

SPORTS FASHION by SAZ SPORT

 4/20

Nothing to waste - Closing the loop



**From throwaway society to circular economy
Solutions and opportunities for the textile industry**

POWERED BY

PERFORMANCEDAYS

FUNCTIONAL FABRIC FAIR

A new lease of life!

We have been living in a disposable society for a long time now, where it is often cheaper to produce something new than repair something older or return it to the cycle, if this is at all possible, as not every item can be recycled. “88 per cent of all clothing items end up in the trash. That is socio-ecological madness.” The sad truth that Lavinia Muth, Sustainability Manager at Armed Angels, brings to light in her statement. “The challenges are great. For a rethinking process, all of us are needed. Only together can we make a difference. We as a company together with our manufacturers can offer products and services accordingly, but above all we can also inform and educate. And we all – as consumers – need to rethink our consumer behaviour.”



Finite resources and infinite garbage heaps. Against this background, the focus of the 25th edition of Performance Days is: Waste nothing, not even time, may recycled clothes be recycled again and again and close the loop. In keeping with the topic “Nothing to waste – closing the loop”, the second Sustain & Innovate conference will commence on 10 December 2020. The branch can look forward to a fitting selection of sustainable materials, which the Performance Forum jury has specifically chosen. In focus: recycled materials such as PET bottles in yarns, recyclables or blends, shirts that decompose into biomass in a cradle-to-cradle approach, and more. On 9 and 10 December 2020, the Performance Days 2020 will be launched as a digital fair, as it was in summer. On the scheduled dates, both established and advanced new tools will go online, with Performance Days furthering its pioneering role in the creation of a digital textile trade fair experience.

As usual, SPORTS FASHION by SAZ will accompany the fair as official media partner of Performance Days. In the newest edition, we will inform about major innovations and product developments of manufacturers (brands and ingredient brands) along with all the important trends in terms of function and sustainability in the textile business, as well as the important topic of how to return textiles back into circulation.

On this note, let's not waste time!

A handwritten signature in black ink that reads "A. Schlüchter". The signature is fluid and cursive.

Astrid Schlüchter



Photo: Uniqlo

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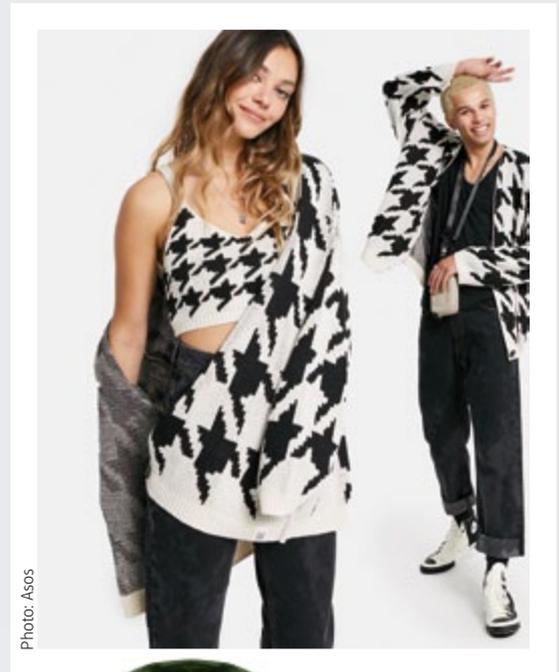


Photo: Asos



Photo: Bleed / Sympatex

NOTHING TO WASTE CLOSING THE LOOP

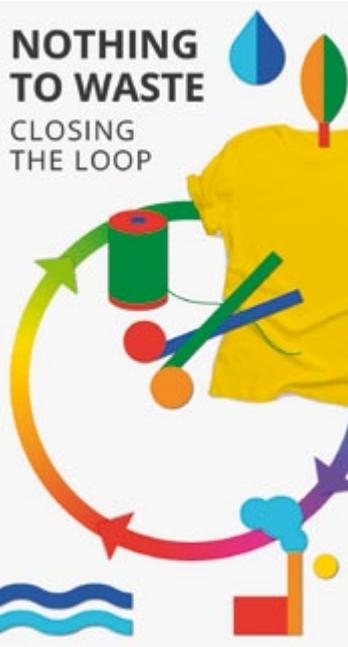


Photo: Performance Days

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Collection of Tomorrow

Merely one year after its initial launch, Spinnova and Bergans of Norway venture to the next step as they present the second product from their "Collection of Tomorrow", a follow-up to the backpack. In cooperation with new partner, the English fabric specialist Halley Stevensons, Spinnova's material has now been further developed for use in the clothing sector. The aim of the collection is to develop products that consist exclusively of renewable resources and are recyclable. The second product, a shirt in the style of a Scandinavian blue-collar worker shirt, was presented on 9 November 2020. "We're delighted that the Halley Stevenson Company has shared its enormous expertise with us and taught us so much. We are more than happy with the result", says Lotta Kopra, Chief Commercial Officer of Spinnova.

Spinnova's production technology for cellulose-based textile materials has the potential to revolutionise the textile industry worldwide. What



The Spinnova fabric could be recycled again and again.

Photo: ATS Spinnova

makes the patented process completely unique is the fact that it refrains from the use of any harmful chemicals, and no waste or side streams are triggered, and 99 per cent less water is consumed than in a normal cotton production process. The Spinnova material can be recycled over and over again. The backpack introduced in November 2019 was made of a blend of organic cotton, whereas the fabric of the shirt is made of a mix of Spinnova and Lyocell. "The backpack was still a prototype and only available in a very small quantity due to the limited total amount of Spinnova x Bergans materials available at that time. We have meanwhile increased the quantity of the material by 500 per cent. Nevertheless, we still expect the shirts to sell out quickly", says

Product Designer Johannes Flem from Bergans Future Labs, the name under which the Innovation Department of Bergans of Norway operates. ●

The fibre of the future

Technical advancement and a sense for practical playfulness – the Japanese are known for their love of high-technology. It therefore comes as no surprise that a Japanese manufacturer of bio-materials has launched a ground-breaking fibre with the potential to set new standards in terms of sustainability. Over years of research, Spiber's developed the

Brewed Protein material, which is produced in a microbial fermentation process and consists of sustainable, plant-based raw materials. Similar to spider silk, Spiber's new fibre is made of high-performance organic materials. But instead of spiders, precision-engineered microorganisms produce this bio-based protein polymer. The fibre has the thermal properties of wool and convinces with a corresponding pleasant feel.

Pro animal welfare: Brewed Protein is not only a potential alternative to textile fibres, but thanks to a specific manufacturing process it can also convince as a fur or leather alternative. Moreover, it can be processed into resins that are quite similar to tortoiseshell or animal horn. The vegan fibre wishes to play its role in contributing to a future vision of plastic-free clothing. The Japanese apparel brand Goldwin has now been working closely with Spiber for five years on common further development. An important milestone in this cooperation is "The Sweater". Its number worldwide is strictly limited and interested parties can only apply online to order the exclusive sweater. "This fibre could revolutionise the future of the apparel industry and be the answer to current environmental issues that arise in the production of synthetic fibres. We wish to develop the next generation of core material and pave the way for a more sustainable society", says Takao Watanabe, President of Goldwin Inc. and Development Executive. ●



Fotos: Goldwin

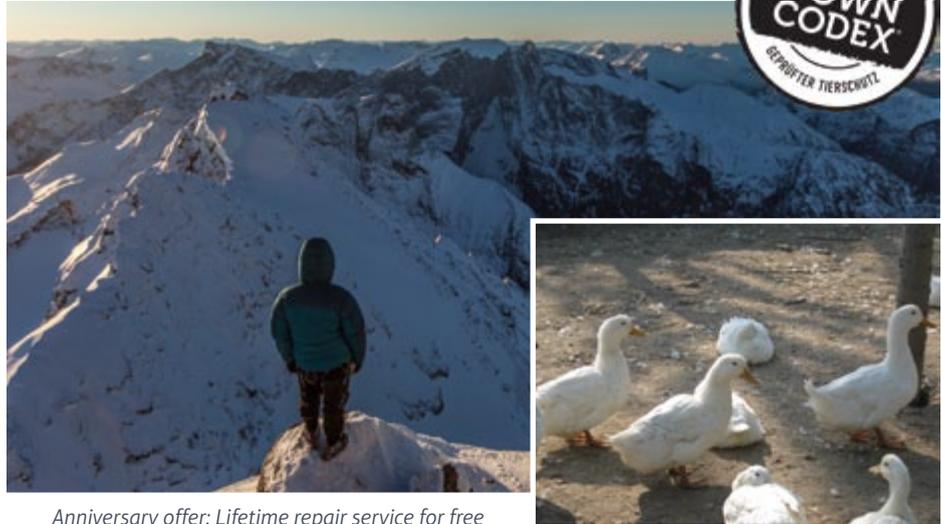
Brewed Protein is the perfect alternative to textile fibres, leather and fake fur.

10 years Down Codex

Ten years ago, Mountain Equipment was the first company worldwide in the outdoor sector to verify the origin of down and present it transparently to ensure both animal welfare and quality. To mark that anniversary, they offer a lifetime free repair service on down clothing and down sleeping bags purchased during the campaign period.

An independent institute regulates the adherence to strict animal protection standards in the production of down, among others the species-appropriate treatment of animals, refraining from live plucking or force fattening. Furthermore, the down must always be a by-product of food production. In addition to compliance with animal welfare guidelines, the Down Codex guarantees high quality down. Along with regular audits of the entire supply chain, each down batch is checked for quality characteristics such as the mixing ratio or fill power. For this purpose, a twelve-digit numerical code is sewn into every Mountain down product. By means of this code, the owner of a down sleeping bag or down jacket can check www.thedowncodex.de to see the origin of the down in the product, details about quality and certification relating to suppliers.

"Working without the Down Index has now become unimaginable – ani-



Anniversary offer: Lifetime repair service for free

mal welfare and the responsible and resource-saving use of the natural down material are of extreme importance to us", expresses Thomas Strobl, CEO of Mountain Equipment Germany. "It is just as important to us to manufacture especially durable products that prove themselves without compromise in alpine use. We are fully convinced of our products and the long life they offer. That is why we go so far as to provide a ten-year guarantee on our down sleeping bags."

Photo: Mountain Equipment

The Art and Science of LifeWear

As part of the China International Import Expo (CIIE), which took place this year from 5 to 10 November in Shanghai, clothing retailer Uniqlo hosted "The Art and Science of LifeWear" for the first time, a global exhibition of its LifeWear brand in China, following similar events in New York, Paris and London in previous years.

The exhibition space, titled "Museum of Tomorrow", showcased the innovation and technology behind Uniqlo's legendary products, the craftsmanship used to create high-quality apparel, sustainability initiatives and the first public presentation of the upcoming "+J" collection in collaboration with designer legend Jil Sander.

By means of a knitting machine that applies Wholegarment technology, the revolutionary art of 3D seamless knitting was demonstrated, which adapts perfectly to the body shape while providing a new wearing experience along with stylish comfort. Uniqlo's global efforts in sustainable development and innovation were also highlighted, with its underlying message of the power of clothing in protecting the earth and promoting the well being of people and communities.

The CIIE also marked the world premiere of BlueCycle, a rebranding of Uniqlo's water-saving technology that enables significantly lower water consumption in the manufacturing process of jeans.

Jalin Wu, Group Executive Officer of Fast Retailing and Uniqlo's Chief Marketing Officer for China Region, explains: "We hope that with our participation we can contribute to a better life in the future and to a new lifestyle for people everywhere. We are confident about the Chinese market. The company plans to expand its presence in lower classified cities in China."



Exciting exhibition: Uniqlo shows the Wholegarment ...



... technology with a special knitting machine.

Photos: Uniqlo

Green function from nature

Imbotex is committed to environmentally friendly fibres derived from hemp and nettle. Hemp is one of the most environmentally friendly fibres in the world. The plants have no need for pesticides, displace weeds without herbicides, control the erosion of the topsoil and produce oxygen.



Photo: Imbotex

Nettle: extremely sustainable and light



Hemp: environmentally friendly and renewable

Hemp counts as one of the renewable resources that can be cultivated in only 100 days and is also the most versatile fibre in the world. Hemp insulation offers the warmth and softness of a natural textile and provides superior durability when compared to other materials.

Nettle fibre is also sustainable thanks to its lower environmental impact. Furthermore, nettle has been renowned for at least 3,000 years for its benefits such as lightness and particularly good breathability. Since the fibres are not affected by moisture, they are suitable for insulation while providing great comfort: the body remains cool in summer and warm in winter. ●

Open source initiative for designers

In order to take up the fight against plastic waste in the clothing industry, the outdoor brand Houdini, in cooperation with Polartec, is making its award-winning "Mono Air Houdi" fleece jacket freely available as open source. Everyone from freelance designers to billion dollar brands can gain a deeper insight. With the launch of the Mono Air Houdis made of an even lighter version of Polartec Power Air, the two companies are not only presenting the result of an innovation project, but also the milestones along the way. Every step behind the Mono Air fleece jacket is revealed online at www.houdinisportswear.com, i.e. the complete development from the pattern to its final button is clearly illustrated.

The aim of the initiative is to coax the textile and product design industry to shift even further towards recycling management by means of the exchange of knowledge and cross-industry cooperation, thus rendering it virtually waste-free. "The textile industry is making great progress in terms of sustainable solutions. That is great. But the pace has to be stepped up. The rationale behind the idea of the Mono Air project is the necessity of such essential co-operations if the textile industry is to change. We all

Every step behind the Mono Air fleece jacket is revealed online – the complete development from the pattern to its final button.



Photo: Polartec/Houdini

share the problems caused by the resource-wasting production process of clothing. So why not share the solutions? One garment alone will not be sufficient, but we hope it can be an important step in accelerating the pace of innovation – and hopefully trigger change beyond the textile industry", explains Eva Karlsson, CEO at Houdini. ●

Know your stuff

With the aim of enabling more transparency for consumers concerning the textile supply chain, Verena Keller and Caspar Flockenhaus founded the start-up "Know your stuff" at the beginning of 2020. By simply scanning a QR code on a garment, customers can directly and easily track the journey of the respective garment in a retail- or online shop. It was particularly important to the founders to make the production facilities and their employees, and thus the people behind the products visible. The focus here is always on an appealing and easily accessible presentation of the many



Verena Keller and Caspar Flockenhaus

Photo: Know your stuff

certificates, standards and various social and ecological measures by brands and their producers. Brands can simply register on Know your stuff's digital platform and create a profile together with their partners. In this way, the many investments in high-quality producers can easily be made visible on the market, individually and authentically per garment.

Become part of this network, and open the textile industry's black box together with Know your stuff. You can find further information at www.knowyourstuff.de, on YouTube channel, Instagram and LinkedIn account. ●



Nothing to waste – Closing the loop

Reprocessing instead of throwing away

One thing is certain: The world has a massive waste problem. The textile industry contributes to this to a large extent. Shorter life cycles of garments generate even more waste, with most of it being hardly recyclable. The outdoor branch has been working on feasible solutions – yet where does it stand today? The Sustain & Innovate conference will provide an initial overview, devoting itself this winter to the topic of “Nothing to waste – closing the loop”.

The fast fashion industry in particular has fallen into disrepute for flooding the market with endless heaps of apparel, which ultimately hardly finds its way back into the cycle. The problem is that many of the clothes we wear are no longer reusable due to the material composition, production and often also the poor quality, be it for used clothing- or recycling purposes. Instead of being really recycled, used clothing is often downcycled. If considered unfit for this purpose too, they are incinerated as residual waste. But both manufacturers and customers often opt for clothing that is cheap but comes with unpleasant side effects. Cheaper goods only survive a few washes, tear easily, lose their shape and good appearance quickly and are subsequently disposed of rapidly by their owners. And finally, the temptation to stock up on new, low-quality products is too great. The result: even larger, non-recyclable textile waste heaps.

The outdoor branch is a pioneer in many respects in terms of sustainability – harmful PFCs have long been a thing of the past, natural materials and recycling are being prioritised, resources are being saved and more environmentally friendly production processes are being developed right



Picture Organic sees in circular economy part of the solution for the textile industry, but it will not fix all of the problems.



“When we talk about circularity, product longevity is crucial. This begins with the quality and the design. That is our first step approach.”

Lavinia Muth, Sustainability Manager at Armed Angels

through to the traceable supply chain. Always with a set goal in mind: keeping the ecological footprint as low as possible. “Closed-loop recycling management is crucial. In a world where emissions are reduced, less energy is consumed and resources need to be spared, closed-loop recycling is the solution. Especially in the textile industry, which is reliant on oil for the production of polyester. The recycling of plastic bottles is far better than the procurement of conventional polyester. This is a path we have been following since the beginning of Picture in 2009, to produce parts of the collection. But there is one but! Plastic bottles are waste products and also oil-based. So they cannot be seen as a true long-term solution”, explains Florian Palluel, Sustainability Manager, Picture Organic Clothing. So far, one problem remains almost unsolved: How can we return garments back to the textile cycle?

Ways to exit our throwaway society

“For us, closed-loop recycling is the future. We need radical rethinking. For more than 13 years we at Armed Angels have stood for Eco & Fair. But even the most sustainable fashion company consumes resources and generates waste. That is why we will together break through the linear model of ‘produce – use – dispose’ and set out on the path towards a circular economy. Because 88 per cent of all apparel end up in the trash. This is socio-ecological madness”, explains Lavinia Muth, Sustainability Manager at Armed Angels. Yet how can we avoid clothing being simply thrown away after its life cycle, or better said, is it not essential to check the durability of a product in advance? “Closed-loop recycling – that will be the coming great



Armed Angels is launching a take-back system: that means customers can send their old T-shirts back and the company will make new ones.



Photo: Picture Organic Clothing

Florian Palluel, Sustainability Manager, Picture Organic Clothing: "At the moment I have no idea if we will have such circular products in two or five years, especially because in our case, we talk about a complicated product: a snow jacket."

transformation of our society. This not only means keeping all materials and products in a closed cycle, but also extending the longevity of the products, offering repair solutions, reselling products. And all of this ideally in a closed production cycle, in the spirit of renewable energies, regenerated use of water and chemicals in order to recycle them. With this approach, we will no longer speak of the end of a product's life."

There are ways out of this one-way street – but the solution to the problem can only be tackled by manufacturers, producers and consumers in unison. Fjällräven, for instance, is committed to durability and quality in addition to sustainable production and the use of environmentally friendly materials – it is therefore no coincidence that the outdoor brand has been named the most sustainable label in Sweden in 2020. "Products should be of a high quality and durable in both a physical and emotional sense. What good is an item of clothing made from the world's most durable fabric if it no longer feels up to date just one year after its purchase? For this reason, timeless design is a priority. And we are happy to see our products being passed on from one generation to the next because we have succeeded in creating a long-term relevance that contributes to making more sustainable behaviour possible", says Christiane Dolva, Head of Sustainability at Fjällräven.

The first path a worn out clothing item must take is the path to the old clothes collection. A lot of people wish to support social projects, giving their clothing a second lease of life while supporting socially disadvantaged, poorer social groups. A second path is the path back to the manufacturer or retailer, who takes back the returned clothing, tries to repair them and in the worst case, recycles them. This is where brands such as Bergans, Vaude, Nudie Jeans, but also fashion chains such as H&M, & Other Stories or COS come into play. A third option would be a rental system for apparel. The best example is the Cyclon project, recently launched by the Swiss running brand On, a 100 per cent recyclable performance running shoe made from castor beans. But that is not enough, because even a recyclable product that simply ends up on the garbage heap after use has gained very little. That is why the Swiss manufacturer feels it is its responsibility to collect the products it produces. For this purpose, the first subscription service for running shoes and clothing was introduced. On wishes to demonstrate that the focus is less on ownership, but more on the experi-

ence with the product itself. "80 per cent of the ecological footprint of a product relates to the production of the material. This is why On focuses on the recycling of materials. With Cyclon, we have designed a 100 per cent recyclable performance running shoe that customers cannot buy – but only rent on subscription. This guarantees that the product is returned to us where we can send it off on a new life cycle", explains Viviane Gut, Head of Sustainability at On. And she continues: "Closed-loop recycling management begins with design and ends with recycling, thus undergoing the entire production process. This means that none of the 'players' mentioned

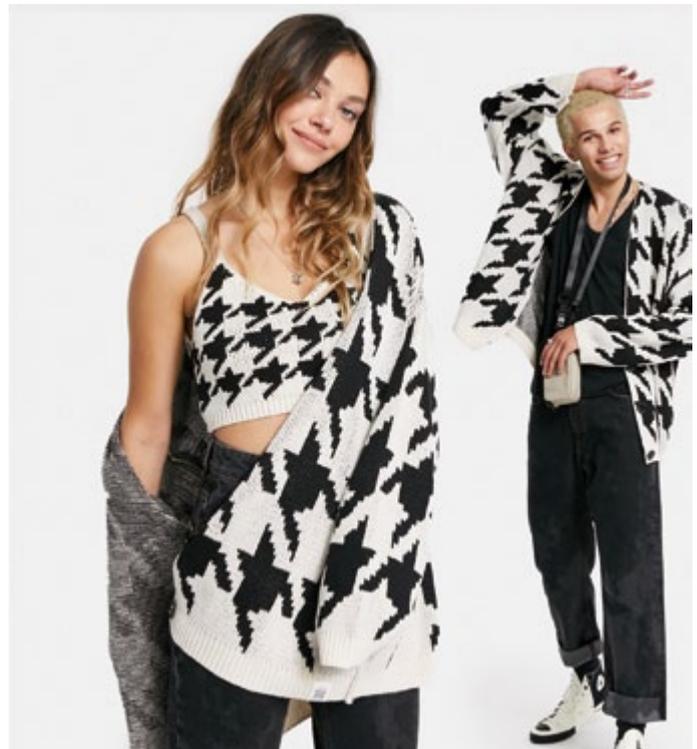


Photo: Asos

The circular collection from Asos: sustainable and stylish

above can escape responsibility. There should be a quest for innovative ideas that take the entire process into account. For example, it is easier to recycle products that were developed using as few different materials at the beginning of the cycle. This is the reason why the Cyclon running shoe is largely made of bio-based materials from castor bean."

A completely different path would be the one already taken by the food industry

Here, a recycling code serves as identification of the various materials, which ultimately ensures their return to the recycling loop. The code consists of the recycling symbol: three (often green) arrows – which represent the recycling loop – and a number that identifies the material. What if a similar symbol were to be introduced in the apparel industry? Lisa-Marie Strasser is Creative Sourcing Manager at Schöffel and is already thinking ahead: "I think there are various approaches to solving the problem of recycling. In any case, it would make sense if recycling clothing were given a uniform recycling symbol similar to that used for food packaging. This would be better for sorting products and make it easier to return them to the cycle – the state would have to intervene and pass appropriate legislation. Furthermore, customers would be informed immediately when they buy an article whether their T-Shirt is recyclable."

The path to more responsibility – the path to closed-loop recycling

In order to close the loop, perhaps the recycling of old materials is the decisive step. Today, some are turning to mechanical or chemical processes to recover fibres. However, this takes for granted that the collection and sorting of the growing textile waste is brought under control.

In the course of the mechanical recovery of fibres, the basic structure of the fibre does not change. For textiles made of pure cotton and wool, this means that they are broken down into raw fibres, which can then be spun and woven again. Thanks to a new mechanical process on which the engineering and development service provider Imat-uve is collaborating with a German-Dutch project consortium, this could all now change. The derived recycling yarns and woven fabrics are to be used primarily in the automotive industry, but also in sectors such as architecture, home textiles and clothing. Like recycled cotton, recycled polyester is mostly obtained by me-



Rent, not buy! Consumers could rent the the 100 per cent recycled performance running shoe Cyclon.



Photo: H&M Foundation

The new garment-to-garment recycling system Looop disassembles and assembles old garments into new ones.

chanical recycling these days. For polyester, however, this involves melting down the existing plastics and spinning new fibres from them again. Much less energy is required for mechanical recycling than if textiles were made from scratch, although the processing procedure results in the fibres being shortened, reducing their strength and quality compared to the original material.

On the other hand, there is chemical recycling. In this process, polymers are extracted at the molecular level and reprocessed into primary raw materials. Worn Again Technologies and The Regenerator, winner of the 2018 H&M Foundation Global Change Award, and Blend Re:wind from Mistra Future Fashion, have found ways to isolate cellulose and polyester polymers from cotton blends. Companies such as Re:newcell, Infinited Fiber and Evrnu are focusing on recovering cellulose fibres from cotton and viscose.

Chemical recycling of textiles is still in its infancy and is currently more expensive than mechanical recycling, plus the fact that harmful by-products are often released in the process.

Nevertheless, the problem needs to be nipped in the bud. According to statistics from the German Federal Association for Secondary Raw Materials and Disposal (BSVE), each year alone sees 1.01 million tonnes of old clothes and new clothes that have never been worn end up in the trash. The majority of this is incinerated or processed into low-grade nonwovens, as there is no possibility to reprocess the fabrics to a high quality. The reason being that mixed textiles cannot simply be separated again, or only with elaborate, chemical and thus less environmentally friendly procedures. A lot of work needs to be done in this area, a fact that all at Armed Angels are well aware of: "Without cooperation in the entire value-added chain, and this includes consumers, it will not be possible to implement a closed-loop economy. This is because consumers are taking on a whole new role in the supply chain, where they will act as raw material suppliers in the future by returning their used clothing to the manufacturers via take-back systems. It is incredibly important to already consider the life cycle of the product in the design phase and to lay the groundwork for keeping a product in the cycle as long as possible, through durability, repair, resale or the aforementioned recycling. Innovative, climate-friendly technologies are also a decisive factor in making the traceability or composition of materials transparent so that reprocessing and value retention is possible."

●
Astrid Schlüchter

Closing the loop

Recycling revisited: The Green Machine from H&M

A prerequisite for textile closed-loop recycling management is that fabrics can be recycled accordingly. But the majority of clothing consists of mixed materials that are particularly difficult to separate or can hardly be converted into new ones. By means of a hydrothermal process discovered by researchers in Japan in 2017, the H&M Foundation is now looking a solution to the problem right in the eye.

Separating polyester- and cotton blends entirely? This is something experts still see as an enormous challenge due to the fact that it has not been really possible to do so yet. With the "The Green Machine" project, the H&M Foundation in collaboration with the Hong Kong Research Institute of Textiles and Apparel (HKRITA) is now taking the plunge. Since 2016, developers have been working on an innovation that was first presented in 2018 in Tai Po, Hong Kong. Erik Bang, Head of Innovation at the H&M Foundation, explains what the Green Machine is all about and above all why such projects are essential today: "Fashion is one of the most wasteful industries in the world in terms of resources. It consumes large amounts of water, land and other resources to produce clothing. There are simply not enough resources to continue on this path. The consequences for our ecosystems are catastrophic. Conversely, clothing is an essential product for our citizens. We must therefore find the smartest and safest ways to manufacture, use and recycle them." HKRITA, in partnership with the H&M Foundation and a team of highly experienced, retired engineers, now wishes to start a revolution with a new process. "With the aid of a hydrothermal process, textiles can be recycled without any loss of quality. The separation process of cotton and polyester requires heat, water and less than five per cent green, biodegrad-



Erik Bang, Head of Innovation at H&M Foundation

able chemicals (citric acid). In the end, cotton is turned into a type of cellulose powder that can be applied to functional fabrics or regenerated fibres", says Erik Bang, Head of Innovation at the H&M Foundation. "This technology is revolutionary because we are now able to recycle mixed textiles. It is the first time that this has taken place in a safe, resource-saving and cost-efficient manner. But we could never have achieved this milestone alone without the efforts of HKRITA. It is all a matter of drawing the right conclusions. Thanks to our partner, we have now succeeded in producing the first ready-to-wear garments." The first collection with the new recycling technology comes from Monki and consists of a grey hoodie and jogging pants on which "respect your mother (nature)" is embroidered.

The next steps for the Green Machine technology are complete: should the process finally be put into operation. The goal is for the hydrothermal recycling plant to be able to recycle a few tonnes of mixed textiles per day. "This will enable

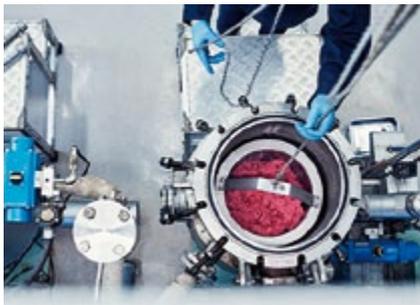
us to offer the fashion industry a technology that allows polyester and cotton blends to be completely separated. If we look into the future, it is to be expected that general consumption, not only in terms of clothing, will increase enormously. The current economic model is based on the idea of producing something and then throwing it away as waste. The resources available on our planet are limited and its ecosystems and climate are fragile. That is why we need to reinvent our industry to make it circular and recycle resources instead of wasting them."

Here's how the Green Machine works:

1. Mixed fabric of polyester and cotton is placed in the Green Machine.
2. The fibres are separated solely by the use of heat, water and less than five per cent green biodegradable chemicals.
3. A large oven dries the separated fibres.
4. The result: separated fibres that can be used to produce a new garment – the cotton is extracted in powder form and can be reused in a variety of ways.

And most important, the Green Machine works with a closed cycle: the water, heat and green, biodegradable chemicals can be reused over and over again – resulting in no secondary pollution.

Astrid Schlüchter



The Green Machine could separate mixed fabric of cotton and polyester by the use of heat, water and less than five percent green biodegradable chemicals.



Nothing to waste – Closing the loop

Circular Economy concerns us all. But how could we bring clothes back into the textile cycle?

This year will also see the international sustainability conference Sustain & Innovate take place for the second time in conjunction with the digital winter edition of the Performance Days. The exclusively virtual conference on 10 December 2020 will focus on all aspects of sustainable action, from procurement to the production and sale of functional textiles. The aim is to bring together leading decision makers, to inform and exchange and to utilise the networking options. The event is organised by the experts of Performance Days and SPORTS FASHION by SAZ.

With its focus topic “Nothing to waste – closing the loop”, the fair has chosen a topic that not only concerns our own industry. Wasting

nothing, not even time, recycling clothing back to recycled clothing in closing the loop. Textile recycling management is considered the solution to the global waste problem, slowing down the consumption of resources and reducing climate-damaging greenhouse gases. But what exactly is recycling management, and how can it succeed? Prominent international experts discuss background issues, solutions and future forecasts and provide insights into new business models.

In line with this topic, the fair organisers will deal with facts and visions in a nutshell as expert rounds take place on a virtual stage. Simply register and log in online for free at www.performancedays.de.

These are the programme highlights on 10 December 2020:

10:10 – 10:50

Emotional durability as core value



Speaker: Christiane Dolva, Head of Sustainability Fjällräven
Fjällräven is committed to supporting people in leading active lives by means of durable, classic products, which do not pander to



any current trends. Charles Ross and Christiane Dolva speak on topics such as corporate social responsibility, sustainable thinking and action, emotional durability and much more.

11:00 – 11:20

Introduction to the topic “Nothing to waste – closing the loop”



Speaker: Lisa Marie Strasser, Creative Sourcing Manager Schöffel
Recycling management, circularity, mono-component materials. What do these all mean, and how do these individual factors fit together? The presentation informs about and clarifies new developments. What are our options in closing the loop?

11:30 – 12:30

What we can learn from the last 20 years

Panel/Discussion round with:
- Erik Bang, H&M Foundation, Innovation Lead
- Martin Bösch, Texaid, CEO
- Alan Wheeler, Textile Recycling Association, Director
- Thomas Ahlmann, FairWertung, Managing Director



Moderation: Anna Rodewald, GreenroomVoice, Partner
Recycling management systems need time to pick up momentum. Time, a rarity in 2020. Which parts of the recycling chain already exist, which parts are missing, and where can we work together to bring about change and a global win-win situation for everyone?

12:45 – 13:45

Focus on sustainable, circular fibres



Speaker: Alexa Dehmel
This webinar provides information on the focus topic “Closing the loop” using the example of the fabrics awarded by the Performance Days jury. Alexa Dehmel summarises the jury’s findings relating to the 24 key themes. A total of four groups could be defined: nylons, polyester fibres, wool and cotton. The purer and cleaner the original fabric, the easier it is to recycle in the end. For the A/W 2022/23 season, manufacturers are presenting a whole range of recycled materials such as PET bottles in yarns, recycled fibres and blends, garments that decompose in a cradle-to-cradle approach, and much more.



These are the programme highlights on 10 December 2020:

14:00 – 14:20

Know your stuff – Boost consumer

Speaker: Verena Keller, Managing Director
 Know your stuff,
 With the aim of enabling more transparency for consumers concerning the textile supply chain, Verena Keller and Caspar Flockenhaus founded the start-up “Know your stuff” at the beginning of 2020. By simply scanning a QR code on a garment, customers can directly and easily track the journey of the respective garment in a retail- or online shop. Become part of this network, and open the textile industry’s black box together with “Know your stuff”.

14:30 – 14:50

We are what we wear – sustainable recycled insulation “made in Italy”

Speaker: Francesca Fincati, Imbotex, Sales
 A fully sustainable lifestyle is not always easy. This makes environmentally friendly alternatives in the textile industry for the fast fashion branch of even more importance. Textile recycling management can help to accelerate this step, with upcycling likewise offering a good alternative. By means of a patented mechanical process which wastes fewer resources, is completely environmentally friendly and GRS-certified, it has been possible to produce insulation from existing materials. 100 per cent made in Italy!

15:00 – 16:00

Closing the loop – Innovations in the recycling sector

Panel/Discussion round with:
 - Ann Sarimo, Infinited Fiber Company, Chief Marketing Officer
 - Cyndi Rhoades, WornAgain, Founder
 - Jenny Fredricsdotter, Re:newcell, Circular Business Manager
 - Juha Salmela, Spinnova, CTO and co-founder



Moderation: Sophie Bramel, freelance journalist
 Transforming old clothes into new fibres is becoming a reality thanks to advances in the development of various recycling technologies. In the online panel discussion, the challenges and progress of companies that see valuable resources in waste and thus pave the way to textile recycling will be debated.

16:15 – 16:45

An introduction to the performance and versatility of Tencel textiles in outdoor apparel

Panel/discussion with:
 - David Parkes, Concept III, Founder
 - Steven Lerman, Brookwood Companies, Executive VP Consumer
 - Sharon Perez, Lenzing, Business Development Manager Tencel (inspired by nature)
 has been long recognized as a premium, quality fiber, with functional properties and textile versatility. The combination of its natural sustainability and thermal performance, moisture management, and appealing aesthetics provide important opportunities and applications in performance apparel. A collection of knits and wovens are being introduced to take advantage of these properties and to introduce a new collection of outdoor textiles.

Sponsors



Supporters





From fibre to fibre

True to the focus topic “Nothing to waste – closing the loop” the sporty fabrics for the Autumn/Winter 2022/23 season are clear proof that sustainability and function need not be mutually exclusive.

The winter edition of Performance Days will yet again see the Performance Forum surprise us by showcasing various highly innovative and particularly sustainable fabric solutions for the Autumn/Winter 2022/23 season. In addition, and in line with this year's focus topic “Nothing to waste – closing the loop”, the Performance Forum jury will provide an overview of specially selected sustainable materials. Textile recycling management is considered part of the solution to the global waste problem, curbing the consumption of resources and reducing climate-

damaging greenhouse gases. But what exactly is recycling management and how can it be carried out successfully? And above all, how far have fibre manufacturers progressed in the development of mono-component fabrics that can ultimately be returned to the textile loop? In focus: recycled materials such as: PET bottles in yarns, recyclability and blending, shirts that decompose to biomass in a cradle-to-cradle approach, and more. In general, the Performance Days Forum will exclusively highlight fabrics that have been sustainably produced.

Jury's Pick: Fibre to fibre

From cradle to cradle. True to the focus topic “Nothing to waste – closing the loop” the sporty fabrics for the Autumn/Winter 2022/23 season are clear proof that sustainability and function need not be mutually exclusive. Quite the contrary, textile fibres can be recycled more and more frequently and thus be returned back to the textile cycle. What is outstanding here is the multitude of new, innovative and above all sustainable solutions in almost all categories that support the textile cycle. Four main categories in particular set the tone: Nylon, polyester, wool and cotton. The focus is on mono-component fabrics, such as 100 per cent pure cotton, 100 per cent recycled polyester, pure wool, merino or nylon, which can be perfectly recycled into the textile cycle.



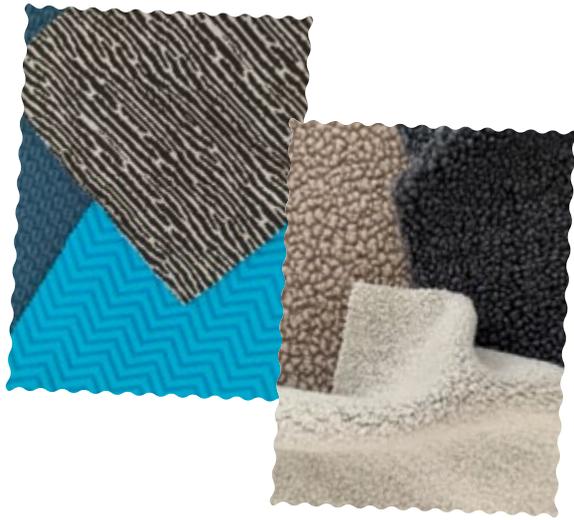
Baselayer

There is an increasing dominance in this category by the group of natural fibres, consisting mainly of wool, wool blends, organic wool jersey, hemp, bamboo or coconut shell. The soft viscose fibre, made of bamboo pulp, is often combined with argon oil. A distinction is made between wool, partly combined with Tencel. We have also seen the recent addition of the use of Smartcel, an innovative Tencel Lyocell high-tech fibre, which is produced on the basis of natural cellulose and the trace element zinc. Seacell is a fibre obtained from seaweed. It contains trace elements including minerals and vitamins. In contrast to Seaqual – where for production plastic waste is removed from the sea. A lot of manufacturers are applying the processing of milk proteins from non-food milk. Bio-based polyamide is another important category. This includes the likes of recycled polyamide, jacquards, pure recycled polyester, Polartec Delta, Tencel and polyester fabric constructions. Naia spun fibre is a newcomer to this segment. It interweaves with materials such as Lyocell, Modal or recycled polyester.



Midlayer

This category also displays an extremely large number of natural materials in Winter 2022/23. The focus is on newer constructions to generate heat, yet at the same time, manufacturers are attempting to reduce the use of micro-plastics in the development process. More focus is being placed on natural fibres such as micro-modal, cotton, hemp, organic cotton, Tencel, merino wool or fabrics made of soya. Hemp is increasingly replacing the use of cotton. The much lower water and energy consumption make hemp a better alternative. Furthermore, hemp is in no need of any chemicals. On top of all this, there are high-loft fleeces made of 100 per cent polyester, super technical knitwear with Seaqual fibre components, Polartec Highloft, Overdied Grip Velour, biodegradable polyester up to elaborate polyester 3D constructions. Tencel articles continue to feature prominently; the same goes for new air-chamber variants. All fleece fabrics are napped on the inside, but without any use of micro-plastic. There is a trend towards Sherpa fabric, which is replacing high-loft fleece qualities.



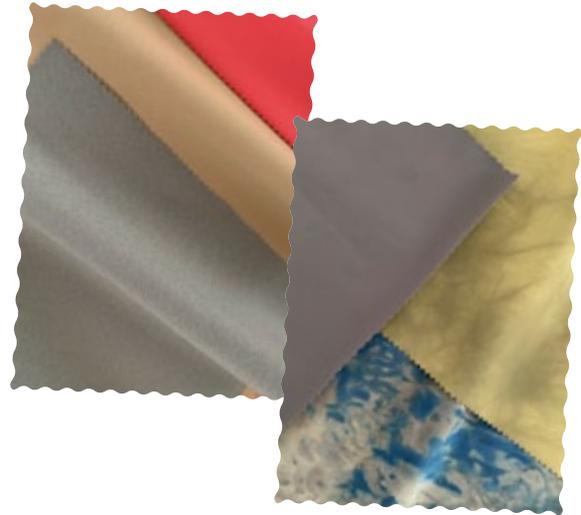
2-Layer

2-layer jackets are usually somewhat heavier and not quite as robust. Here you can find once again wonderful new structures, from classic extremely durable variants to new 3D structures that enable exciting design formats. The fabrics guarantee high breathability and water column, are light and impress with great stretch properties. Nylons are meanwhile available in numerous variants, mostly recycled, with some of the yarn derived from old fishing nets. BASF presents an organic variant that replaces harmful chemicals with vegetable oil from certified, environmentally friendly sources. Econyl is another option: Instead of using crude oil as in conventional nylon production, Econyl production uses waste materials such as production waste from the nylon manufacturing process, fabric remnants and carpets and fishing nets from the oceans. Cotton is blended with polyester or with Eco Rayon. Polyester fibres come with a recycled PET membrane, with stretch or innovative technologies such as special polymerisation spinning technologies.



2.5 & 3-Layer

3-layer jackets are especially recommended when travelling often with a heavy backpack or when exposed to adverse weather conditions. The functional 3-layer fabrics can no longer refrain from the use of natural fibres and recycled variants. The natural fibres convince overall with great values, especially in terms of breathability and waterproofness, providing 100 per cent recycled cotton with a PFC-free water-repellent coating, along with a 40 per cent linen, organic cotton blend. In the area of special membranes, XPore is often used, as is the bio-based membrane Dupont Susterra, biodegradable polyamide or recycled polyester with graphite membrane. The group of lightweights made of recycled nylon, and partly of recycled road waste, are wafer-thin yet robust. Ripstop, lightweight 60-gram mini-ripstop, ultra technical Drytex, ultra lightweight hard shells, recycled polyamide and polyester lightweights complete this category. Among the mono components, a multi-coloured jacquard and two Oxford structures in polyester and Nylon are a pleasant surprise.



Shirts & Pants & Tights

The trend towards fabrics of natural origin is also evident here. Among others still fresh in use are manila- and banana hemp, which is extracted from the abaca plant of the banana family (Musaceae). In the category of tights for running, fitness or yoga, the trend is moving away from the classic shiny tapewear articles to circular knitted articles with a matt look. Alongside soft, unique Tencel fabrics in robust quality, the many innovations in recycled variants are surprising, such as recycled Double Knit or newly recycled Coolmax. The blends of Eco Vero are also very exciting, with fibres made from certified renewable wood sources in combination with Seaqual and Tencel from controlled cultivation.



Lifestyle

Natural high-density cloth, thick winter fabrics, natural jerseys and digital print looks prevail in the lifestyle category. The colours are reminiscent of autumn, ranging from curry to cognac and mustard. The variety is great: robust, easy-grip linen and organic cotton blends, winter twills made of 100 per cent recycled cotton, beautiful linen- and Tencel weaves, Oxford fabrics, batiked naturally dyed denim fabrics and recycled polyester are ideal for thick yet elegant winter coats and jackets. In addition, there are classic winter fabrics such as loden made of 20 per cent recycled polyamide and 80 per cent wool, lumberjack fleece made of recycled wool, Eco Rayon and polyamide blends or a polyamide/lycra mix. The natural jerseys range from recycled polyester and abakar, hemp und cotton blends to double-face knits.



Outer Midlayer/Softshells

Warming, windproof and water-repellent jackets worn outdoors as an outer layer during sports or leisure activities typify the Outer Midlayer category. One trend that is clearly visible: the classic softshell is increasingly being replaced by the Midlayer, which provides outdoor protection against wind, rain and the cold. Polyamide and polyester fibres remain dominant even in winter 2022/23. The chemical fibres are often recycled, are even biodegradable or are used in a bio-variant. The use of elastane or stretch PU provides for more freedom of movement. Anyone on the lookout for natural fibres will find various blends of organic cotton, cotton or wool.



Lightweight & Downproof

The lighter variants of the winter models are ultra-light, breathable and heat-insulating. They also impress with their wide range of appealing colours and designs. The trend here is towards the typical nylon qualities of many Korean fibre manufacturers, which are produced using the air-washed process. It is also astonishing that lightweights can now be processed from Econyl and other recycled fibres without losing any of their lightness. Almost all fibres – from nylon, Econyl, polyamide to polyester – are over 90 per cent recycled, and often dyed with vegetable variants or dyed in a dope dyed process.



Safety & Durability

Durability, abrasion protection, tear resistance, elasticity, breathability, wearing comfort – workwear materials need to perform high technical values. In addition, the appropriate colour management is of particular importance for the workwear sector – bright, dazzling, neon signal tones dominate. Many fibres are also recycled in the workwear sector, or are of natural origin. In general, cotton fibres that are available in recycled or organic variants are gaining in importance. PFC coatings provide for additional protection and tear resistance. Newcomers in this segment are 100 per cent recycled Cordura and recycled biodegradable PET. Vectran spun from liquid crystal polymers is often used to provide cut resistance. This fibre is five times stronger than steel, making it ideal for use in workwear.



A jacket is a jacket

... and ends up as a jacket again? In order to achieve this, the functional textile manufacturer Sympatex has long been championing a solution: Closing the textile loop! Together with partners such as the sustainable streetwear specialist Bleed, there have been efforts to close the clothing loop bit by bit since 2009 in order to gradually return clothing waste back into raw material.

What actually happens to a functional jacket when it gets old and worn out? As a consumer, can I simply throw it in with the household waste or does it – as is the case for plastic or aluminium – need to meet specific disposal requirements? While the focus for sustainability is often placed on the manufacturing process, the signs are now clear that the disposal of such products increasingly leads to ecological consequences that acutely endanger one's own living environment. In view of the incredible quantities of textile

waste produced by the industry annually, manufacturers such as Sympatex have decided to implement the recycling management system over the coming ten years, regardless of external conditions, and to offer only products made from 100 per cent circularly extracted raw materials by the year 2030 at the latest. "With around 50 million tonnes of synthetic fibres a year, our industry contributes around 12 per cent to the global flow of plastics with which we flood our planet after (increasingly) short use. The resulting rapidly increasing flow of used textiles, which ends up in landfills or incineration, is in itself a form of 'dynamite'. Political and social pressure to put a stop to this is growing by the minute. The EU plastics tax on non-recycled plastic packaging from the beginning of 2021 will only be a first step. Our industry should therefore turn its attention to the topic of recycling as quickly as possible – and in fact, it is picking up more momentum", explains Sonja Zajontz, Head of PR at Sympatex. For the Bleed fashion label, which has been collaborating with Sympatex since 2009, the regular balancing of the CO₂ footprint is the point of reference for improvements which the company is constantly working on. Some collections already consist of recycled or remanufactured materials, and the first vegan products have been launched. Nevertheless, how can I as an end consumer rely on my functional jacket being returned to the textile cycle? Or better said, how do I know in the end that textile recycling is in fact carried out from A to Z? And, what role does the retailer play in this? To what extent must we all work together? "We are all in the same boat in the end: brands, suppliers, producers, retailers and of course, at the end of the chain, the consumer. If we all treat each other fairly, a lot can be achieved in the future. But I would like to see more courage from the retailer side. Customers accept innovations much faster and are often – when it comes to new products, new materials and new designs – easily hooked. Retail-



Photo: Bleed

Completely recycled, functional and stylish, too – the Active Coat from Bleed and Sympatex



Photo: Bleed

Bleed-founder Michael Spitzbarth has a good laugh – the gloves from Bleed, Zanier and Sympatex are recycled and can be recycled again.



Photo: Sympatex

Sympatex advertising campaign – circular economy as part of corporate DNA

ers, in turn, are often reluctant to take any risks when it comes to innovations”, says Michael Spitzbarth, Bleed founder.

The life cycle of a jacket

The life cycle of a jacket is linked to various circumstances. How often is it in use, which challenges is it exposed to, what type of weather conditions must it withstand? However, in the end it is irrelevant what is expected of a jacket in its lifetime. What ultimately counts is how it is disposed of, or how its return to the cycle is managed. This is where the product developers and designers come in – because they should be able to design a model in such a way that it lasts as long as possible, i.e. to prolong the service life of a product as much as possible by means of important factors such as processing, material or the cut. Spitzbarth sees this as the first important step in terms of sustainable action: “Design your products with durability and circularity in mind, a motto that has become second nature to our designers and product developers. Already during the development process, topics such as recyclability and circularity must be considered. That is the basic requirement.” That is why Bleed only uses pure natural fibres or recycled materials. If materials are mixed, they are difficult to separate in the end. At least up to now. “In the next five years new recycling possibilities will be available. We are already on a good path, with plenty of room for improvement.” The procedure – at least at Bleed – is still as follows: “When jackets are returned by customers, we try to repair them. If this is no longer possible, we keep the jacket, the material is then recycled and goes back into the cycle.” However, the process has not yet been optimised, but pilot projects are working on ways to make it easier to return clothing to the cycle. According to Spitzbarth, this is a matter for all involved, manufacturers, suppliers, brands, retailers and of course, the end consumer. “We in the functional area are already quite advanced in this respect. Pure fibres are already in circulation from the outer material to the hardshell filling. Zippers, drawstrings, rubbers, buttons and other such details are more prob-

lematic.” Product developers can meanwhile draw from a wealth of resources, the possibilities to combine functionality with an attractive appearance are also given. “We are currently processing used plastics from the packaging industry for the outer- and lining materials of our recycled functional laminates. Since more than 70 per cent of synthetic fabrics are made of polyester, this is not necessarily a difficult undertaking.



Photo: Sympatex/Wear2Wear

The sustainable Wear2Wear concept is a synonym for high-quality, eco-friendly apparel.

Around 50 per cent of the textiles we use are already currently made from recycled PET or contain at least a significant proportion of it. However, the processing of old PET bottles into new functional textiles has always been only a temporary solution for us – the goal is to close the textile loop in such a way that clothing is recycled again and again”, explains Zajontz.

The rebirth of a jacket

A jacket is a jacket is a jacket – it's nice when a jacket becomes a jacket again at the end of its life cycle and doesn't have to end up in the trash like many other things. This is functional specialist Sympatex's approach in getting closer and closer to the desire for the ultimate functional jacket of the future. Very close, in fact, because at Ispo Munich 2020, visitors were able to see for themselves the world's first upcycled functional jacket made from 30 per cent recycled old textiles and 70 per cent recycled PET bottles. The 3-layer high-performance jacket Revolution Hybrid was developed in cooperation with Wear2Wear. “The most important technologies have long been available. Around 85 per cent of our laminates are already made of mono-material (pure PES) and are therefore ideally suited for post-use recycling. The problematics in really closing the loop lies rather in the crux of the matter: the ‘Design4Recycle’ approach has not yet been implemented across the board to guarantee an economically efficient collection and recycling process. In addition to the selection of single-variety products, the construction of the end products also plays a decisive role in the profitable circularity of textile products. This approach includes, among others, a pure material selection with seam-reduced cutting variants, in combination with single-variety ingredients and with finishing and dyeing processes suitable for recycling”, says Zajontz.

Nevertheless, Bleed too is also getting closer to the desire for recyclable products – proof of this being the fabric used in Sympatex's “Active Coat”



Photo: Sympatex/Wear2Wear

The “Design2Recycle” team has designed the functional jacket in such a way that it combines the best options for ecological and economic recycling.

and the fleece lining made of recycled polyester. The impregnation is free of PFCs and PFOAs, the membrane is free of PTFE, and due to the purity of the material, the coat can even be recycled after use. Together with climate consultant ClimatePartner, a completely climate-neutral functional jacket



How does a jacket turn into a jacket again? By designing and developing it in such a way that it can be completely recycled in the end.

Photo: Sympatex



Five partners in Europe have teamed up and cover the entire recycling cycle.

has been developed, which is not only recycled, but also produced with CO₂ compensation, even if production does take place in China and involves longer transport routes. Together with Sympatex and ClimatePartner, Bleed wishes to calculate the ecological footprint caused by the production of the jacket and offset it by supporting an extensive forest protection project in Kenya. "The cooperation with Sympatex, on-going since 2009, is extremely important to us. In recent years, we have advanced with many projects that are important to us both, and in doing so we have stimulated one another,

as in the development of the Bleed X Zanier Eco Glove", says Spitzbarth. The glove's materials are Bluesign and Oeko-Tex certified, and highly functional at the same time: The Sympatex laminate used for the shell is PTFE-free and PFC-free, optimally breathable, 100 per cent waterproof and windproof. The proven fleece lining from Polartec is durable and robust. Bleed welcomes back clothing and also the Bleed x Zanier Glove after their service life, thus closing the recycling loop together with partner Sympatex via its Wear2Wear system. Nevertheless, there is still a long way to go before the topic of textile recycling actually works and can be implemented accordingly by all those involved. "So far, we have observed very few concrete initiatives in this direction – even though the topic is generally being discussed more and more frequently. We consider this lack of initiatives to be quite dangerous, as we foresee a shortage of bottled PET for current recycling approaches in our industry in the near future as the pressure on the packaging industry to recycle increases. The EU plastic tax on non-recycled plastic packaging from the beginning of 2021 will only be a first step. For this reason, we contacted many of our partners directly in the summer to initiate a dialogue on initial prototype collections. After all, if we want to avoid rummaging through unsorted mountains of waste and landfills or incineration plants for future raw materials, we should get together as soon as possible to rebuild our supply chains so that our own raw materials remain in circulation – instead of being dumped in landfills", Zajontz sums up.



"The processing of PET bottles has always been a temporary solution. The aim is to close the textile cycle so that clothing can be recycled again and again."

Sonja Zajontz, Head of PR Sympatex

Astrid Schlüchter



Foto: Performance Days

Function @ PD

Die Icons erklären die Funktionen der vorgestellten Stoffe.
The icons explain the functional properties of the fabrics on display.

Strick- & Wirkwaren	Webwaren	Faserpelz	Softshell	Elastische Stoffe	Isolation	Wasserdicht & atmungsaktiv	Winddicht & atmungsaktiv	Temperaturmanagement	Schnell-trocknend	Geruchs-kontrolle
<i>Knitted</i>	<i>Woven</i>	<i>Fleece</i>	<i>Softshell</i>	<i>Stretch</i>	<i>Insulation</i>	<i>Waterproof & breathable</i>	<i>Windproof & breathable</i>	<i>Thermo-regulation</i>	<i>Quick dry</i>	<i>Odour management</i>
Bedruckbar	UV-Schutz	Hoch abriebfest	Schwer entflammbar	Reflektierend	Bluesign	Wiederverwertet	PFC-frei	Biologisch abbaubar	Daunenfest	Ausrüstungen
<i>Printable</i>	<i>UV resistant</i>	<i>High abrasion</i>	<i>Fire retardant</i>	<i>Reflective & high visibility</i>	<i>Bluesign</i>	<i>Recycled</i>	<i>Fluorocarbon-free</i>	<i>Bio-degradable</i>	<i>Downproof</i>	<i>Finishes & Treatments</i>

Die 240 im Performance Forum präsentierten Stoffe sind das „Best of“ von über 613 Einsendungen an die Jury der Performance Days. Im Dezember 2020 werden die Highlights nicht auf einer Plattform vor Ort in der Messehalle gezeigt, sondern gegliedert in zehn Kategorien in rein virtueller Form auf der Website der Performance Days unter www.performancedays.com. Jeder Stoff ist mit einem QR-Code versehen, der eine Produktbeschreibung anhand der Icons enthält.

The 240 fabrics presented at Performance Forum are a “Best of” from more than 613 submissions to the Performance Days jury. Due to the exceptional circumstances, in December 2020 the selected highlights will not be shown on a platform on site in the exhibition hall, but divided into ten categories in a purely virtual form on the Performance Days website at www.performancedays.com. Each fabric is labelled with a QR code that contains a product description.

ECOSENSOR™



- Spezialist für nachhaltige Funktionsstoffe
- Specialist for sustainable, functional fabrics
- www.asahi-kasei.co.jp

Ecosensor™ von Asahi Kasei kombiniert High-Performance mit Innovation, um Menschen dabei zu unterstützen, Körper und Geist auf natürlichem Weg in Einklang zu bringen.

Aufgrund der einzigartigen Technologie, Funktionalität und dem Fokus auf Nachhaltigkeit ist das Material eine echte Alternative zu gängigen Stoffen. In der neuen Kollektion werden nachhaltige High-End-Inhaltsstoffe wie GRS-zertifiziertes FCFC-Recycling-Polyamid verwendet. Die Herstellung erfolgt in einer Bluesign®-zertifizierten Färberei. Das Ergebnis ist ein leichtes High-Tech-3-Lagen-Material mit Top-Eigenschaften: Das PFC-freie DWR überzeugt mit einer 20.000-mm-Wassersäule und 40.000 g Atmungsaktivität. Das Obermaterial ist aus recyceltem 10d-Ripstop-Polyamid und der Träger aus 7d-Trikot mit einer 7-µ-pu-Membran in der Mitte. Die leichte Faser ist ideal für High-End-Regenbekleidung und Packable-Systeme.



Ecosensor™ by Asahi Kasei presents its new fabric collection, imbued with the brand's sustainable story-making. It combines high-performance and innovation to empower people with the possibility to live life naturally both for mind and body.

The unique technology and environmentally friendly functionality is designed to make a real and sustainable difference. Within the new collection, this type of fabric uses responsible premium ingredients such as GRS (Global Recycled Standard) certified FCFC recycled polyamide and it is made using dye house which is Bluesign® certified. An extremely light-weight high-tech 3-layer fabric with exceptional features: it can achieve 20,000 mm waterproofness and 40,000 g breathability with PFC-free DWR. The face fabric is 10d rip stop recycled polyamide and backer is 7d tricot with 7 µ pu membrane in the middle. This light fibre can be used for professional outdoor rain wear and it is especially suitable for packable compact jackets.



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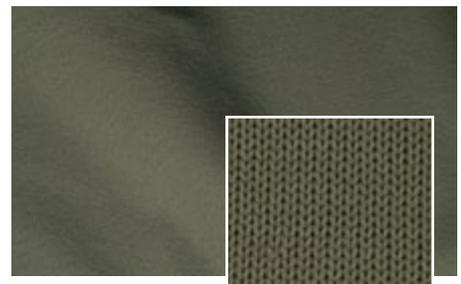
Intelligente Technologie gepaart mit Umweltbewusstsein sind zwei der Schlüsselemente, die diese neue Kollektion auszeichnen. Das Ergebnis ist ein Sortiment an High-Performance-Funktionsstoffen, deren Zusammensetzung vollständig rückverfolgt werden kann.

Im Sortiment befindet sich ein neues, innovatives Stretch-Material. Es wird mit Roica EF™ hergestellt, dem weltweit ersten GRS-zertifizierten recycelten Stretchgarn, das mehr als 50 Prozent recycelten Pre-Consumer-Stoff verwendet. Das Material wird mit einer speziellen Strickmaschine verarbeitet, sodass die Vorderseite eine hohe und die Rückseite eine niedrige Stärke aufweist. Die Färberei, in der der Stoff bearbeitet wird, ist nach Oeko-Tex® Standard 100 zertifiziert. Die Faser ist für Mid Layer, Sport, Fitness sowie Lifestyle bestens geeignet – die perfekte Lösung für alle, die Nachhaltigkeit suchen, ohne auf den luxuriösen Aspekt von Strick verzichten zu müssen.



Smart technology and responsibility are two of the key elements that characterise this new collection, where the result is a range of fully traceable, high-performance fabrics. Ecosensor™ offers a wide range of products with this unique high-tech performance, providing premium quality and comfort to its use.

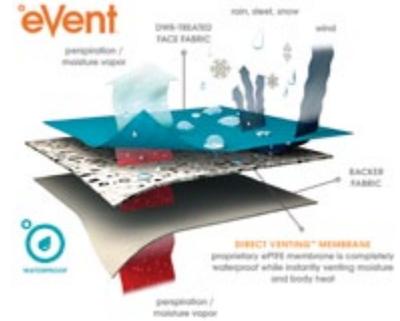
Among the new and innovative stretch materials, this one is made with Roica EF™, the world first GRS-certified recycled stretch yarn using more than 50 per cent pre-consumer recycled content. This fabric is knitted by a special construction knitting machine so the face side is high gauge and the back side is low gauge; it is made using dye house which is certified by Oeko-Tex® Standard 100. It can be used for mid layer or athletic and fitness wear and casual apparel as well. It is the perfect solution to the consumer looking for sustainability without having to give up on the luxurious aspect of knits.



ITTTAI Performance Fabrics / eVent Fabrics



- Spezialisten für Membrane und Laminate
- Specialists in membrane and laminate fabrics
- www.itttai.com



eVent und ITTTAI präsentieren gemeinsam innovative technische Stoffe für hochwertigen Allwetterschutz und beste Performance.

eVent fabrics and ITTTAI Performance Fabrics partner to provide advanced technical fabrics that offer all-weather protection and industry-leading performance.

Mit der Einführung einer luftdurchlässigen wasserdichten Membran revolutionierte 1999 eVent die Bekleidungstechnologie. Der Unterschied zu anderen Membranen ist das Direct Venting™-System. Durch Milliarden mikroskopisch kleine Poren kann der Schweiß schnell abdampfen. So bleibt der Körper trocken und warm bei unterschiedlichen Temperaturen und Wetterlagen. In Zusammenarbeit mit ITTTAI Performance Fabrics bietet eVent führenden Sportswear- und Modemarken sowie den Herstellern professioneller Arbeitskleidung leistungsstarke Stoffe, die wasserdichten, winddichten und wetterfesten Schutz garantieren.



Founded in 1999, eVent fabrics is the original air permeable waterproof technology. The critical difference between eVent and traditional waterproof/breathable technology is our Direct Venting™ system. With billions of microscopic pores in our proprietary membrane, sweat is instantly vented to keep users dry and comfortable in the widest range of temperatures and conditions. eVent works in partnership with ITTTAI Performance Fabrics to provide leading sportswear, professional and fashion brands with high-performance technical fabrics that provide waterproof, windproof and all-weather protection.

Lanificio Becagli



- Spezialist für Performance-Stoffe und Modetextilien
- Specialist for technical fabrics and fashion textiles
- www.lanificiobecagli.com



Lanificio Becagli schlägt die Brücke zwischen Technologie, Innovation, Design und Nachhaltigkeit.

Lanificio Becagli is very active in conscious fashion as it all starts with fabrics, sustainability, technology, innovation and design.

Lanificio Becagli hat sich auf die Entwicklung, Herstellung und den Vertrieb innovativer Textilien sowohl für den aktiven Sport als auch für die Fashion spezialisiert. Innovation und neueste Technologien stehen ebenso an vorderster Stelle wie umweltfreundliche Konzepte, zum Beispiel Transparenz der Lieferkette und nachhaltige Materialien. Seit 2020 sind fast 90 Prozent der Textilien aus nachhaltigen Materialien und die meisten GRS-zertifiziert. Damit trägt der italienische Produzent wesentlich zum Umweltschutz bei und schlägt die Brücke zwischen technischen Eigenschaften, Performance und Conscious Fashion.



Eco-friendly key concepts, as ethical business practices, supply-chain transparency, minimal impact policies and sustainable materials are mixed with technology and innovation to make our sustainable and ethical collection. Becagli's eco-friendly fabrics are the right choice for the planet keeping technical properties, performance, innovation and the taste for fashion trend. From 2020 almost 90 per cent of our articles are environmentally-sound fabrics and the majority are GRS certified.

Searching for the right fabrics is the first choice for conscious fashion.



Polartec



- Spezialist für textile Lösungen
- Specialist for textile solutions
- www.polartec.com



Polartec verbindet Funktionalität und Nachhaltigkeit in leistungsstarken Stoffen. Dafür wurden bereits mehr als 1,7 Milliarden PET-Flaschen verarbeitet.

Jüngstes Resultat des Polartec® Eco Engineering™ zur Minimierung des negativen Umwelteinflusses in der Textilindustrie ist Polartec® Power Air™: eine Strickkonstruktion, die durch Luftpolster effizient Körperwärme speichert und bis zu fünf Mal weniger Mikrofasern verliert als andere Midlayer-Stoffe. Im Einsatz für mehr Kreislaufwirtschaft stellt Polartec gemeinsam mit Houdini das „Mono Air Houdi“ als Open Source vor. Die Fleecejacke aus einer 25 Prozent leichteren Version von Polartec® Power Air™ besteht zum größten Teil aus recycelten Materialien und kann vollständig wiederverwertet werden.



Polartec combines performance and sustainability into efficient fabric and has diverted over 1.7 billion PET plastic bottles from landfill and turned them into fabrics.

The latest innovation to come from Polartec® Eco Engineering™ to minimize the negative impact of the textile industry on the environment is Polartec® Power Air™. This is a fabric with a revolutionary knit construction that encapsulates air to retain body warmth and sheds up to five times fewer microfibres than other premium mid-layer fabrics. Fighting for more circularity, Polartec and Houdini present their award-winning “Mono Air Houdi” jacket. An open-source project, every step of the garment’s creation has been made visible in the hope that other brands will follow suit. The jacket is made of a 25 per cent lighter version of Polartec® Power Air™ that comprises recycled polyester and is fully recyclable.

Polygiene



- Spezialist für geruchshemmende Technologien
- Specialist for anti-odour technologies
- www.polygiene.com



Eine Umfrage zeigt eine Zunahme der Waschvorgänge aufgrund der Pandemie. Details und nähere Informationen dazu enthält die Studie von Polygiene*.

Der Wunsch, Verantwortung zu übernehmen und sich selbst und andere zu schützen, war noch nie so stark wie heute. Die Ausbreitung von Viren zu minimieren und die am stärksten gefährdeten Personen nicht zu gefährden, hat momentan oberste Priorität. Gleichmaßen sollten wir bereits im Vorfeld Kaufentscheidungen überdenken oder Produkte entsprechend pflegen, damit sie länger haltbar bleiben. Die Polygiene® Stays Fresh-Technologien sorgen für eine erstklassige Textilbehandlung, die Bekleidung und Equipment angenehm frisch halten. Das Ergebnis: weniger Waschvorgänge. Polygiene ViralOff® garantiert dennoch, dass über 99 Prozent der Viren* gemäß der internationalen Norm ISO18184:2019 (SARS-CoV-2, H3N2, H1N1)* reduziert werden. Fazit: Länger tragen, weniger waschen.



A survey shows an increase of washing due to the pandemic. Details and more information can be found in the current survey from Polygiene*.

The ability to take personal responsibility with protection for oneself and others has never been greater. We can disregard advice regarding distancing, wearing a mask and washing our hands, or we can do what is in our power to minimize the virus spread and protect those most vulnerable. The same decisions can be made on the articles we purchase and how we care for our apparel and gear. Polygiene® Stays Fresh technologies provides a branded answer that is a textile treatment that will keep products fresh. You can wash less, and with Polygiene ViralOff® feel confident that over 99 per cent of viruses* are reduced per the international standard ISO18184:2019 (SARS-CoV-2, H3N2, H1N1)*. Together we can make a difference. Wear more, wash less.

*Polygiene survey, visit <http://polygiene.com/survey-on-viruses-washing-and-viraloff/> to read more

Rudholm Group



RUDHOLM GROUP

- Spezialist für nachhaltiges High-Performance-ECO-SPORT-Zubehör
- Specialist for sustainable high-performance ECO SPORT accessories
- www.rudholmgroup.com



Rudholm Group verbindet mit ECO SPORT Hochleistungsprodukte und Nachhaltigkeit im Bereich Sportzubehör.

Mit der ECO SPORT-Kollektion bringt Rudholm Group umweltfreundliche, recycelbare und biologisch abbaubare Sportzubehör-Produkte auf den Markt. Das Sortiment umfasst gewebte und gestickte Badges aus 100 Prozent GRS-recyceltem Polyester sowie Etiketten, Schnüre und Bänder aus Kunststoffabfällen. Nachhaltige Alternativen sind auch Hang Tags aus FSC-zertifiziertem Papier oder Bambus. Zudem werden Metalloberflächen nicht galvanisiert, sondern neueste Nanotechnik eingesetzt. Das macht die ECO SPORT Linie von der Rudholm Gruppe zur nachhaltigen Alternative.



Rudholm Group ECO SPORT range mixes high performance products with sustainability for your sporting accessories.

This range includes 100% GRS recycled polyester woven and embroidered badges – with 100% recycled backing. Available are labels, cords and tapes made from post-consumer chips like plastic bottles. Choose from the FSC or bamboo hang tags, both a sustainable and renewable alternative. The new Eco Seal is made from 100% GRS certified polyester string and natural materials such as organic cotton, hemp and FSC paper string. This makes the ECO SPORT range from the Rudholm Group a truly sustainable option.

Schoeller



- Spezialist für innovative Funktionsstoffe
- Specialist for functional fabrics and innovative textile solutions
- www.schoeller-textiles.com



Multifunktionelle, nachhaltige Hightech-Textilien stehen bei Schoeller im Zeichen von biocosmo.

Innerhalb der Schoeller Performance Kollektion setzt biocosmo einen ganz klaren Fokus: Außergewöhnlich nachhaltig. In der Gruppe der biocosmo-Textilien sind Stoffe herausgestellt, die entweder aus recycelten, recycelbaren und/oder biologisch abbaubaren Garnen gefertigt sind und bei denen die verwendeten Ausrüstungstechnologien biobasiert sind. Ohne Kompromisse bezüglich Funktion und Komfort entsprechen diese hochwertigen, langlebigen Textilien den verschiedensten Bedürfnissen der modernen Weltbürger*innen und begleiten sie im Biokosmos von Arbeitsalltag, Freizeit und Sport. Menschen, die diese biocosmo-Stoffe tragen, wissen, dass Schoeller Textil ihre Verantwortung gegenüber der Umwelt ernst nimmt, und setzen damit ein bewusstes Statement für die Zukunft von Planet Blue.



At Schoeller, biocosmo devotes itself to these sustainable and, where possible, multifunctional, high-tech fabrics.

Within the Schoeller Performance Collection, biocosmo sets a very clear focus: extraordinary sustainable. The biocosmo textiles feature fabrics made with recycled, recyclable and/or biodegradable yarn and a bio-based finishing technology. Uncompromising in terms of function and comfort, these high-quality, durable textiles meet the various needs of modern cosmopolitans, accompanying them in the biocosmos of day-to-day work, leisure and sport. Anyone wearing these biocosmo fabrics knows that Schoeller Textil takes its responsibility toward the environment seriously and thus makes a conscious statement for the future of the blue planet.

Sympatex



- Spezialist für ökologische Funktionsmaterialien
- Specialist for ecological functional materials
- www.sympatex.com



Zeitgleich mit der Performance Days 2020 schließt Sympatex mit dem neuen GRS-zertifizierten Fibre2Fibre-Funktionsartikel BANFF den Textilkreislauf.

Mit dem Funktionstextil BANFF stellt Sympatex ein neues 2-Lagen-Laminat mit einer sortenreinen PES-Oberware aus 100 Prozent Alttextilien vor. Der weiche und leichte Artikel hat einen natürlichen Look und ist bestens geeignet die Segmente Allround und Urban Athleisure.

Dank der zu 100 Prozent recycelbaren, PTFE-freien Sympatex-Membran aus Polyetherester kann der sortenreine, GRS-zertifizierte Artikel am Ende des Produktlebenszyklus erneut problemlos dem Textilkreislauf zugeführt werden. Die Entwicklung des Artikels ist Teil der „Agenda 2020“ von Sympatex mit dem Ziel, den Textilkreislauf so schnell es geht zu schließen. Bis 2030 sollen 100 Prozent der verarbeiteten Rohware für das gesamte Sympatex-Laminatportfolio aus dem geschlossenen Textilkreislauf stammen.



At the same time as Performance Days 2020, Sympatex is closing the textile cycle with the new GRS-certified Fibre2Fibre functional article BANFF.

With the functional textile BANFF, Sympatex presents a new 2-layer laminate with a pure PES upper fabric made of 100 per cent old textiles. The soft and light article has a natural look and is ideally suited for the Allround and Urban Athleisure segments.

Thanks to the 100 per cent recyclable, PTFE-free Sympatex membrane made of polyether/ester, the mono-material GRS-certified article can be returned to the textile cycle at the end of the product life cycle. The development of the article is part of the Sympatex „Agenda 2020“ with the aim of closing the textile cycle as quickly as possible. By 2030, 100 per cent of the raw materials processed for the entire Sympatex laminate portfolio should come from the closed textile cycle.

Technow



- Spezialist für technische Textilien und Stoffe
- Specialist for technical textiles and fabrics
- www.tech-now.ch



Auf Graphenbasis entwickelte Fasern zum Schutz gegen Covid-19.

Der Schweizer Spezialist Technow reagiert auf den Marktbedarf und präsentiert antivirale, nach ISO 18184:2019 zertifizierte Stoffe auf Graphenbasis zur Eindämmung von Infektionen mit dem Coronavirus SARS-CoV-2. Durch das direkte Auftragen von Graphen auf das Garn wird die Viruslast um 99 Prozent verringert. Die Zusammensetzung des getesteten Gewebes bestand zu 90 Prozent aus Rayon, hergestellt aus 2,5 Prozent Graphen und 10 Prozent Elastomer. Diese Anwendung eröffnet neue Dimensionen: Bei Zugabe von nur 2 Prozent Graphen behalten waschbare Stoffe ihre antiviralen Eigenschaften ohne jegliche chemische Behandlung.



Graphene-based fabrics against Covid-19.

Technow has obtained antiviral certification for its graphene-based fabric with focus on Covid-19 (SARS-CoV-2) virus. Textiles developed with the addition of graphene are able to kill the virus deposited on them and guarantees protection against its transmission and contamination. The composition of the fabric tested was 90 per cent rayon made with a 2.5 per cent of graphene and a 10 per cent of elastomer. Since elastomer has no antibacterial properties, the tested fabric can be said to have "a graphene concentration of 2 per cent". The main aspect of this application is in the creation of a yarn which, simply through the addition of graphene and without any type of chemical treatment (antibacterial or antiviral), would allow the production of fabrics which are fully washable and can maintain their thermal and antiviral properties during the time.