Central to the Sustainable Apparel Coalition's broad push to promote sustainable practices in the apparel and footwear industries, the materials section of the Higg Index strives to gauge the environmental impact of textiles and raw materials. This ambitious, innovative and concerted effort to rate and compare textiles raises as many questions as it answers.

How materials measure up in the Higg Index

Assessing the environmental and social impacts of the apparel, footwear and home textiles industries across the globe is a daunting task. The nearly 200 companies and organisations, including brands, retailers, manufacturers, suppliers, NGOs and academics that are members of the Sustainable Apparel Coalition (SAC) have taken up the challenge and are working collectively to reach this lofty goal. In environmental matters in general, collective initiatives are better than individual measures. This, and the desire to create a global sustainability framework for the entire industry, are part of the reasoning behind the Higg Index.

It all started in 2003, when Nike first began to work on what was to become the Materials Sustainability Index (Nike MSI), "a practical method to help designers make informed, real-time decisions about the potential and various environmental impacts of material choices in the product creation process". Materials are estimated to represent 60% of the environmental impact of a product, and Nike was looking for a way to monitor and reduce this load, but found no commercially available tool. It thus created its own, with the help of Brown and Wilmanns Environmental LLC developing a rating system using "publicly disclosed information related to the environmental impacts of materials". By 2012, the index was



Nike's Material Sustainability Index was first developed to help its designers better understand the impact of their fabric and material choices, not as a substitute for full lifecycle assessment studies.

Nike



Aware of its role as a "single player in a large, complex supply chain" Columbia Sportswear believes "the best way to make significant progress as an industry is to work together to come up with solutions that are applicable for all supply chain stakeholders," thus its commitment to the SAC.

Columbia Sportswear

said to propose relative material scores for some 80,000 materials supplied by 1,400 companies.

At roughly the same time, the Eco Working Group of the US-based Outdoor Industry Association (OIA) was also compiling its own Eco-Index to help member companies measure the environmental impact of the materials they used. Some 40 brands participated in the project.

These two information sources are the initial building blocks of what has become the Higg Index's Materials Sustainability Index (MSI). First released in 2012, it was updated in 2013. "It is made to be used by everyone in the industry and is based on best available practices," says Baptiste Carriere-Pradal, head of the SAC's European office. The Higg is organised in three parts: in addition to the materials section, there is a design module and a manufacturing facilities section. These tools are accessed via an online platform developed by Schneider Electric (at Higg.org). Companies are invited to provide detailed information on their efforts to reduce their impact on the environment. It's free.

"It is designed to be easy to use, and is similar to LinkedIn," argues Mr Carriere-Pradal. In addition to the nearly 200 SAC members, several thousand companies have already provided data on their facilities and processes, he says.

Critical mass

This level of cooperation and sharing information within the industry is regarded as unprecedented and has been widely applauded. The impact of the tool depends ultimately on its widespread use. The members of the SAC represent roughly 40% North American, 40% European and 20% Asian companies and organisations. "A majority of the major players have joined," says Mr Carriere-Pradal. Japanese fast fashion retailer Uniqlo is one of the recent recruits.

"The Higg Index is well-established. With 40% of the industry represented, it has reached critical mass," says Bernhard Kiehl, head of sustainability for WL Gore's Fabrics division. Invista's global sustainability director for apparel Arnaud Tandonnet concurs, saying: "The power of the SAC lies in the number of companies it has attracted." He also salutes its ambition to "quantify the impact of a garment on the environment" with "a simple tool that indicates, much like the energy ratings on home appliances, how 'green' a product is."

The aim to simplify procedures by integrating existing eco-standards and labels is also viewed favourably. "Suppliers are bombarded with audit requests," says Mr Tandonnet. The implementation of a standardised approach to restricted substances lists (RSLs), for instance, is seen as a positive move by many.

The devil in the details

However attractive simplifying and streamlining sustainable practices can be, the intricacies of the textile and clothing supply chain pose many challenges. "Each material is the subject of much debate, but at the end of the day, each material must be given a score," says Benjamin Marias, co-founder of France-based Air Agency, a consultancy specialising in innovation and sustainability. An expert on product end-of-life, Mr Marias was a contributor to the OIA's Eco-Index. The process is always open for revision. "Companies can provide feedback, and comments are taken into account," he adds. To address the issues and

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questions raised, SAC says it updates each of its tools every two years, so it is a work in progress.

The index draws its main architecture from Nike's MSI, which attempts to rate the environmental impact of fabrics and plastics. The database is available to the public in the form of a smartphone app called Making. Though worthy of merit, as nothing else is available in such a practical form, it is not without flaws, which are also found in the Higg Index's MSI online viewer (msi.apparelcoalition.org).

The inaccuracies found in the index's scoring system are due in part to the fact that it rates fabrics, not fibres or yarns. Though the purpose of the tool is to guide designers in their material decisions, this approach can distort data and lead to surprising situations. Spandex is currently present in the index as a "woven fabric from petrochemical sources" and scores the lowest in the online MSI, where "data quality assessment" is posted as "medium/low". On Nike's Making app, spandex is compared to TPU. Though technically of the same family (polyurethane), spandex and TPU are not technically comparable. Synthetic fibre producer Invista, maker of Lycra-branded spandex, was quick to spot the system's glitches. The company became a member of the SAC in 2013, participates in the Material Working Group, and has a representative on the Advisory Board. "Though there remains much to be done, great progress has been made in the past year to reconcile our lifecycle assessment (LCA) datasets with the Higg Index," says Mr Tandonnet.

Wool and lyocell suppliers also have scores to settle with the inner workings of the Higg Index. When Lenzing joined the SAC, the cellulose fibre producer brought a 2010 lyocell to the organisation's database. This move made the lyocell fabric category score number two best-rated textile in the MSI, after polypropylene (which gets a 36 rating as a pellet and 32.5 as fabric. Lyocell fabrics score 30.2 points). Many industry insiders consider the weighting of various parameters, such as land and water use, as a key source of flaws. German merino wool spinner Südwolle points out in its 2014 company newsletter Ecobalance: "The wool-related data within the Index is currently inaccurate and out of date. Südwolle Group, in partnership with ZQ Merino, retail brand partners and the International Wool Industry are undertaking a large-scale project to establish a new, accurate dataset that can be incorporated into the Higg Index. This will improve the tool and enable brands to make sustainable, ecologically sound decisions about their production and manufacturing systems."

Dear life cycle assessments

As LCAs become more common, the quality of the data used for the Higg Index should improve accordingly. "LCAs are standardised protocols, but they are not perfect," says Mr Kiehl at Gore, "they are however the best we have." The lengthy process lasted a full year at WL Gore and comes with a high cost. Invista is currently conducting an LCA for Lycra. This raises the question of how the Higg Index will manage 'branded' LCAs in a platform dedicated to 'generic' materials. What happens when the data provided by different manufacturers doesn't line up?



WL Gore is one of the founding supplier members of the SAC and also participates in the European Commission's Product Environmental Footprint programme.

WL Gore

In addition to discussions on the value of the datasets used in the Higg Index, the investment required to monitor progress in matters of sustainability is another hurdle in the evolution of sustainable practices. At Invista, Mr Tandonnet's sustainability team consists of more than 100 people. The Index may well be better suited to large corporations. "The process represents a heavy investment, requiring staff to collect and upload data. This is not easy for small companies," recognises Benjamin Marias. Even at WL Gore, Mr Kiehl agrees: "It's a good cause, but everybody feels the pain."

By reducing the number of audits and taking into account existing industry standards such as Oekotex or bluesign, the Higg Index should help reduce some of the expense linked to implementing sustainable measures. To simplify some of the data processing, SAC is thinking of making the tools easier to use, possibly by tailoring the number of questions, depending on the type of supplier, keeping only those considered the most pertinent. This is not an easy task, says Mr Carriere-Pradal as the level and quality of detail "need to be high for the information to be valid".

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The Textrends forum at ispo helps buyers find innovative fabrics developed by exhibitors and includes sustainability within its criteria. Now available as an ipad app, it can be consulted after the show.

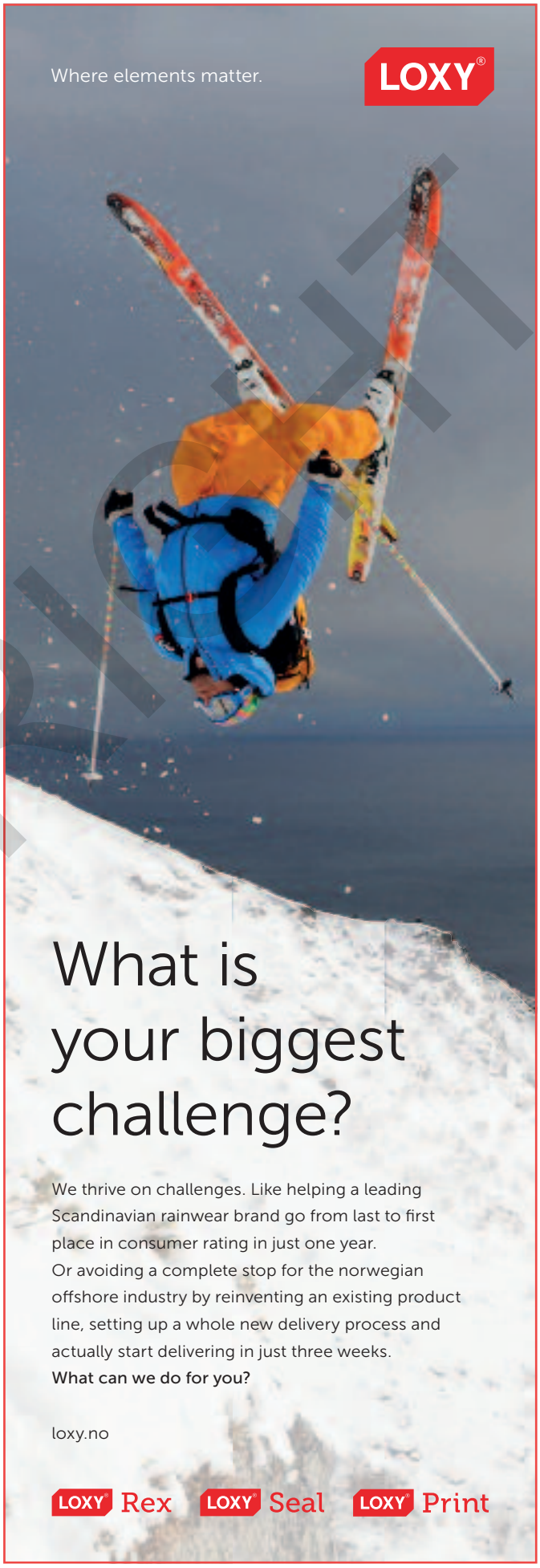
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Reaching out to consumers

The goal to create a single system open to all and based on a common language, when achieved, could also be used as a tool to convey a company's eco-progress to consumers. Here again, the lofty pursuit faces many obstacles. In the myriad that could be cited, the fact that the facilities module of the index is self-assessed, instead of third-party, will no doubt be an issue when addressing the general public. For Adam Mott, corporate sustainability manager at The North Face, the key question is "how does one make the data relevant to consumers? The information conveyed must be tied in to what consumers feel concerned by". He believes consumers buy a product for its functions and its aesthetics, not its impact on the environment. "Everybody wants a single, global tool that is easy to use and understand, something like a three-level scoring system. The problem will be deciding what to score and how to convey that information to consumers," says Benjamin Marias. The only existing example of a large-scale eco-label is that found on home appliances sold in Europe. But it indicates a single score, which is the product's energy use, a metric not particularly relevant to clothing, shoes and home textiles.

While the Higg tackles its "titanesque task", to quote Arnaud Tandonnet, of measuring the impact of materials, environmental labelling will in time be mandatory for all products sold in the European Union. A pilot programme has been launched to evaluate options for a first series of 25 product categories. The SAC is a stakeholder and is in charge of the non-leather shoe category.

Despite its imperfections, for many the Higg Index is going in the right direction and the collaborative effort is in itself a breakthrough. Archroma apparel marketing manager Paul Cowell sees major competitors, such as adidas and Nike, or Archroma and Huntsman, working together as "good news" and, even more, "a breath of fresh air".



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