PULSE OF THE FASHION INDUSTRY

EXECUTIVE SUMMARY

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The fashion industry has a clear opportunity to act differently, pursuing profit and growth while also creating new value for the world economy. It comes with an urgent need to place environmental, social, and ethical improvements on management's agenda.

In the past decade, the global fashion industry has been an engine for global development and made progress on sustainability. Awareness is growing and individually, companies are optimizing business practices to limit their negative impact. But to maintain its current growth trajectory, the fashion industry as a whole needs to address its environmental and social footprint. The earth's natural resources are under pressure, and while fashion is not the most obvious contributor, it is a considerable one. Social conditions in the fashion industry are also far from those set forth in the United Nations' goals for sustainable development.

There is a clear need for acting differently. The good news is that by changing practices, the industry can both stop the negative impact and generate a high amount of value for society, while also safeguard its long-term profitability. We estimate that the industry has the opportunity to create €160 billion in annual value for the world economy by 2030.

As of today, however, the environmental and social 'Pulse' of the industry is weak. The newly developed global Pulse Score,[1] a health measure for the sector, is only 32 out of 100. Although many companies are making real progress in optimizing business practices, it is clearly not yet enough. If the fashion industry continues its present course of incremental improvement, it will most likely see rising costs and regulation for materials, labor, and processing. Based on conservative projections, fashion brands' profitability levels are at risk of at least 3 percentage points if they don't act determinedly, and soon.

To make a difference, fashion companies need to do more than upgrade to match what the leaders are doing. It would not be enough. Under optimistic and ambitious assumptions, only less than half of the €160Bn could be captured. The industry needs a consolidation and realignment of efforts and resources towards high impact levers, with fewer and stronger initiatives. To get there, the industry has to promote new operating standards and boost innovations across companies, geographies and supply chains. In bringing together participants at every stage of the value chain, fashion can ensure strong growth far into the future.

1 The Pulse Score is a global and holistic baseline of sustainability performance in the fashion sector. It is based on the Sustainable Apparel Coalition's proprietary Higg Index. The Pulse extends the Higg Index by extrapolating the findings to include the entire industry. The Higg Index is the most extensive and representative existing measurement tool for the industry. It covers the majority of large companies and was extended to gain a view on currently underrepresented small to medium-sized players.

THE CASE FOR CHANGE IS INDISPUTABLE

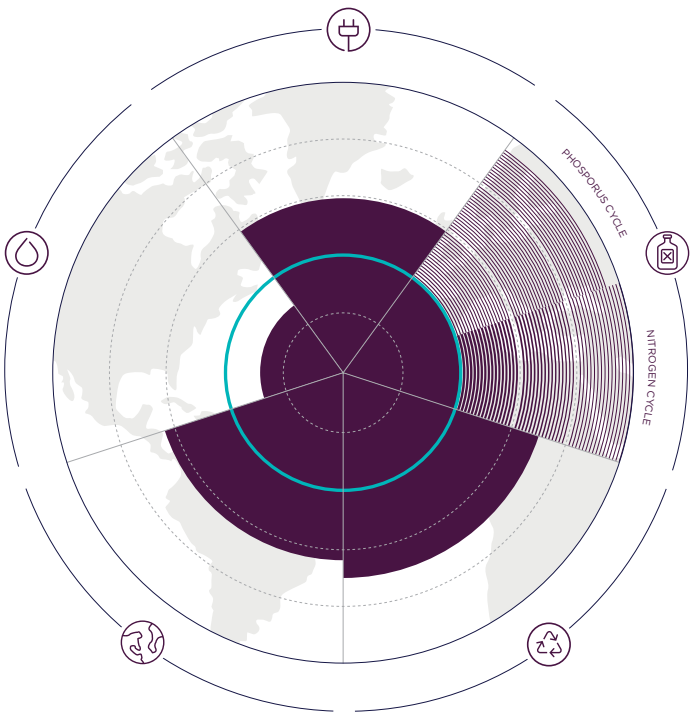
Given current trends in population and GDP growth, The Boston Consulting Group (BCG) and The Global Fashion Agenda (GFA) expect global apparel and footwear consumption to rise from 62 million tons to 102 million in 2030 – the equivalent of 500 billion t-shirts. A number of 'planetary boundaries' are already stretched, and this growth in fashion production will contribute to increase the stress on these boundaries. (See Exhibit 1.)

Exhibit 1

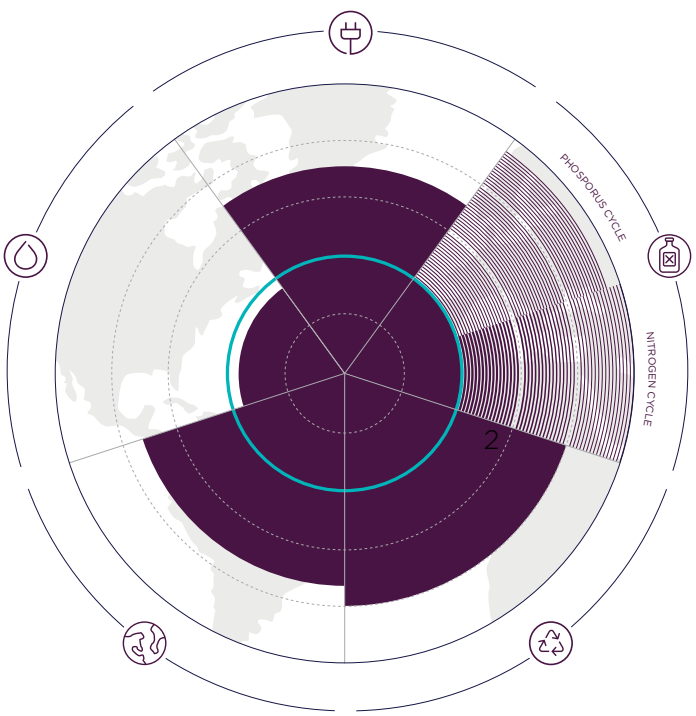
The Planetary Boundaries Have Already Been Breached

- Planetary boundary
- Distance from planetary boundary
- Energy emissions
- Land use
- Water consumption
- Chemicals usage
- Waste creation

2015



2030



Note: Illustration adapted from UN Environment Programme, Rockström et al. and Steffen et al., representing today's status
Source: BCG analysis; UN Environment Programme (2012); Rockström et al. (2009); Steffen et al. (2015)

Exhibit 2 Fashion's Trajectory on Key Resources Further Deteriorating

1. Fashion consumption of apparel and footwear

In this report, we assess each major resource, natural and social, to project how the industry's impact will develop following current trajectories of production and consumption. (See Exhibit 2.) If the industry succeeds in growing at the projected rate without deteriorating its environmental and social footprint, it has the opportunity to generate the total annual value of €160 billion for the world economy – representing human economic activity, social and natural capital.

Water is a key resource in fashion, both in cultivating the natural fibers and in processing the fabric. BCG and GFA project the industry's annual water consumption under current practices will rise 50% by 2030 – a date when the World Bank expects the global shortfall between demand and supply to reach 40%. If fashion can innovate and overhaul its practices enough to keep its water consumption constant, it will generate **€32 billion** in annual value for the world economy – and protect itself from higher prices and disruption in supplies.

Energy emissions, especially from the processing stages, are an even bigger opportunity. Already, atmospheric CO_2 is 20% beyond what is considered safe, and we expect fashion's annual emissions to increase 60% by 2030. Keeping fashion's emissions constant would represent **€67 billion** for the global economy.

Chemicals are more challenging to track and assess. In fashion these include fertilizers, pesticides, and a variety of dyes and processing agents. Looking at occupational illnesses due to carcinogens and airborne particulates, we estimate an opportunity of **$7 billion** annually that could be achieved through advanced chemicals management.

Waste is a largely hidden opportunity. Continuing current practices, by 2030 fashion's annual waste from production and consumer disposal will increase by 60%. Today, only 20% of apparel is recycled at end-of-use, and most of that is downcycled into lower-value materials due to inadequate technology. Assuming a linear production model, the industry could save society **€4 billion** per year by keeping the total amount of waste constant. Far more is possible through closed-loop recycling.

Wages are an immediate opportunity on the social side. In major textile manufacturing countries such as India, half of all workers are not paid the minimum wage, which in many areas is well below what can be considered a living wage. The International Labour Organization reports on 'extreme compliance' to minimum wages in the fashion industry, setting the threshold at 120% of what is legally required. If the industry manages to keep the number of workers paid less than 120% at a constant number,[2] while expanding its workforce to support the projected volume growth, then it would add **€5 billion** annually to the world economy through greater local consumption and private investments.

2 The authors of this report do not recommend 120% min. wage as representative of a living wage. The level of 120% was taken to show the general insufficiency of minimum wages to make a living. Also the 120% level is advantageous due to the data available in ILO reports on wage compliance.

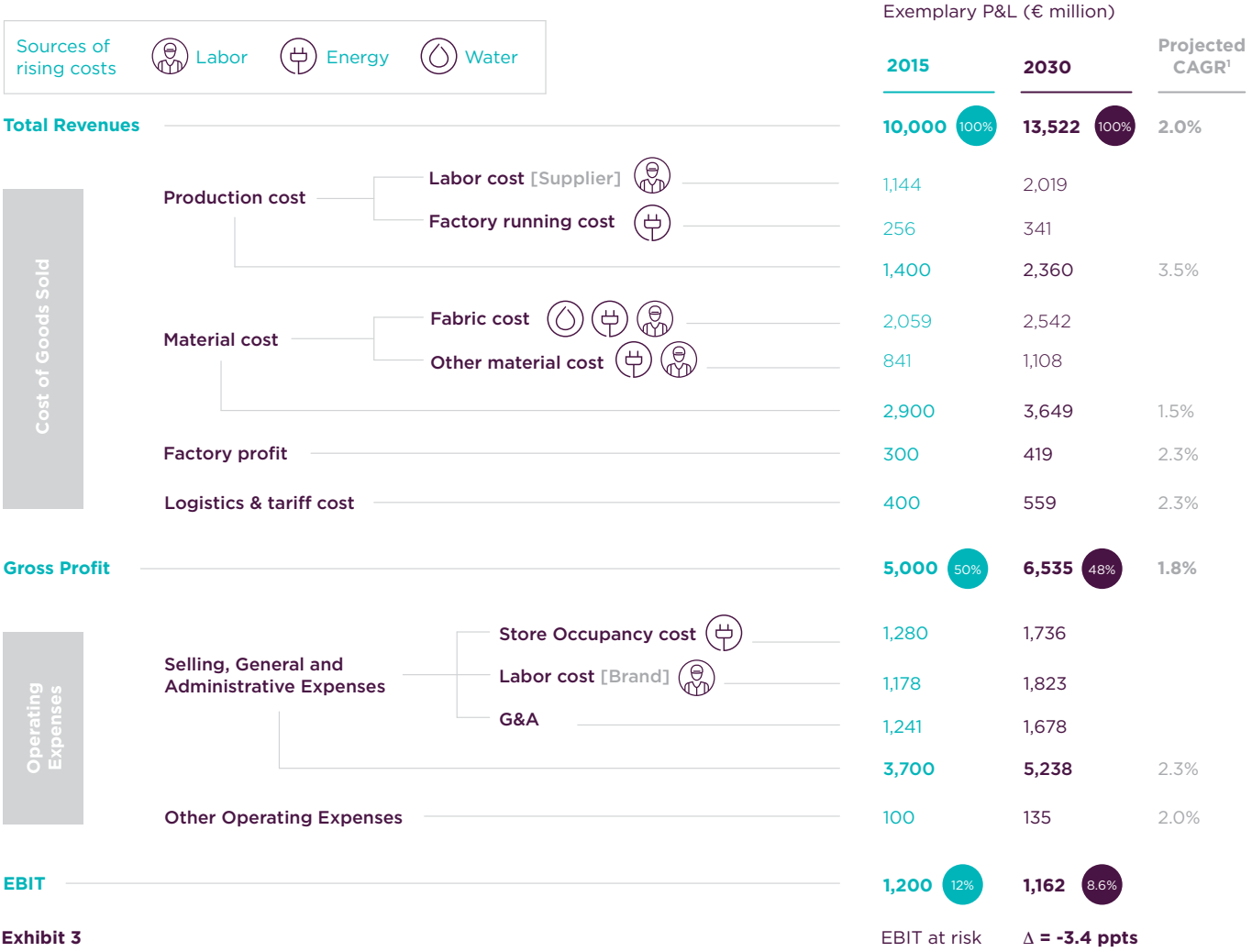


Exhibit 3

Business as Usual Puts Profitability at Risk

1. Note that we do not assume the same growth rate for every year in the study, so the CAGR represents an indication of magnitude over 15 years
Source: BCG analysis
Note: Differences in sums can occur due to rounding

Health and safety offers great opportunity as well. The industry has already made good strides in improving the working environment in processing and manufacturing. But annual recorded injuries are likely to rise by around 15% by 2030 – with each injury risking shortened life expectancy and diminished family support. If the industry succeeds in preventing nearly all injury, society would reclaim **€32 billion** per year.

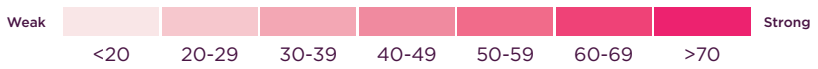
Community engagement is often overlooked, but for every euro spent by brands on local spending initiatives, society gains a greater return through multiplier effects. If the industry raised its community spending ratio from the current 0.2% of sales to 0.7%, the UN-recommended level for governments in wealthy countries, then society would gain **€14 billion** annually by 2030.

Besides the value generated for the world economy, these improvements would reduce the industry's exposure to rising prices from scarce natural and human resources. Cost projections confirm that fashion brands' profitability levels are at stake if no counteracting measures are taken, due to price hikes in energy, labor and other input factors. Their EBIT margin could fall by 3 percentage points, equal to **€45Bn** in monetary value across the industry. (See exhibit 3.) Hence the opportunity and the need for the industry to intensify and combine its efforts.

VARIATIONS IN PERFORMANCE

Not all fashion brands are equally responsible for the industry's current status—and not all are equally equipped to reap the outlined value opportunity.

Exhibit 4 Strong Variations in Pulse Scores Based on Revenue



Average Pulse Score

	Price position	Rev. size	Value share of overall market
Premium	Luxury market	< €0.1-3.2Bn	5%
	Luxury Big Players	> €3.2Bn	2%
	Sustainability Champions[2]	< €0.1-0.45Bn	3%
Middle Segment	SMEs <€0.1Bn	< €0.1Bn	20%
	SMEs > €0.1Bn	€0.1-0.45Bn	5%
	Mid-size middle mainstream fashion	€0.45-3.2Bn	14%
	Middle mainstream fashion	> €3.2Bn	5%
	Sportswear	> €3.2Bn	7%
Lower Middle / Entry Price Points	Unregulated	< €0.1Bn	10%[1]
	SMEs <€0.1Bn	< €0.1Bn	19%[1]
	SMEs >€0.1Bn	€0.1-0.45Bn	5%
	Fast Fashion & Low Price / Entry Fashion	> €3.2Bn	5%

THE PULSE SCORE

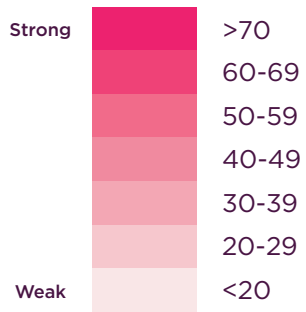
The Pulse is a performance score for measuring and tracking the sustainability of the global fashion industry on key environmental and social impact areas. By design it is impossible to achieve a score of 100 on sustainability, as this is intended to be aspirational.

Overall, the Pulse Score of the fashion industry is:

32 / 100

Measured on a scale from

1 – 100



GFA and BCG developed the Pulse Score to assess the industry's performance on environmental and social issues across fashion companies and stages of the value chain and conducted the Pulse Survey to confirm and refine the findings. The **Pulse Score** combines the quantitative Sustainable Apparel Coalition's Higg Index, with input from industry executives to extrapolate its findings to the entire industry. Fashion's overall score is 32 out of 100, indicating the large opportunity for improvement.

The spread in performance is considerable. Despite conventional wisdom, sustainability is not a luxury that only premium-priced brands can afford. Company size, far more than price positioning, correlates with a higher Pulse score. Nor is so-called 'fast fashion' necessarily a threat to the environment and society: the large entry-price high-street brands all achieve solid scores. The same is true for a few "sustainability champions" with value propositions centered on these concerns. (See Exhibit 4.) Small and mid-sized fashion brands in contrast, which collectively comprise more than half of the industry, rate poorly. They constitute a massive blind spot – and opportunity: half the industry has done little to address these concerns, and is not on track to do more.

By geography, European brands score higher on environmental dimensions, while their U.S. counterparts are more likely to follow social best practice. By type of ownership, family-owned firms perform better on these issues, while most (not all) public companies tend to maximize short-term shareholder value.

As for stages in the value chain, the beginning and end have the most opportunity for improvement. Design scores 22 and raw materials only 17, while consumer use scores 23 and the end-of-use stage goes down to 9. Those areas typically get little attention by the media, consumers, or even industry participants such as the designers themselves.

The middle stages, where the scores are higher on average, show large gaps between the leaders and remaining brands. The gap between the top and bottom quartiles is 45 or more points for transportation and manufacturing. (See Exhibit 5.)

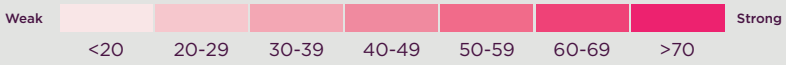
Exhibit 5 Gap of 52 Points Between Top and Bottom Performers

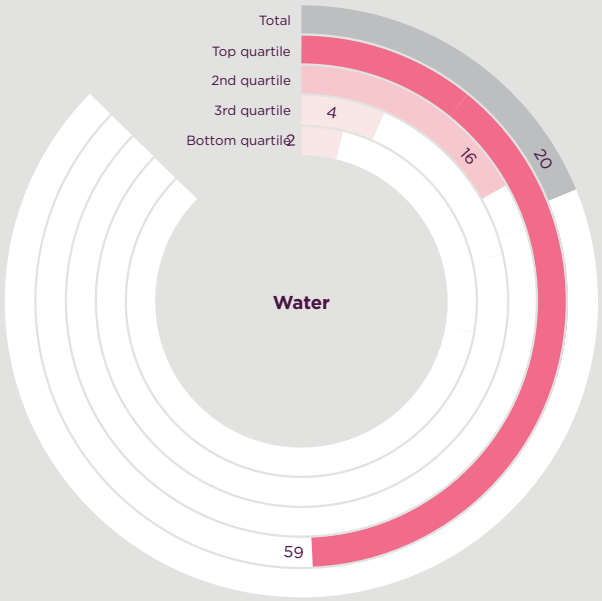
	Design & development	Raw materials	Processing	Manufacturing	Transportation	Retail	Use	End of use	Total Pulse Score
Total	22	17	38	28	41	28	23	9	32
Top quartile	37	47	66	56	67	33	24	21	63
2nd quartile	22	16	43	26	47	35	26	9	32
3rd quartile	19	4	29	22	34	29	29	4	22
Bottom quartile	10	2	14	11	17	14	14	2	11

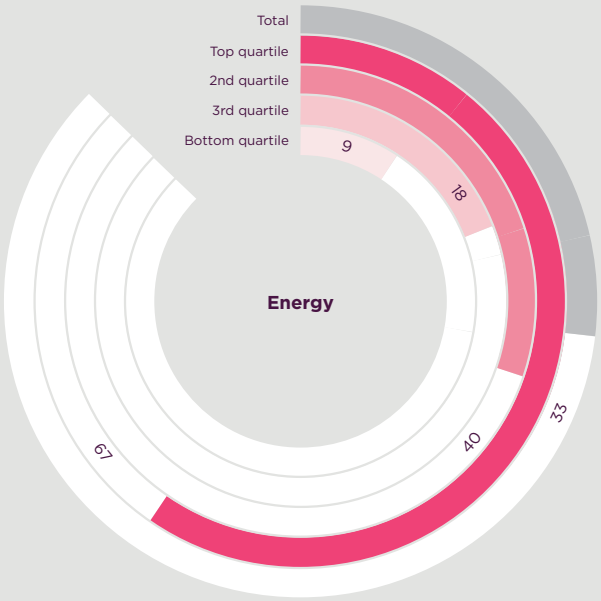
Note: Quartiles weighted by revenue; Normalized – unverified data
Source: BCG analysis; SAC Higg Index Brand Module, Jan 2017; Expert Interviews

Exhibit 6

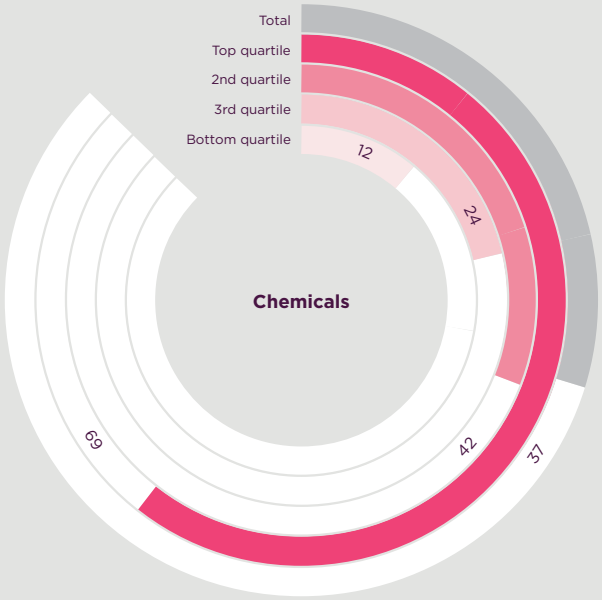
Impact Areas under Regulatory and Public Spotlight Get Higher Pulse Scores

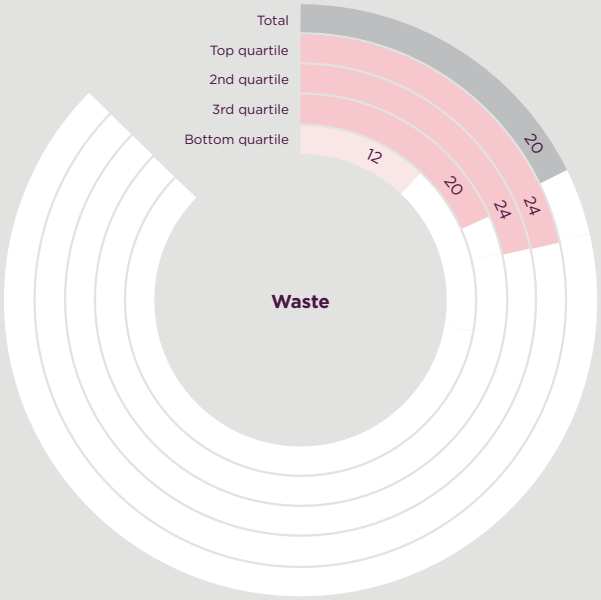


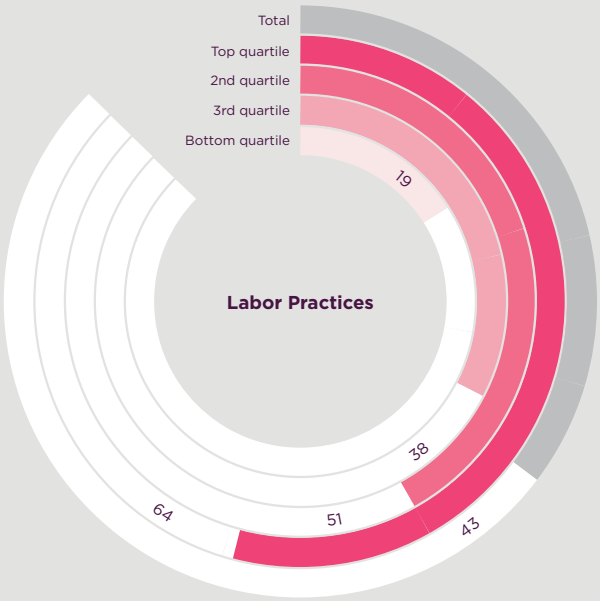


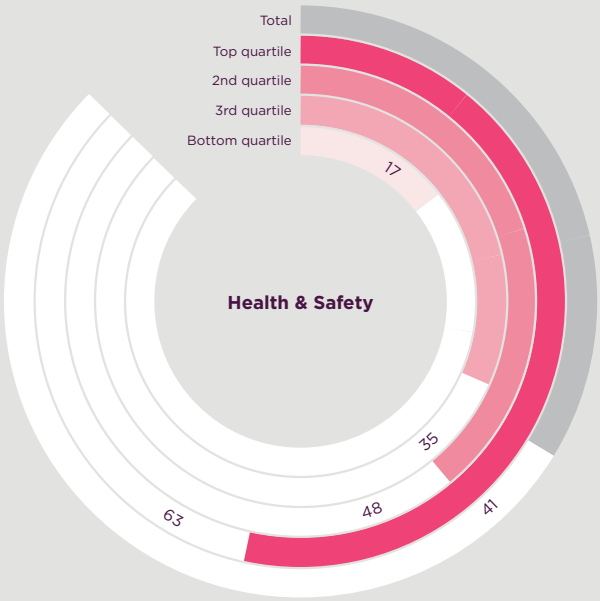


Environmental

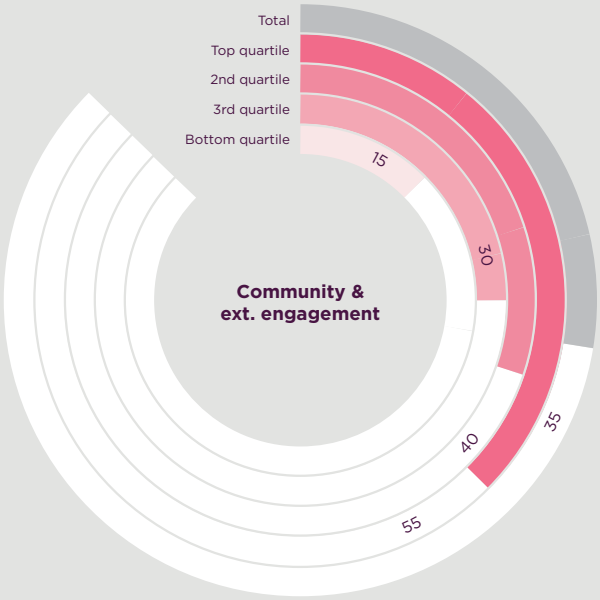


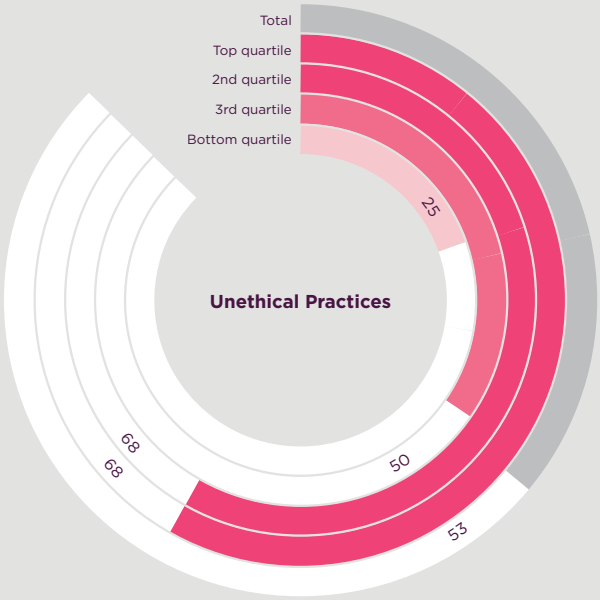






Social & Ethical





Note: Quartiles weighted by revenue; Normalized – unverified data
Source: BCG analysis; SAC Higg Index Brand Module, Jan 2017; Expert Interviews

As for the areas of impact, outside pressures drive success here as well. Brands perform relatively well within health and safety, which are regularly in the media and regulatory spotlight. Chemicals is also a relative bright spot, with a Pulse score of 37, due to regulatory restrictions, while waste and water management, which get little attention, are both at 20. In areas where good technology already exists to address problems, large differences are visible: the gap between the top and bottom quartiles is 58 points in energy while it is only 12 in waste. (See Exhibit 6.) Such gaps show that a great deal of improvement is possible using current technologies and practices. To bring all of the industry to the level of best practices visible today, a number of immediate actions are possible. However, even if the entire industry caught up to the best practice front-runners, it would not be enough. Under optimistic and ambitious assumptions, only less than half of the €160Bn could be captured.

Actions well beyond what individual players can accomplish are needed, in order to collectively move the industry to a whole new level of impact improvements. The main challenge to achieve this ambition is not individual commitment and actions, but leadership, collaboration, consolidation of resources and innovation. Many of these ideas will become practical only with widespread adoption. It's not enough for a few leading brands or sustainability champions to show proof of concept. The broad commitment and coordinated participation of the industry as a whole is needed.

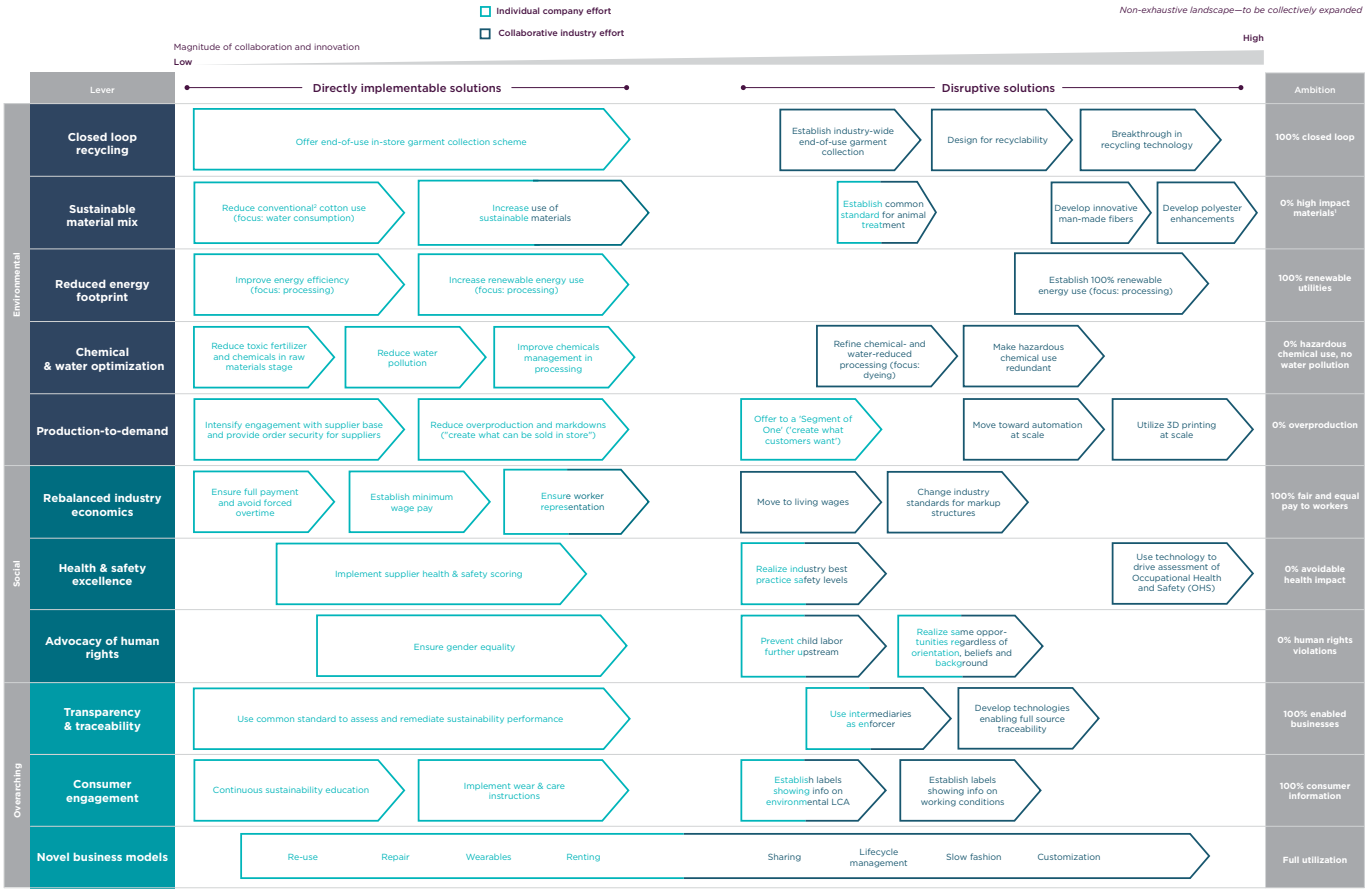


Exhibit 7

Actions to Take in the Landscape of Change

1. E.g., conventional cotton or leather
2. Cotton grown traditionally; excludes Better Cotton Initiative, Cotton Made in Africa, organic cotton, recycled cotton

Source: BCG analysis

THE LANDSCAPE FOR CHANGE

To realize the large opportunity for the world economy, and safeguard future profitability, the industry needs to take two kinds of steps. The first involves **pragmatic, concrete actions** that are already economically viable—and are being practiced by leading companies as shown in numerous proofs-of-concept. The second consists of two leaps forward: **innovating** with the exciting developments now being explored in research centers and test facilities, and **collaborating** to drive change throughout the industry faster and with more impact. To guide this work, the report presents a landscape for change that will support smart growth for the industry.

The landscape for change lays out a series of goals, each of which combines immediate actions with disruptive actions that depend on innovation and collaboration. (See Exhibit 7.)

Environmental

- Closed loop recycling - No value leakage, e.g., one garment recycled for every garment produced.
- Sustainable material mix - 100% sustainable fibers with low footprint, e.g., replacing conventional cotton
- Reduced energy footprint - Minimized energy consumption and 100% carbon neutrality
- Chemical and water optimization - No hazardous chemicals and no water pollution
- Production-to-demand - No overproduction

Social

- Rebalanced industry economics – Fair and equal pay to worker and skill development for all workers
- Health and safety excellence – 100% safe working places fostering well-being and morale
- Advocacy of human rights – No human rights abuses and full rights advocacy

Overarching

- Transparency and traceability – Full visibility on all tiers' supplier performance and conditions
- Consumer engagement – Complete customer information on a garment's life-cycle impact, environmentally and socially
- Novel business models – Full utilization of purchased fashion products

Moving toward these goals will go a long way toward achieving the €160 billion a year opportunity for the world economy. Staying on the current path, by contrast, will put the industry at risk of significantly higher costs.

Assessments of business cases of sustainability measures, along with a multitude of proofs of concepts, show that improving a fashion brand's impact need not come at the detriment of profitability – and this is without calculating the positive effect on risk management and brand building. For example, calculating the business case for energy efficiency reveals an improvement potential of approximately 1 percentage point EBIT.

THE REGULATOR AS AN AMPLIFIER

Regulators have a role to play as well. Up to now, aside from minimum wages and chemicals, fashion has faced little regulatory intervention. But this could change – and suddenly – if public opinion begins to blame the industry for sustainability shortfalls. It is far better for the industry to take the lead and favorably steer the needed changes. Not only would it preempt unilateral restrictions, but it could prompt supportive regulation that reinforces sustainability targets and incentivizes change.

THE CONSUMER WITH THE POWER TO TIP THE SCALE

The power to tip the scale lies also with consumers, which studies show are far more sensitive to environmental, social, and ethical concerns than those of previous decades. Farsighted fashion brands can join forces with consumers in a long-term push for better practices and transparency in the value chain. And through education, information, and incentives, consumers can gradually change their habits in consuming fashion to reduce their own footprint.

COLLABORATION AND INNOVATION NEEDED ON AN UNPRECEDENTED SCALE

Up to now, selected brands, retailers, and multi-stakeholder initiatives have shown impressive commitment and have already achieved great progress. Best practices are available across all segments of the industry, and substantial innovations are emerging. Applying and implementing these will do much to improve the industry's impact. But these will not be enough. A collective effort with critical mass would enable the industry to make progress on the major-goals, such as a unified standard for recycling.

Such an effort would need a unified agenda with clear goals. It would be led by the large industry brands, which have been shown to be clearly ahead of the game when it comes to environmental and social issues. The key is to set up an ecosystem that encourages all parts of the industry to collaborate on the major issues. Multi-stakeholder initiatives, acting beyond commercial interests, can offer guidance and promote cohesion. But today's scattered, fragmented array of initiatives, memberships, certifications and so on can be confusing for brands, suppliers, innovators and donors. Consolidation is inevitable to focus time, energy and money.

With the industry united around an agenda for change, it can drive the needed systemic change and work jointly on disruptive innovation. As promising ideas emerge, companies can support pilot programs and then quickly scale them up to commercial viability. Such collective investments would drive down costs and enable the magnitudes necessary to 'move the needle' – as can be seen in other industries where such practices are common.

Since its beginning – certainly since the development of mass-fashion markets – the fashion industry has always had its eye on the clothing lines to be launched next season. In the context of a world timed by seasons altered already by the heavy hand of humankind, the industry must now look still further forward.

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