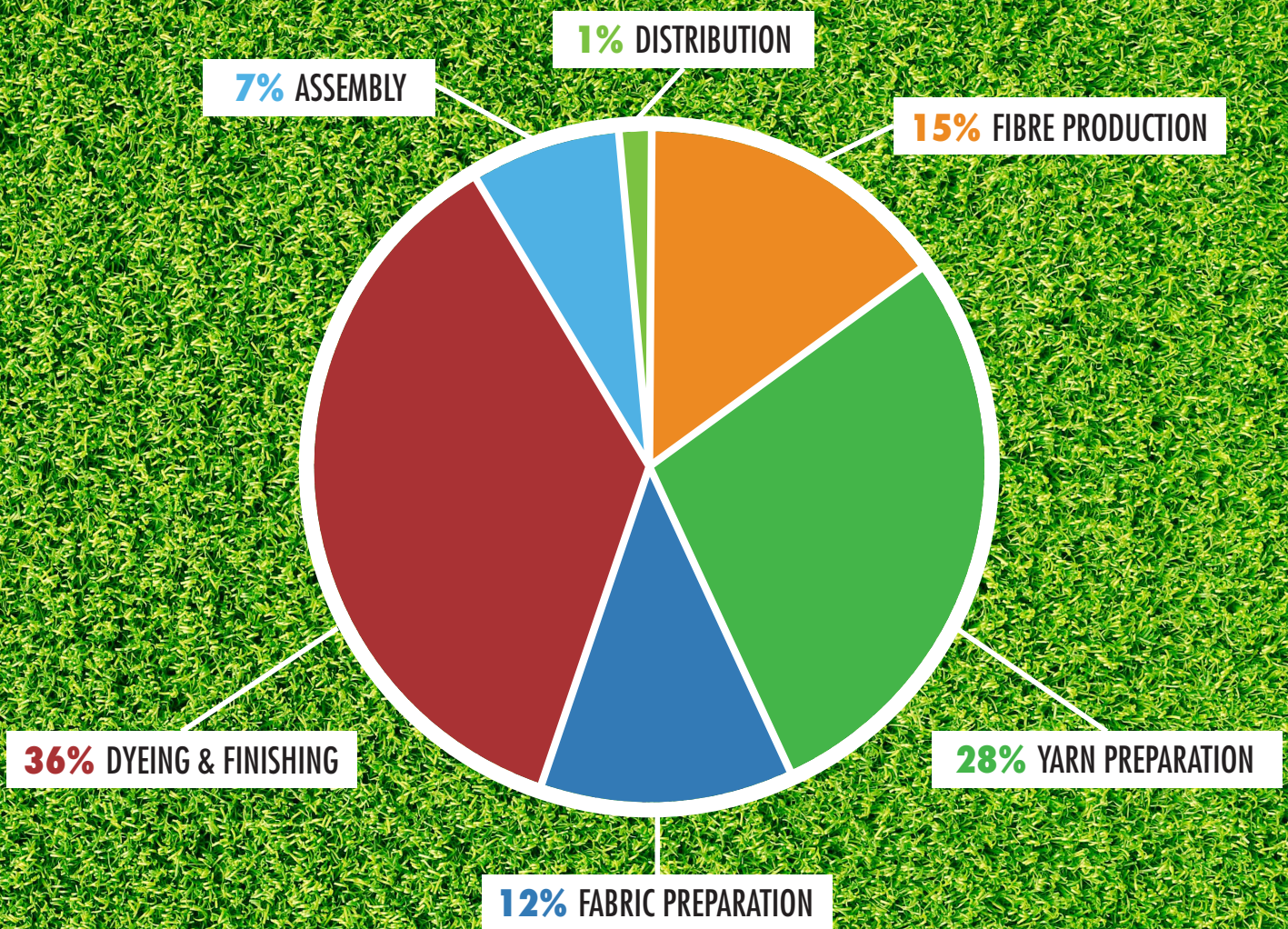
Firstly, let's examine the process of samples management in the fashion sector. The industry does not yet seem to have moved forward significantly when it comes to reducing the need for physical samples for new products and materials. Many other industries have reduced their requirements for product prototypes but the fashion industry continues to be obsessed with retaining the need for too many different types of samples. There are immediate steps that can be taken to reduce or remove this need entirely:

1. **Digital Colour Approvals** – When a new colour or material is being developed the supplier has traditionally been asked to send physical samples to the brand. The brand then checks the colour and material via human eye and very frequently rejects the sample because it does not meet expectations. This can happen multiple times with all the associated cost, time, and wastage. Utilizing today's technology will allow this process to be 100% digitized. Paired with a cloud-based management platform this enables suppliers and brands to communicate directly, and agree/disagree on the new development without a single physical sample received by the brand. Not only offering a more accurate method of evaluation, this speeds up the approval process while eliminating the unnecessary cost and waste.

2. **3D/Virtual Samples** – When new finished products such as apparel and footwear etc. are being developed they also go through an extensive sampling and approval/rejection process. Even worse, there can be multiple types of samples such as prototypes, fit samples, seal samples, sales samples, and production samples. All of these samples are traditionally produced as physical products, and the same shipping between brand and vendor occurs. As with new colours and materials, the same human evaluation is performed which involves all the previously described re-work, shipping time, and wastage. Technology again can play a major role in reducing this cycle by the cloud-based evaluation of 3D models and using advanced collaborative and communication capabilities.

EMISSIONS PRODUCED DURING THE MAKING AND DISTRIBUTION OF CLOTHES

[Quantis]

1% DISTRIBUTION

7% ASSEMBLY

15% FIBRE PRODUCTION

36% DYEING & FINISHING

28% YARN PREPARATION

12% FABRIC PREPARATION

Carbon emissions are one of the most harmful side effects of the fashion industry but they are also one of the easiest to measure and reduce. Any movement of merchandise in the supply chain causes carbon emissions. This includes the development of new products and materials along with their associated samples, movement of finished products from manufacturer to brand, movement of raw materials to manufacturers from their suppliers etc. Where products are fully defined in terms of a multi-level bill of materials, this enables brands to more accurately measure the effect of their product purchases in terms of ALL the material movements required to satisfy this.

Having a robust and functionally rich software solution, potentially deploying Artificial Intelligence, can enable brands to measure the carbon emissions they have incurred. In addition, it will also give them the ability to predict likely carbon emissions based on information such as proposed vendor allocations, line plans, sample requests, and potential purchase orders. Once the predictions are known, the brand can then model various scenarios in order to deliver the appropriate mix of commercial and sustainability goals.

When brands select suppliers to procure merchandise they must ensure that the supplier is compliant to social and ethical trading standards. But how far down the supply chains should the brands investigate? Does the primary supplier outsource any work to 3rd parties? Where does the supplier source their raw materials? Are the raw material suppliers complying with ethical and social standards? The reality is that brands must now ensure that ALL levels in the supply chain, down to the cotton origin, are properly scrutinised.

150 MILLION
Lives are touched by the Global Apparel Industry Daily

80%
Women throughout the Supply Chain

[GCU The Fair Fashion Center]
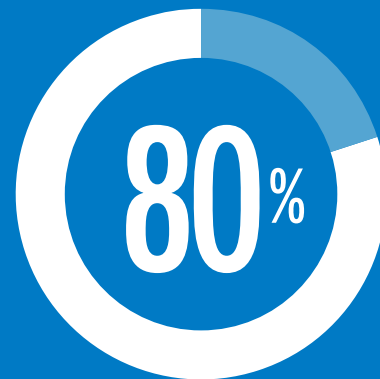
Again, technology can be a major help to ensure compliance. A cloud-based solution with full collaborative capabilities or API's to enable the easy and seamless collection and verification of this data is now becoming critically essential. Not only can the brand be assured that their entire supply chain is compliant, but they can also examine other aspects such as resources being used, for example, energy sources, safe disposal of chemicals, and waste water. Official certifications for the materials such as GOTS and Oeko-Tex can also be captured effectively.

More and more compliance and sustainability monitoring platforms such as Higg are being developed and adopted by global brands. Higg developed a set of standardized tools to assess the social and environmental performance from facilities, brands, and product levels. Technology has the capability to integrate to these powerful platforms to deliver a seamless information flow to brands, enabling them to put this data alongside their own analysis in order to make the informed sustainability decisions when sourcing merchandise. Increased participation with such efforts improves the industry transparency as a whole, and also aligns with today's consumers demanding greater accountability.

Not only are brands, retailers, and manufacturers taking this subject seriously, technology companies are doing the same. Combining the efforts of developing more sustainable materials, reducing waste, improving management of water, energy, and fossil fuel resources. Designing in circularity, along with the latest technology available, brands and retailers can take real steps forward in their goals to make the fashion industry a much more sustainable and ethically aware sector. **Sustainability is no longer optional.**

GLOBAL ORGANIC TEXTILE STANDARD

The Global Organic Textile Standard (GOTS) was developed by leading standard setters to define world-wide recognised requirements for organic textiles. From the harvesting of the raw materials, environmentally and socially responsible manufacturing to labelling, textiles certified to GOTS provide a credible assurance to the consumer.

10,388
CERTIFIED FACILITIES

4 Million
WORKERS REPORTED IN GOTS CERTIFIED FACILITIES

OEKO-TEX®
CONFIDENCE IN TEXTILES

Oeko-Tex enables consumers and companies to make responsible decisions. Comprised of testing and certification process for textile and leather goods, to guarantee maximum consumer safety and a path to a sustainable future.

Higg | Trusted Sustainability Data

Developed by the Sustainable Apparel Coalition, the Higg Index is a suite of tools for the apparel and footwear industry to assess environmental and social sustainability throughout the supply chain.

45,000+
HIGG USERS GLOBALY

120+
COUNTRIES WITH HIGG USERS

500+
BRANDS COMMITTED TO USING HIGG

SUSTAINABILITY IS NO LONGER OPTIONAL

DeSL

Discover e-Solutions Ltd (DeSL) believes in working towards a more responsible future. This is why we are constantly innovating to offer a wide-range of elite software solutions, including Product Lifecycle Management, for the retail, fashion, apparel, textile, and footwear industries. Whether you're replacing spreadsheets or an outdated system, our modular software provides flexibility and scalability. DeSL supports sustainability and digital transformation, from SMB to enterprise level companies.

References:

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Fashion United - https://fashionunited.com/global-fashion-industry-statistics

Maricopa Community College - https://www.maricopa.edu/about/sustainability

Nielsen Global Sustainable Shoppers Report - https://www.nielsen.com

U.S. Cotton Trust Protocol - https://trustuscotton.org

U.N. Sustainable Development Goals - https://sdgs.un.org/goals

Quantis Environmental Impact Report - https://quantis-intl.com/report/measuring-fashion-report

GCU The Fair Fashion Center - http://www.gcufairfashioncenter.org

GOTS - https://global-standard.org

Oeko-Tex - https://www.oeko-tex.com

Higg - https://www.higg.com