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2017 was a turning point for sustainability. Overall 75% of fashion companies have improved their score compared to last year – raising the pulse of the industry by six-points. This is impressive and encouraging. However, more needs to be done.

The fashion industry has a responsibility to continue to improve its environmental and social performance. As one of the largest and most creative industries, it has a vital interest in securing a prosperous and sustainable future. Environmental and social stress are enormous, and they are continuously growing, in line with customer demand. In addition, consumer behavior and rapidly evolving technology will soon shape and challenge the industry in unpredictable ways. It is undeniable: the industry has to adapt.

The direction is set. Almost half of the fashion players (by market share) demonstrated that laying the foundation for change and initiating action can boost Pulse Scores, a performance measure of the sector developed by The Boston Consulting Group (BCG) and the Global Fashion Agenda (GFA), powered by the Sustainable Apparel Coalition’s Higg Index. The majority of this year’s improvement in Pulse Scores is driven by companies in the mid-price segment. It clearly indicates that moving to better practices has reached the mass market and is no longer a question of values or a privilege of large companies’ resources. And, even some companies of smaller size gained strong momentum, beginning to catch up to the frontrunners.

However, progress at the very top and among the weakest performers has lagged, each for different reasons. Many well-performing giant companies and luxury players are finding progress increasingly difficult. At the same time, almost one third of the fashion industry has yet to take action.

THE PACE OF CHANGE DOESN’T GO FAR OR FAST ENOUGH
To put fashion on a path to long-term prosperity financially, socially, and environmentally, the level of change needed will require more than individual companies realizing just incremental improvements. What is needed now is active collaboration and a clear commitment by the industry’s leaders to prioritize a responsible long-term strategy, despite the pressure of quarterly results.

This year’s report aims to give guidance to companies looking to start or find further advances toward more responsible ways of doing business, by sharing proven best practices and defining bigger and bolder steps the industry must take. Taking action not only improves the social and environ-
mental performance of the industry, but results in a strong business case – raising the EBIT margin by 1 to 2 percentage points.

Building on the Pulse Score, BCG and GFA worked with leading fashion players to develop two important frameworks offering guidance and inspiration. The first, the Pulse Curve, enables companies to compare their actions and performance against other industry players and evaluate their progress over time. The second, the Roadmap to Scale, is an inspiring guide that offers concrete actions companies can take to prioritize and plan sustainability efforts.

**BUILDING A BETTER INDUSTRY TAKES COLLABORATION**

Given the pace and magnitude of change, leveraging existing solutions and best practices will not be enough. Frontrunners are already reaching these limits and experiencing that impact levels off. These are the companies that are blazing the trail for the rest of the industry, so their continued progress is critical. To regain momentum, they must find innovative solutions and explore different business models.

Individual companies recognize that they cannot create this disruptive change on their own – the industry as a whole must develop partnerships and ecosystems that can commercialize and scale the most promising innovations on the horizon. This type of collaboration is what will achieve the speed of change needed to boost the fashion industry’s environmental and social performance – and profitability – in the long run.
In the past year, the Pulse Score of the fashion industry improved from 32 to 38 (out of 100). The Pulse Survey, representing all industry segments, confirms that the topic is rising on the industry’s agenda. Of the executives polled, 52% reported that sustainability targets acted as a guiding principle for nearly every strategic decision they made – an increase of 18 percentage points from last year.

Nearly all of this year’s progress came from companies in the mid-price segment (see exhibit 1). This segment accounts for almost half of the industry by revenue, so progress here is encouraging. However, other industry segments showed little progress in addressing their environmental and social footprints. Small and mid-sized enterprises (SMEs) in the entry-price segment have not performed well (in fact, 2017’s report found they represented a blind spot in addressing sustainability). They are likely unsure about where to start with these complex issues. Size continues to be a major determinant of performance in sustainability for the industry as a whole (see exhibit 1).

The largest companies and sustainability champions are still in the lead. However, the Pulse Score of the largest companies has not risen as much as the industry on average, a clear indication that they’re finding it harder to make the large leaps of progress they have in the past. These diminishing returns are not from lack of effort or progress within existing initiatives, but rather from the lack of scalable and commercially viable technology solutions, as well as from pain-points in global infrastructure and regulation.

The Pulse Score

The Pulse is a performance score, powered by the Higg Index, 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:

38 / 100

Measured on a scale from:

1 – 100
Exhibit 1
Pulse Scores by segments and sizes
Biggest advancement by mid-price segment; size remains highly correlated with sustainability performance

<table>
<thead>
<tr>
<th>Revenue Size</th>
<th>Global Market Share</th>
<th>Pulse Score 2018 (vs. 2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;€0.8B</td>
<td>3%</td>
<td>Sustainability Champions* 80 (+18)</td>
</tr>
<tr>
<td>Premium segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;€0.8B</td>
<td>2%</td>
<td>Small players - Luxury 51 (+4)</td>
</tr>
<tr>
<td>&gt;€0.81B</td>
<td>5%</td>
<td>Large players - Luxury 51 (+4)</td>
</tr>
<tr>
<td>Mid-price segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;€0.08B</td>
<td>20%</td>
<td>Small players 37 (+14)</td>
</tr>
<tr>
<td>€0.08B-€0.8B</td>
<td>10%</td>
<td>Medium players 47 (+15)</td>
</tr>
<tr>
<td>€0.81B-€8B</td>
<td>7%</td>
<td>Large players - Fashion 44 (+11)</td>
</tr>
<tr>
<td>&gt;€8.1B</td>
<td>2%</td>
<td>Large players - Sports¹ 47</td>
</tr>
<tr>
<td>&gt;€8.1B</td>
<td>6%</td>
<td>Giant players - Fashion 58 (+13)</td>
</tr>
<tr>
<td>Entry-price segment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;€0.08B</td>
<td>10%</td>
<td>Unregulated 0 (+/-0)</td>
</tr>
<tr>
<td>&lt;€0.08B</td>
<td>19%</td>
<td>Small players 20 (+2)</td>
</tr>
<tr>
<td>€0.08B-€0.8B</td>
<td>7%</td>
<td>Medium players 29 (+3)</td>
</tr>
<tr>
<td>€0.81B-€8B</td>
<td>4%</td>
<td>Large players - Fashion¹ 45</td>
</tr>
<tr>
<td>&gt;€8.1B</td>
<td>3%</td>
<td>Giant players - Fashion² 67 (+/-0)</td>
</tr>
</tbody>
</table>

1. New segment introduced in 2018
2. Giant players – Sports manually adapted due to errors in completing Higg Survey
3. Giant players – Entry-price fashion manually adapted due to different revenue thresholds compared to last year

*Note: Sustainability Champions: Sustainability is part of their core strategy and decision-making framework. These typically smaller companies regard sustainability as a key differentiator in their strategy and align their actions, products, and communications behind it.

The overall increase of the Pulse Score is clearly reflected in the value chain. Last year’s most advanced steps (processing, manufacturing, and transportation) continue to be the strongest areas. But weaker steps, such as end-of-use and design and development, saw the biggest gains this year and have narrowed the gap – a promising turn of events.

Here as well, incremental improvements are good, but are not proceeding fast enough. The ambition should be well more than a six-point increase per year. The industry needs to raise the Pulse Score beyond small improvements to generate disruptive change at a much greater speed. To do that, we need broader application of existing technologies, and greater adoption and scaling of next-generation innovation.

The overall Pulse Score gap from 38 to 100 indicates the size of the industry’s opportunity to create new value for society and individual businesses.
The goal of this year’s Pulse Report is to share existing best practices and proven solutions, as guidance to the industry as a whole. In extensive interviews with advanced industry players, we identified the impactful actions they took to achieve their gains. What we found is that most companies’ sustainability journeys follow a similar pattern, with their environmental and social performance improving in phases. Building on those insights, we created the Pulse Curve, which charts the trajectory from a company’s first steps toward improved performance through to implementing the most advanced practices. Industry players can use the Pulse Curve to assess and accelerate their own journeys, deploying the frontrunners’ learnings. The process is ongoing – as the industry leaders continue to experiment and advance, the rest of the industry learns from them, moving the whole industry to better practices (see exhibit 2).

The curve begins with a pre-phase, in which uncoordinated action is taken before a clear strategy develops, and then progresses along four phases. At the beginning, a company’s movement along the curve is almost flat. Entry-level companies displaying the lowest Pulse Score cluster in this section. The curve rises along with increasing Pulse Scores as companies set strategies and targets. They begin to reach the next level as they implement collaborative initiatives and improvement measures in their value chains. As they work with partners along the supply chain to introduce efficient production techniques, improve working conditions, and adjust their sustainable materials mix, brands and retailers continue to progress along the curve.

However, at a certain point companies realize that improvement levels off, as they reach the limits of available technologies and infrastructure. To unlock the next level, companies must collaborate with other stakeholders, driving systemic change through bold leadership and creating innovation ecosystems that lead to the disruptive technologies truly needed.

Exhibit 2
The Pulse Curve
The Pulse Curve shows the trajectory toward a healthy pulse
SCALING UP EXISTING SOLUTIONS

THE ROADMAP TO SCALE

Building further on the comprehensive knowledge we gathered from industry frontrunners, we collected existing high-impact solutions and best practices to develop the Roadmap to Scale. This guide for the industry offers inspiration and concrete actions that companies can start implementing immediately (see exhibit 3).

The roadmap is the first attempt by the industry to present a potential path for fashion brands and retailers, regardless of size, price positioning, or geography to raise environmental and social performance. It is a framework,
suggestive rather than definitive, which reflects a range of experiences and insights. Each brand or retailer will have to define its own interpretation of the roadmap depending on starting point, aspiration and available resources.

Whatever their starting point, companies that use and adapt these best practices will both improve their environmental and social performance, and raise their profitabilty. Successful implementation of the roadmap will leave fashion companies with a well-grounded foundation, including an ambitious strategy and dedicated team, having embedded sustainability deep within the core of the business.

The Roadmap to Scale is divided into three phases: building the foundation, implementing core actions, and expanding to scale.

BUILDING THE FOUNDATION
Phase one of the roadmap starts at the point after a company has decided to move beyond uncoordinated action and begins to lay out the key enablers of success, the most central of which is making the commitment to sustainability. Other enablers include setting a clear strategy and goals, a dedicated team and resources (though not many are needed at first), frequent communication both internally and externally, and traceability along the supply chain.

Setting strategies with short-term and long-term targets is the cornerstone of any major business endeavor, including reducing environmental and social footprint. While the adoption of targets is very encouraging, fashion companies need to link these efforts with their overall business strategy, embedding sustainability into their core business.

Internal communication unites the organization around improving environmental and social viability. Companies need to share the top management’s commitment, explain the strategy and targets, and set transparent expectations for the supply chain. Only if cascaded down through the entire organization can sustainability become an integral part of the company’s core business, values, and, ultimately, its DNA.

Traceability in the supply chain is a prerequisite for companies to understand the social as well as the environmental impact of business practices and products. It enables brands to identify risks and challenges, as well as opportunities to increase operational efficiency, while building strong and trusting relationships with suppliers.

As a first step, fashion companies gradually invest in these enablers, which lay the groundwork for any implemented initiative along the roadmap and determine the brand’s ability to scale their efforts later on. The quality of the enablers will determine the duration of the individual phases, the ease of implementation of any activity, as well as the ultimate environmental, social and financial impact of the fashion company’s activities.

As efforts are pushed to scale, more members are added to the team, the strategy becomes more elaborate with bolder ambitions, and the visibility into the supply chain extend towards tier-three and tier-four suppliers.

IMPLEMENTING THE CORE
Phase two is where companies begin to see actual returns on investment in their commitment to both environmental and social progress. With height-
ened visibility into their supply chain, organizations can see where they can take specific actions to improve their environmental and social performance, and raise efficiency. Implementing collaborative existing programs and initiatives enables companies to make significant progress in a relatively short amount of time. They can start improving their materials mix, use water, energy, and chemicals more efficiently, and strengthen their partnerships with suppliers to make improvements backed by a positive business case.

In the same vein, this visibility allows companies to help cultivate more respectful and secure working conditions. Brands benefit most in this phase by joining collaborative initiatives that are already active and provide frameworks, standards, assessment methods, and training materials participants may use and apply within their own sustainability work. In addition to improving safety and labor conditions, these initiatives address social topics such as financial inclusion, health, diversity, and gender equality.

Both types of activities simultaneously boost companies’ Pulse Scores, and also build capabilities and proof-points to unlock greater organizational support. This is where the investments start to pay off financially.

EXPANDING TO SCALE

Phase three involves building on the successes established in phase two. Only 10% of the industry – mostly just the largest companies and sustainability champions – has reached this point so far. These frontrunners have secured organizational backing as well as managerial support to arrive at this phase. In a sense, scaling up sustainability efforts is no different from any other business model or operational transformation: take the actions that yield initial successes and roll them out across more of the supply chain. But it also means intensifying efforts, which, given the need for new ways of doing business in the fashion industry, requires looking further at available solutions.

These include using non-conventional fibers, advanced water and energy conservation, and collaborating to promote better wage systems. It also includes building closed-loop systems by training designers to consider the impact of their choices on the rest of the value chain, influencing consumer behavior and increasing the re-use of pre-consumer waste. The environmental and social impact of change made at this level is significant, both for environmental and social performance, and for boosting profitability.

Driving initiatives to scale often requires enlarged investments, specific expert knowledge, and size. The companies we see that have the greatest ability to foster sustainability are predominantly large organizations. Thus, in order to drive impact beyond previously achieved levels, companies undertake many of the activities within this phase in collaboration with peers or other players within the industry.
THE BUSINESS CASE IS ALL POSITIVE

Even without considering the beneficial impact of investing in sustainability on brand building and risk management, the business case is compelling: improving a fashion brand’s environmental and social performance actually boosts profitability. From our discussions with industry frontrunners we know that investments in resource efficiency, secure work environments, and sustainable materials go beyond counteracting projected losses to increase profitability.

If companies implement and scale the activities showcased in the Roadmap to Scale, they can expect a positive EBIT margin uplift of 1 to 2 percentage points by 2030, as compared to the 2015 baseline outlined in last year’s report. The case for sustainability is even stronger once we compare the profitability uplift from implementing the roadmap to continuing business as usual. We calculate that continuing business as usual will result in an EBIT margin decline of 3 to 4 percentage points by 2030, considering the expected rise in the cost of labor and other resources.

Comparing the decline in EBIT margin of 3 to 4 percentage points (business as usual) with the positive EBIT uplift of 1 to 2 percentage points, reveals the true value of sustainability (see exhibit 4).

Exhibit 4
Exemplary P&L for a fashion brand implementing the Roadmap to Scale
Adapting best practices from the industry adds 1-2 percentage points
EBIT until 2030

<table>
<thead>
<tr>
<th>Improvement potential within</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>Energy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total revenues</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor cost [Supplier]</td>
<td>Factory running cost</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of goods sold</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material cost</td>
<td>Fabric cost</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factory profit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics &amp; tariff cost</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gross profit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selling, general and administrative expenses</td>
<td>Store occupancy cost</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating expenses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other operating expenses</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EBIT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,200</td>
<td>1,162</td>
</tr>
</tbody>
</table>

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.

Note: Differences in sums can occur due to rounding.

Source: BCG analysis.
MOVING INTO DISRUPTIVE SOLUTIONS

Even under optimistic assumptions, the industry’s existing solutions and business models will not deliver the impact needed to transform the industry. Fashion needs a deeper change. To break through to the fourth phase on the Roadmap to Scale, companies need new technologies and models that are only just beginning to emerge.

EMERGING INNOVATIONS

Developing these new technologies and models will not be easy in such an asset-intensive industry. Many of these innovations will need pre-competitive collaboration to become commercially viable. This is especially so in areas of the value chain that have the lowest Pulse Scores, such as raw materials and end-of-use. Companies cannot solve these alone.

Based on discussions with industry players and other actors, we have prioritized three of the most promising areas where we see new innovations: sustainable materials mix, closed-loop practices, and Industry 4.0. In other areas such as wage systems, where transformation is intensely needed, the innovations and developments are still too far away, and thus cry out for ambitious collaborative efforts.
Sustainable materials mix refers to innovations in new and existing materials to reduce environmental impact. Examples of advances here include the development of non-conventional fibers made from substances such as citrus juice, grape plants, or kelp; bioengineered leather; and the further promotion of bast fibers. These innovations also extend to processes, such as chemical-free binding technology.

Collaborative research and promotion of sustainable materials should be a high priority for the industry as current improvements in lowering the negative impact of cotton and recycled polyester are far from adequate to address the problem. Scaling solutions for sustainable materials has proven difficult, particularly with the volume of global demand and sourcing complexity.

Closing the loop involves minimizing resource consumption by facilitating re-entry into the value chain. In other words, this repeatedly recycling and reusing materials until they become biodegradable waste. The current linear business model stresses the environment by generating waste throughout the value chain, whereas a closed-loop system seeks to minimize waste and put that which is unavoidable to use. Closing the loop can address the finite land, water, and energy resources used intensely by the fashion.

Emerging innovations that support closed-loop systems include recycling technologies that can produce new fibers comparable in quality to virgin fibers, and optical fiber-sorting technologies needed to facilitate scalable recycling. Others include mapping and tracking systems that enable pre-consumer waste upcycling and recycling, and consumer-focused fashion-as-a-service subscription programs.

Industry 4.0 has the potential to disrupt the entire way the fashion industry runs today, by leveraging the constantly increasing capabilities of automation and other technologies. While this level of change hasn’t really begun in the fashion industry, we know it is inevitable, and will likely affect every step in the value chain, making it leaner and driving much higher productivity.

Examples of such technologies that are appearing now are virtual design software that connects 3D design with the 2D pattern environment, and on-demand and 3D printing that have the potential to reduce waste and shorten time-to-market dramatically. Also, sensors and Internet of Things (IoT) technologies offer tracking and tracing opportunities that could serve multiple uses.
ONLY A STRONG INNOVATION ECOSYSTEM WILL TURN OPPORTUNITY INTO REALITY

In order to accelerate these innovations and generate new ones, fashion’s stakeholders must join in incubating and scaling new ideas. Besides funding, innovators in this industry require a strong network of support: extensive mentorship, patient capital, and close collaboration throughout the fashion value chain.

This calls for the development of an ecosystem, anchored by the major brands that address typical innovation boundaries:

• Deep, often specialized topics expertise. Supply chain innovations require advanced chemical or engineering skills, capabilities that most fashion brands do not have in-house, and that are rare among innovators to begin with.
• Time-consuming innovation cycle. Fixed-assets innovation requires long R&D and capital expenditure cycles, unlike easily scaled virtual innovation.
• Capital- and pilot-intensive proof-of-concept hurdle. Asset-intensive innovations have to be tested in facilities resembling the actual production, meaning that innovators depend on either the cooperation of suppliers to proof their concept or the support of investors. Neither is easy to come by, and investors are unlikely to invest in testing facilities prior to a successful proof-of-concept.
The future of fashion might look dramatically different from today. Innovation may fully disrupt how clothes are made and consumed. Global trends and forces will shape consumer behaviors – and the role of brands and retailers – in unpredictable ways.

To help the fashion industry grasp potential developments, GFA and BCG have investigated disruptive patterns in other industries and interviewed thought leaders in scenario planning and digital disruption. Based on these findings, we present three scenarios of disruptive business models.

These scenarios are not predictions but a visionary look into the future – with a call for conversations on how companies might prepare and safeguard the future. The fashion industry has to be vigilant about recognizing the trends early that will challenge their business models, and plan effective responses that will lead to continued growth.

- **Instant fashion:** Consumers order and receive the apparel they want, when they want it and how they want it, using technologies such as 3D printing and other on-demand production that happens at the point of sale. The environmental footprint of such a production system is reduced, and the ability to meet consumer demand is heightened.

- **Fashion as a service:** The sharing economy comes to fashion to better promote reuse. In the same way that customers subscribe to software as a service (SaaS) rather than buying it outright, consumers in effect rent clothing. An industry’s environmental footprint is significantly reduced by the lowered need for manufacturing in quantity.

- **Smart fashion:** Apparel becomes electronically enabled to instantly adjust to the wearer’s preferences instantly. Smart fibers allow garments to alter colors, for example, improving environmental impact by reducing need for multiple versions of the same item.

The fashion industry continues to face an enormous challenge in reducing its environmental and social footprint. BCG and GFA hope brands and retailers will follow the call for future collaboration and innovation. Only a joint effort will push many of these disruptive innovations to reach the scale needed. Even in the best circumstances, this will take joint investments and efforts spanning several years. The urgency, and the potential for value creation, is as great as ever. We are confident that the creativity and commitment of the fashion industry leaders can create a prosperous fashion industry.
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