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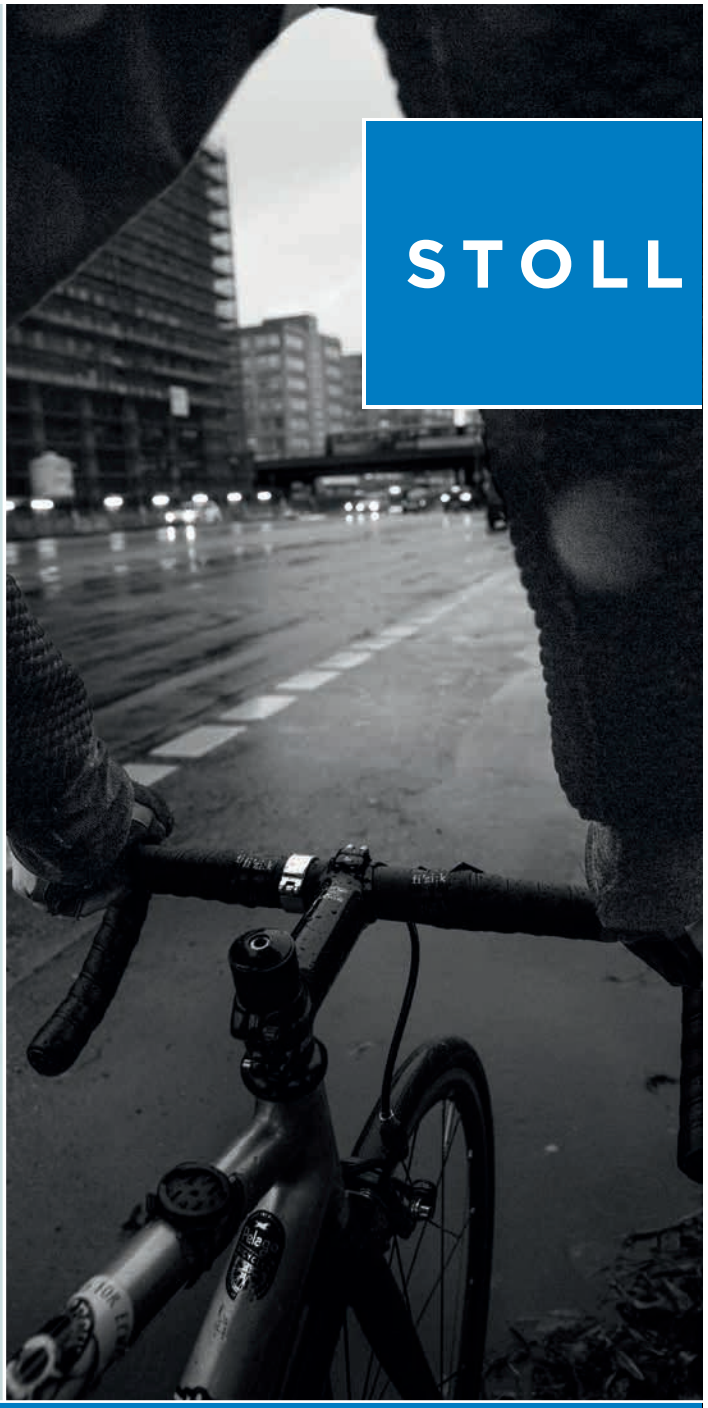
www.textile-network.com



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Vaporisation – one puff and it's gone!

Iris Schlomski, editior-in-chief

Vaporisation means "vanishing into thin air" and is a term currently used to describe the digital transformation of our world, both at work and at home, in which physical products are increasingly being replaced by information (software). In his fascinating book entitled "Vaporized", Robert Tercek cuts to the chase with two succinct quotes right at the start: "Software is eating the world" and "Mobile technology is eating the world" (Marc Andreessen/Venture-Capital, p. 13). Just pause for a moment and think, for example, of the cameras, dictaphones, travel alarms etc that have all been vaporised by the smartphone.

Photo: textile network

In "Vaporized" (published 2015 in English) innovation expert Robert Tercek takes us to the front line of digital transformation. Tercek provides an essential guide to this vaporized world, with proven strategies for those who want to master the process

Nowadays, many corporate functions can largely be emulated by software and before you know it – bang – they will be vaporised. Our world will soon be fully and inevitably shaped by the opportunities offered by the internet and "www" will no longer stand for "worldwide web" but for "whatever, whenever, wherever". Companies with "analogue" products or services will be competing against their flexible, affordable, and purely digital rivals. Whatever can be replaced by software will be replaced by software!

The future is "agile"

Very much in keeping with this trend, this year's Techtextil/Texprocess 2017 was all about digitalisation and Industry 4.0. These central topics also formed the focus of this year's Lectra Fashion 4.0 Event, marking the launch of Fashion PLM 4.0 at the beginning of June in Cestas, near Bordeaux. Lectra's CEO Daniel Harrari recognised the fundamental and far-reaching impact digitalisation would have on industry years ago and has since been aligning his company to the "digital, smart world" with great gusto and spirit. At Lectra's headquarters in Cestas, the more than 100 guests from all over the world, including myself, were bombarded with information about "The power of Cloud"– "The IoT (Internet of Things)" – "Connected products" – "AI (Artificial Intelligence)" – "Industry 4.0" – "PLM 4.0" – "China 2020" and the "Millennials" etc. ... Although it wasn't long before our heads were buzzing, we all came away with a sense of where the digital journey will be taking us!

Digitalisation has already changed consumer behaviour both radically and irrevocably. Customers are fully networked and the likes of google, ebay and amazon already allow us to buy anything and everything quickly, cheaply and through a variety of different distribution channels.

Industry 4.0 is at the same time revolutionising production. The new technologies are opening the door to more flexible working methods as manufacturers endeavour to satisfy the needs of their customers and the modern consumer. Mobile, Cloud, Crowd, Artificial Intelligence – the new technologies and ensuing opportunities are turning every sector of the economy and every industrial system completely on its head. A digital future is currently in the making that is still beyond the limits of our imagination! This is why I warmly recommend taking a copy of "Vaporised" by Robert Tercek away on holiday with you, as it points the way forward to a radically new, software-defined environment.

Here's wishing you a long, hot and thoroughly enjoyable summer!

Yours

Iris Schlomski

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Issue 7-8/2017

KERN-LIEBERS

TEXTILE

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www.kern-liebers-textile.com


Photo: Munich Fabric Start

In September the Munich Fabric Start will present a further trade fair format

MUNICH FABRIC START

A new trade fair for sourcing

Running concurrently with Munich Fabric Start in September some 200 international manufacturing firms will present their range of products, process solutions and services in the field of manufacturing and sourcing in Munich. The range is addressed to European brands and retailers seeking reliable production partners with high quality standards worldwide. The aim here, in particular, is to present new sourcing countries and their potential, their solutions and services. Thanks to the two complementary trade fair formats this complex portfolio now enjoys a joint platform in Munich.

Wolfgang Klinder, Managing Director Munich Fabric Start: "The high demands of the complex and logistically elaborate production and sourcing processes in the textile and fashion sectors necessarily require the synergy of two complementary and synchronised events like Munich Fabric Start as one of the most successful trade fairs for fabrics and additionals and the new Munich Apparel Source specialised in manufacturing and sourcing."

[www.munichfabricstart.com]


Photo: Messe Düsseldorf

1,900 exhibitors from all continents will be in Dusseldorf at the A+A

A+A 2017

It's the individual that counts

From 17 to 20 October everything in Düsseldorf will revolve around a safe, secure and healthy workplace. Trade visitors from all over the world will be meeting at the Düsseldorf Exhibition Centre for A+A, comprising both an international trade fair and a convention. A+A 2017 can already warrant at this stage that it will offer the full range of the latest global trends and products in industrial safety, health promotion in the workplace and safety management at work. The worldwide PPE market currently has a volume of around 18 billion Euro. 38 per cent of this figure (i.e. EUR 5.8 billion) accounts for the markets of the European Union, including 1.8 billion Euro in Germany alone. Experts are expecting the market to grow even further. A+A 2015 attracted 65,000 trade visitors from over 80 countries, with an international share of around 30 per cent.

[www.aplusa.de]

AFRICA SOURCING & FASHION WEEK

Premières in Addis Abeba

Africa's main trade show for the cotton, textile, apparel, home and technology industry is entering the next level.

From 3 to 6 October 2017, the third Africa Sourcing & Fashion Week in Addis Ababa will welcome international providers and buyers and will be cooperating for the first time with Messe Frankfurt. As part of the partnership, the three new trade fair brands Texworld Addis Abeba, Apparel Sourcing Addis Abeba and Texprocess Addis Abeba will be launched within the Africa Sourcing & Fashion Week. The event trio in Addis Abeba's Millennium Hall will present over 250 international exhibitors from 25 countries. The largest exhibiting nations coming to Ethiopia include Turkey, the United Arabic Emirates, Tanzania, Sri Lanka, Bangladesh, India, Italy and Germany. Apparel fabrics, leather goods, fashion and fashionable accessories will be the main items on display. Companies like Almeda Textile, Atraco, Baykar Tekstil, Else Textile, Indochina Textile, Maa Garment, YKK have already confirmed their participation. Home and household textile providers will also be presented.

Machine manufacturers for garment production, CAD/CAM systems, printers, inks and accessories will have a strong presence, too. Brother Industries, FK Group and Groz-Beckert have already confirmed their participation as well as Has Group Turkey, Juki Corporation, Pegasus Sewing Machines, Silver Star, Veit.

Parallel to the fair there will be a comprehensive programme, including a fashion show, lecture series, a trend area and a matchmaking platform.

[www.messefrankfurt.com]

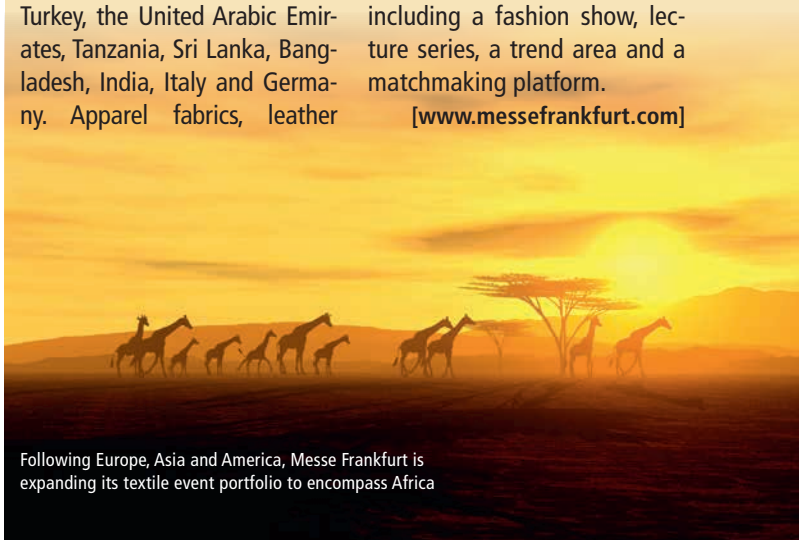


Photo: fotolia

Following Europe, Asia and America, Messe Frankfurt is expanding its textile event portfolio to encompass Africa

Techtextil/Texprocess 2017

Gauging the mood

What a week! At this year's twin fairs Techtextil/Texprocess, we were so busy we had little time to come up for air. But did the exhibitors come away with the same feeling? And which of the many highlights impressed the visitors the most? textile network went in search of answers. We particularly wanted to know which lasting memories the companies would take home from Techtextil/Texprocess and which highlights were in greatest demand. Starting with the best news first, we received positive responses right across the board!

"Texprocess will go down in Gerber Technology's trade-fair history as a resounding success," stated Yvonne Heinen-Foudeh. Stephan Gunold of Gunold GmbH also described Texprocess 2017 as the most successful event thus far "both in terms of the number of visitors and their countries of origin". This view was shared by a great many exhibitors. "A good atmosphere from the first day to the last," said Sylke Mikolajczak of Delius. Dr.-Ing Oliver Maetschke of Ettlin concurred, labelling Techtextil as "the hub of the industry!".

Feelings among exhibitors are still somewhat mixed regarding the benefits of having the twin-fair format. Whereas Joachim Rees of Multiplot described the concept as "super with both fairs making a perfect fit", others could barely see "any common ground" between them. Some long-standing exhibitors, including Sabine Wannagat of Lindauer Dornier, would prefer the event to be "pitched in a similar way to before". Even so, many appreciate the organiser's ambition to provide the audience with a view of the bigger picture. Jen Sutton of Heathcoat Fabrics Limited: "We have attended Techtextil multiple times, and we always leave feeling eager for the next, and the integration of Texprocess gives a wider audience, with more variety and further opportunity". After all, the broader spectrum of exhibitors and products "attracts buyers from overseas and perhaps encourages some to look into fields beyond their current sphere of interest," stated Stephan Gunold. Like Gunold, many companies have already revealed their intention to exhibit in Frankfurt again in 2019. The participants, particularly at Techtextil, believe that the "three-day duration" is sufficient as the "influx of visitors dropped sharply on the Thursday afternoon," stated Eric Zorn of Olbo & Mehler Tex.

How we work in the future: Plenty of positive feedback was showered upon Human Solutions for its Digital Fashion Board

Which highlights were in demand?

The topic of digitalisation aroused a lot of interest among visitors. Be it for digital textile printing and the options to print on different materials such as cotton, fibre glass, polyamide etc. (Mimaki/Multiplot) or the networking of design, pattern creation and cutting through to the sewing shop with a cut ticket and labelling system (Gerber Technology). Plenty of positive feedback was showered upon Human Solutions for its Digital Fashion Board, which was exhibited in the context of product development and showroom solutions. Much interest was also generated by the innovative woven materials. Olbo & Mehler received much attention for its geotextiles, its heat-resistant and flame-retardant materials and its reinforced woven textile for construction purposes. Marketing Manager, Erich Zorn, also noted that the firm's ballistic materials for bulletproof applications had attracted many visitors. Kufner's THS textile heating technology, likewise, received much attention. After making inroads into the realms of fashion, church pews and heated artificial turf, the company, according to CEO Ulrich Sogl, "sees itself moving into the automotive field." All in all, "The fair is a perfect platform for presenting oneself, unveiling innovations, forging new contacts, networking and gathering new ideas," concluded Outlast Europe's President Martin Bentz. And how right he is. In fact, we couldn't have put it better ourselves! The next Techtextil/Texprocress in Frankfurt a.M. takes place from 14 to 17 May 2019.

[www.techtextil.com]
[www.texprocess.de]
[Iris Schlomski]

Multiplot presented innovations in digital textile printing

"Perspectives 2030"

Too rapid advances in textile industry!

Textile future arrives sooner than thought! The textile sector should get ready

Just five years after the German FKT research board (Forschungskuratorium Textil) published its "Perspectives 2025" strategy paper, it is already becoming clear not only to Germany's textile sector that several industry forecasts anticipated for the middle of the next decade, are in fact already well on their way. Rapid advances in technology and materials are exacerbating the need for a forecast up to and beyond 2030 that preferably extends beyond national borders. How quickly can we expect the vision of the future to become reality? The answer: sooner than anticipated. The following four examples provide a rough outline of what the imminent future holds for the textile industry.

3D textile printing:
At ITMA 2015, 3D textile printing was mostly a talking point just for backyard micro companies. Even so, the managing director of one of Germany's biggest textile machinery makers, predicted: "This topic will start absorbing a lot of our attention before the end of the decade." And true enough: Printed running shoes, skirts, dresses and, as announced by an Airbus spokesperson, also fibre composite plastic brackets containing staple fibres in aeroplanes, are fast becoming reality. Breaking news: An embroidery machine has just appeared in the UK as a 3D printer.

"Perspectives 2025" gives direction to all entrepreneurs involved in textiles as they collaborate with experts and students working in interdisciplinary contexts and people who are shaping our future. However, in a world of rapid change, far-reaching technological transformations and increasing interdisciplinary dependencies, it is all the more important to continue writing the future to secure the long-term survival of today's businesses.

FKT-Chef Dr. Klaus Jansen

Futurologist Thomas Strobel

Fibre-sensory wound monitoring:
Several years ago, "Perspectives 2025" identified an area requiring significant action and research. Since then, textile researchers in Dresden – and it appears – also in Wales, are working on methods for monitoring the healing of wounds "from the inside out". The project at Swansea University is known as "Smart Bandages" and aims to employ a 3D printer to produce dressings with sensors in line with the patient's individual needs.

Luminous wallpaper:
Glowing, colour-changing wallpaper is another example of how seemingly futuristic ideas become reality much sooner than expected, albeit on a smaller scale. This hypothetical, yet innovative idea has now been transformed into a marketable product – featuring as one of the highlights at the last Heimtextil trade fair in Frankfurt, Germany, and paving the way for striking textile wall displays.

Smart sportswear:
A similar pace in fibre development is being witnessed in the sports and fitness sector. Smart sportswear is already available, fitted with sensors and complemented with apps and additional performance features such as data monitoring and training support. This suggests that traditional textile manufacturers may well lose their hold on this segment of the apparel industry. They may instead become suppliers to solution providers, whose new business models in the fitness, wellbeing and health sectors market the perceivable benefits for the customer as a package and/or subscription.

Forecasts provide new angle

In a textile network interview with Dr. Klaus Jansen, Managing Director of the FKT, and "futurologist" Thomas Strobel, who both penned "Perspectives 2025", it soon became clear that the work being carried out by today's innovation and investment projects in preparing the ground for the future will continue well into the 2030s. In this context, Mr Strobel comments: "Research and development projects in the textiles field often have a lead time of at least ten years. This means that topics identified today probably won't appear in an industrial context until the

Five new questions

The two interviewees have defined five priorities for such a forecast:

1. New business models with marked benefits for customers, using textiles as functional enablers.
2. Smart textile solutions for clothing, residential contexts and the workplace.
3. Production of textiles that incorporate the principles of personalisation, additive manufacturing methods and local production.
4. Textile contributions for the mobility and transportation solutions of tomorrow, reflecting a diversity of form factors beyond our customary perception of the car.
5. Textiles as an integral part of sustainable construction – beyond textile-reinforced concrete which is already in use.

mid to late-2020s, possibly even taking another five to ten years to become commercially available." Even so, given that many visions are on the home straight within just a few years, whilst new technical opportunities breed new ideas and social necessities require forward-thinking and action, it is important to reflect upon and revise the impact such projects are likely to have on today's industry, moving forward. Besides old-school approaches, new influences have to be taken into account such as digitalisation, the internet of things (IoT), Industry 4.0 and networking. This may involve new business models, improved teamwork between companies and science as well as networking strategies that create value and help distribute profits more fairly. Now that so many aspects of industry are being digitalised, it is important to examine both the opportunities they bring for start-ups as well as the inherent risks for existing production set-ups that are resistant to change.

Glowing wallpaper and smart clothing illustrate the dynamism of the marketplace, arising, above all, from the integration of functions and the internet of things. This, says Jansen, has resulted in the "urgent need to continue writing the future of the textile industry well beyond the year 2025. I would recommend making a forecast beyond 2030 very soon, preferably not only on a German but also a European level. This would help to identify today targeted research approaches for the customer requirements of tomorrow."

[Hans-Werner Oertel]

The Fespa 2017 took place in Hamburg

Fespa

Innovations in digital textile printing

Fespa, the leading European fair for screen and digital printing, opened its doors from 8 to 12 May 2017 in Hamburg. Taking place at exactly the same time as twin fairs Techtextil/Texprocess in Frankfurt, it not only focused on wide-format printing but also featured several innovations in digital textile printing. Textile network went to take a closer look.

The printer manufacturers primarily presented solutions for the large-format advertising sector and applications such as flags, banners, shop design and retail/POS, that is, printing systems for direct sublimation printing on polyester fabrics in widths of up to 5 metres. The exhibits included, for example, the new Agfa 3.2m-wide, six-colour Avinci DX3200 sublimation printer with Konika-Minolta printheads. Supplied with Agfa's own inks and its own Asanti RIP software, this printer provides the market with another all-round system for wide-format textile printing. Durst and ATP showcased direct printing solutions that use sublimation inks for completely new formats in widths up to 5 metres. Whereas Durst has based its Rhotex 500 on the tried-and-trusted Rhotex 325, ATP has built an inline fixing system with integrated calender into its 5-metre-wide DFP2000 4-colour printer. This demonstrates that digital textile printing has finally arrived in the field of large-format printing, and is here to stay. MS unveiled the Impress series which is designed with printing systems up to 320cm in width and Kyocera printheads. This is the first product to emerge from the collaboration between those companies organised within the Dover Group which, among others, is composed of MS (printers), JK-Group (inks) and Caldera (RIP software).

Swimwear and Sportswear

New printers designed specifically for textile applications were presented by Efi-Reggiani. The Renoir Flexy has a Kyocera printhead and is suitable for the industrial scale printing of flexible materials such as jersey with Lycra for swimwear and sportswear. The special fabric feed and a thermoplastic adhesion device hold the fabric in place to prevent creasing and distortions during the printing process.

Aleph is an Italian manufacturer of industrial textile printing systems and a newcomer to the market: the printers from the LaForte series come with Kyocera printheads and are designed both for industrial transfer printing and industrial direct printing on a wide variety of different textiles from fashion and home textiles to sports fabrics. Printing takes place with 4, 6 or 8 colours (reactive, acid, pigment, sublimation and dispersion inks).

Mimaki revealed the new TX300P hybrid printer as a particularly flexible solution, which allows both sublimation and pigment inks to be processed on one printer at the same time without the need to change the

Photo: Stephan Geitel

Mimaki revealed the new TX300P hybrid printer as a particularly flexible solution

The next Fespa is scheduled to run in Berlin from 15 to 18 May 2018 and will surely have a stronger focus on textile printing solutions. Digital textile printing is at home both at Fespa (digital) and at ITMA (textiles). There is general consensus that staging a fair devoted exclusively to this one area is currently unfeasible. Visitors, therefore, have no alternative than to make frequent visits to these fairs to keep pace with the breath-taking speed with which this dynamic sector is developing.

Photo: pixabay

Photo: Stephan Geitel

Avinci DX3200 by Agfa is a soft signage dye sublimation roll-to-roll printer

Inks

Improved dispersion inks for outdoor applications were the order of the day among ink manufacturers. Accordingly, a division of the JK Group has developed Kiian inks with high levels of light and sublimation fastness, specifically for flag manufacturers for whom post-print washes have become superfluous. J-Teck3 (also part of the JK Group) presented its new range of J-Tex P-E (Epson heads) and J-Tex P-K (Kyocera heads) pigment inks, designed for the textile printing industry and a diversity of different fibre blends.

Software

Being a new member of the Dover Group, Caldera unveiled the Textilepro RIP solution for both advertising printing and industrial textile printers. A major focus was on integrating Step&Repeat functions, the RGB colour space, and workflow management for industrial textile applications. Other interesting textile functions offered by RIP software were demonstrated by the Spanish company Inedit. These include, for example, photoshop plugins for textile designers, that show colours in the actual printer gamut or allow colour separations in the design process, thus creating a closer link between the design and production processes. The Swiss RIP manufacturer Ergo Soft has added several functions to the XV version it released last year, such as the ability to convert RGB profiles as well as a 64-bit capability. SAi offered its RIP software as a subscription, the duration of which is determined by the customer.

inks. Given that the fixing conditions for both ink systems are almost identical, the user can print cotton, polyester and polyester blends, e.g. for home textiles, on one machine.

Being that Fespa revolves almost entirely around the world of advertising, it is hardly surprising that the exhibitors of printing media mainly focused on advertising textiles. But Krea, for example, showed a whole host of innovative interior design solutions as well as ideas for outdoor areas. Pongs revealed its textiles for rooms requiring special acoustics, lending acoustic room partitions completely new designs. However, visitors going in search of textile media other than polyester, struggled to find what they were looking for in Hamburg. Only the UK company Premier Textiles offered fabrics made from cotton, linen, silk and viscose, all of which are already pre-treated for reactive, acid, and pigment printing.

An important medium for digital textile printing is transfer paper for sublimation printing. French manufacturer Guyenne Papier has introduced a new addition to the market, which is suitable for home textiles, fashion and sportswear printing on all high-speed industrial printers. Felix Schoeller has also stepped inside the sublimation ring by offering the S-Race microporous sublimation paper. The papers designed for transfer printing are characterised by particularly short drying and transfer times, as well as good dimensional stability.

Ready-to-wear items such as shirts and headgear can also be transfer printed. Exhibiting at Colgraphix's stand, Vapor Apparel showed its range of Vapor-Solar sublimation textiles, which are characterised by high levels of colour-fastness and a large colour space. Elsewhere, manufacturers were offering printing systems for the printing of made-up T-shirts. Kornit rises above the crowd with the Vulcan which is designed for industrial printing volumes of around 250 units/hour in seven colours and on light or dark ground colours.

[www.fespa.com]
[Stephan Geitel]

Techtextil/Texprocess 2017

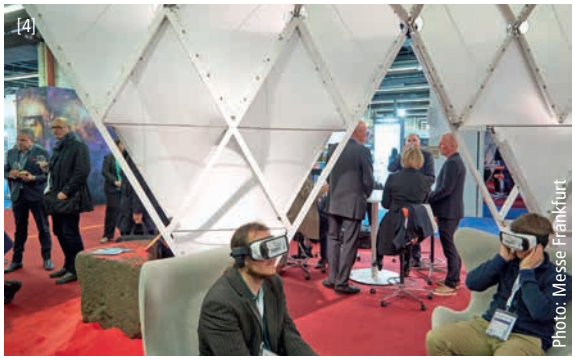
Trade fairs fully focused on future prospects

The Frankfurt twin trade fairs, Techtextil and Texprocess, have once again lived up to their reputation as an innovation platform. 1,789 exhibitors (1,662 in 2015), special exhibitions and associated events provided deep insights into the world of technical textiles, textile production and applications.


[1]
Photo: Messe Frankfurt


[2]
Photo: Messe Frankfurt Exhibition GmbH / Jean-Luc Valentin


[3]
Photo: Sabine Anton-Katzenbach


[4]
Photo: Messe Frankfurt


[6]
Photo: Sabine Anton-Katzenbach

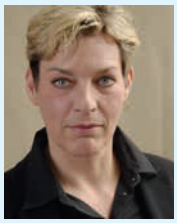
[5]
Photo: Iris Schlomski

The early days when Techtextil occupied one hall of the Frankfurt Messe exhibition site are long gone – the leading international trade fair for technical textiles and non-wovens left its childhood behind many years ago. From 9 to 12 May, Frankfurt Messe recorded some 47,500 visitors (41,826 in 2015), an increase of 13.5 percent over the previous event. Together with Texprocess, which was added several years ago and is devoted to the processing of textile and flexible materials, the twin fairs now fill four halls. And within these four halls can be found the entire innovative force of the textile production and processing industry. The latest developments for a vast range of technical applications were waiting to be discovered at every stand in the fair. Suppliers of smart and high-tech textiles for industry, mobility, and architecture and construction were particularly strongly represented this year.

Living in Space

A major attraction, and a common thread for many of the exhibitors, was the special exhibition 'Living in Space'. This was developed with the collaboration of the European Space Agency (ESA) and the German Aerospace Centre (DLR) and was opened by ESA astronaut Dr Reinhold Ewald. Dr Ewald also spoke at the opening press conference, where amongst

"The innovative force emanating from the exhibitors threatened to overwhelm anyone who just wanted a general overview of the textile industry. They would feel as if they'd been thrown into an old proverb – unable to see the wood for the trees. Fortunately, the organisers at Frankfurt Messe provided oases for such guests with exhibitions and demonstrations, national pavilions and other events."



Sabine Anton-Katzenbach

[7]

Photo: Iris Schlomski

other things he discussed the significance of high-performance textile materials in space travel. These play a crucial role not only in reducing the weight of space capsules but also in protecting the astronauts, for example through their use in space suits. To illustrate the diversity of different performance options, Messe Frankfurt set up the 'Living in Space' exhibition in Hall 6.1. Here, visitors were taken on a virtual-reality journey to Mars, where they could wonder at the materials and products suitable for use in space or draw inspiration from the 'Space Habitat', designed by top architect Ben van Berkel.

The cosmic theme not only thrilled the visitors but was also taken up by various exhibitors, who interpreted it in many very different ways. Machine engineers Brückner Trockentechnik (from Leonberg in southwest Germany), for instance, had issued invitations to a presentation at their stand by Prof. Dr. Dr.-Ing Ernst Messerschmidt. The former astronaut, who as one of the first Germans in space took part in a Space Shuttle mission, spoke on the subject 'From space-age to everyday' in which he mapped out different developments in space travel that opened up new value-added supply chains in other sectors of the economy. He cited as an example the Hydrojacket, developed for firefighting in space, that is required to withstand and protect the user from extreme differences in temperature: in orbit, temperatures on the sun-exposed side reach 150°C, whereas in the shade they fall to -150°C. In a glimpse of the future, he highlighted further applications for technical textiles. Research is being conducted, for example, into textile shells for accommodation modules in space and for deceleration equipment to reduce the speed of spacecraft as they enter planetary atmosphere. Solar sails for a Mars mission are also on the space exploration agenda.

Working at cloud level

New territory could be discovered at the exhibition site even without travelling to the moon; with the focus on Industry 4.0, however, the action was at cloud level. Cloud and internet allow production chains to be integrated, as illustrated by the 'Digital Textile Micro-Factory' that was presented for the first time. The concept, developed by the Denkendorf-based German Institute of Textile and Fibre Research and reputable companies, set out a fully networked clothing industry. Visitors could follow a single-item production system extending from design through digital printing to automatic cutting and making up. At the end, they could hold the finished item in their hands. Veit (of Landsberg) and Prym, from Stolberg, have also embarked on the process of networking their machines with other systems. For each different process, the work parameters are monitored and automatically adjusted to maintain consistent production quality. Display screens provide transparency for operating staff with regard to activities and work tasks. The path to greater flexibility in manufacturing and mass production, with ever smaller batch sizes, is thus becoming a reality.

[1] Hall 3 - Techtextil's heart is beating ever more strongly!

[2] Textile-based pH indicators seeking creative applications

[3] Covestro has developed base materials onto which switching circuits can be printed – for example, for clothing carrying LED lighting

[4] An idea of how buildings can function in the universe ... Prototype II

[5] Microfactory

[6] Regina Brückner and Prof. Dr. Dr. Messerschmidt

[7] Living in Space – special area for high-performance textile materials for use in space travel

When do textiles think?

After a visit to Techtextil/Texprocess, nobody could be in any doubt that textiles are becoming ever smarter. Illumination and heating, and the collection of vital parameters and of environmental conditions, is being integrated into textiles and creating unforeseen application possibilities. In outdoor jackets, conspicuous LEDs are ensuring greater visibility and facilitating the production of more lightweight, wearable light-sources (Forster Rohner). In cold or draughty environments, versatile heating pads are providing a cosy warmth (Kufner Textile Group, Munich). Sensors fitted into gloves are used to warn of a sudden change in pH value (Amann Innovation Lab, Bönnigheim). By also using smart textiles to measure pulse, heart rate and blood pressure, this can help facilitate independent living. The list of such examples gets longer and longer every year and demonstrates that electronic textiles are ushering in a new age. Techtextil offers them not only an appropriate space in which to be presented but also an innovative environment in which the creative ideas of tomorrow are born. This is one of the many reasons why a visit to the twin Frankfurt fairs will more than pay for itself.

[Sabine Anton-Katzenbach]

Techtextil/Texprocess 2017

A young perspective

How is the Techtextil/Texprocess received by the younger generation? textile network asked the young Berlin trend agency Sogush, aka Olivia Rudschewski and Susanne Berngruber, to explore the trade fair and let us know what they thought.

The unanimous verdict: "It's a perfect place for networking, meeting different people from different sectors, exchanging ideas, getting inspired, spotting new trends and also seeing how exhibitors approach the challenge of product presentation at fairs."
Continuing, they stated: "The one thing that immediately caught our attention was the contrast of mostly elegantly dressed men in suits and young fashionable women with a flair of fashion school. It's quite extraordinary how many students the fair seems to attract, judging from the surprising number of young faces we saw. Many came to gather information and learn about the industry."

Digitalisation is omnipresent

The textile and apparel industry has arrived in the digital age with both feet and is taking full advantage of it. From digital textile printing and digital coating technologies to fully digitalised production processes – the textile industry is undoubtedly embracing digitalisation as was reflected in the new trends and developments. As a special event, the fair even included a live demonstration of a completely digitalised production chain.
The Human Solutions Group showcased the already far-reaching possibilities of digital applications. Two particular highlights included the Digital Fashion Board and the Digital Show Room. The Digital Fashion Board replaces the traditional analogue mood board and seamlessly connects product development and 3D visualisation with data from PLM systems. This allows for a streamlined process of quickly finding the right prototype and making important decisions based on a digital model without having to sew a single piece of material.
The Digital Show Room overcomes geographical boundaries and provides a digital space for people collaboratively planning, reviewing and perfecting next season's collection. 3D glasses make it possible to virtually fit and display finished designs on 3D models – anywhere in the world.

Cosmic inspiration from outer space

A lot of excitement revolved around the special exhibition "Living in Space" displaying a wide range of technical textile applications for possible uses in aerospace. It was organised in collaboration with the European Space Agency (ESA) and the German Aerospace Center (DLR). Products covered every aspect essential for life in space, from ultra-light and robust architecture and exemplary implementations for space transportation to high-tech clothing for astronauts. The exhibition was intricately and interactively conceptualised and realised.

[1] State secretary Dirk Wiese (on the right) with the winners of the Texprocess Innovation Awards 2017. In addition to the Awards, the winners were also presented with a year's free subscription to textile network

[2] DDL-9000C by Juki – adjusting and saving thread tension and stitch length via touchscreen directly on the machine

[3] Innovation dressed to impress: Forster Rohner Textile Innovation

Hall 6 – wholly impressive

Particularly memorable was the exhibition of finishing machines and systems in Hall 6. At first glance, one could be forgiven for thinking there was nothing new on show. However, closer inspection revealed technological improvements in efficiency, quality and productivity.
In some machines, these improvements and innovations are so clever, they are almost hidden to the naked eye and until explained by an expert. The Veit Group, for example, reintroduced their optimised shirt finisher with a new and extended set of functions providing an even more refined finishing quality. Similarly, Veit's blower topper improves form and flexibility of trousers. In addition to pant finishing, the generation of pressing machines also achieves high-quality results with men's and women's ou-

Innovation for the double take – the new 8326 shirt finisher by Veit

terwear while being extremely efficient and easy to operate.

World firsts in Hall 5

Hall 5 presented a number of sewing machine innovations. Pfaff, for instance, introduced the world's first "curved version" waistband machine especially designed for fashionable women's jeans, now able to handle both straight and curved seam sections. At the heart of this new machine is an innovative puller system combined with an intelligent software programme. The different sewing sequences (straight and curved) can be selected with a knee switch. Pfaff's "curved version" thus makes it possible to create perfectly shaped waistbands in one single process with one single machine.

Equally impressive were the products selected for the Texprocess Innovation Awards 2017. The four winners chosen by an expert panel were showcased at a dedicated exhibition. The prize for "new technology" went to the Swedish company Coloreel for its ground-breaking approach that enables the dyeing of a white ground thread during the embroidery process, creating unique and colourful results.

Joint prize winner was Juki's debut sewing machine featuring a touchscreen and/or corresponding app for adjusting and saving settings such as thread tension and stitch length. Also included in the same category was industrial sewing machine specialist Xi'an Typical Europe with its Vetron Trace, a new technology for "pedal-less" machine operation. Dürkopp Adler's online monitoring system for industrial production won the award for "new process". The system is able to monitor the productivity and status of a network of up to 1,500 sewing machines and provides real-time data, amongst other functions.

Looking at the Texprocess and Techtextil programme, including forums, panel discussions and the topics covered by them, as well as the demand and interest demonstrated by visitors, it has become obvious once again, how much fair visitors value real-life networking opportunities beyond online connections.

Our verdict

A few exhibitors left some room for aesthetic improvement when it comes to product display. Especially considering the technical nature of their otherwise very interesting innovations, visual presentation is particularly important for visitors, even if it is as simple as an eye-catching pattern to attract people's attention. Foster Rohner Textile Innovation is a model example here. They clearly communicate their message with no room for ambiguity: they are into e-broidery technology and the fusion of light and fabrics.

Another way to draw attention is colour. The Japanese corporation Haso (Hall 6, Stand A62), for example, presented an entire collection to advertise their Micro Fin Dry textiles. Using this extremely lightweight thermal textile, providing warmth in winter and coolness in summer, Haso has designed an underwear and sportswear collection in pastel colours. A true show-stopper that has everyone wanting to touch and learn about their products.

It is the simple things like colours, unusual patterns or interactive experiences that attract visitors and stick in their minds – ultimately influencing a brand's or company's success.

What stuck with us: We are surprised and very impressed with the scope of technical textiles and the role they play in smart textiles and design solutions – even if their use is subtle – from fabrics with integrated audio sensors and temperature regulating surfaces to 3D visualisation. Technical textiles serve as catalysts, allow for process optimisations and high-tech process applications, which would simply not be achievable through design and aesthetic approaches alone.

[www.sogush.com]
[Olivia Rudschewski & Susanne Berngruber]

[4] Sogush came to the Texprocess and Techtextil fairs after being invited to a panel discussion organised by textile network in cooperation with the VDMD. Pictured here: the interviewees on wednesday afternoon and panel members.

[5] The Digital Fashion Board is the next generation mood board

[6] Susanne Berngruber (on the left) und Olivia Rudschewski (on the right) are together Sogush

"We're here at the Texprocess and Techtextil fairs because we were invited to a panel discussion organised by textile network in cooperation with the VDMD. In preparation for our talk we were asked what we associate with the term technical textiles. The first thing that comes to mind is the sports industry, which has embraced the advantages of smart textiles. The entire exercise and sportswear sector, especially regarding footwear/trainers, has dramatically changed over the last 15 years. Secondly, we also think about the connection between technical textiles and environmental sustainability. Adidas, for instance, has launched the Parley initiative to stop using plastics in shoes. Using plastic waste recovered from the sea in shoes, creating functional products. We think this sets a great example for tackling current sustainability and environmental issues with smart textiles."

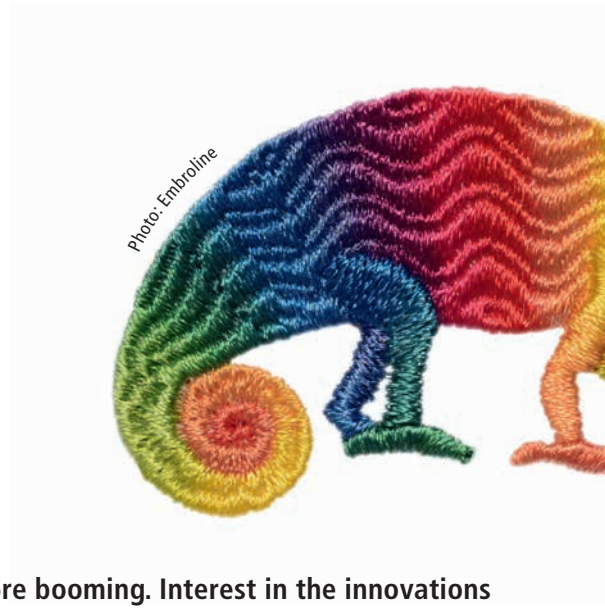


Photo: Embroline

Techtextil/Texprocess 2017

Huge interest in embroidery

Embroidery is currently highly fashionable and the industry is therefore booming. Interest in the innovations exhibited by manufacturers of embroidery machines, yarns and accessories at the twin trade fairs Texprocess/ Techtextil 2017 was palpably higher than ever.

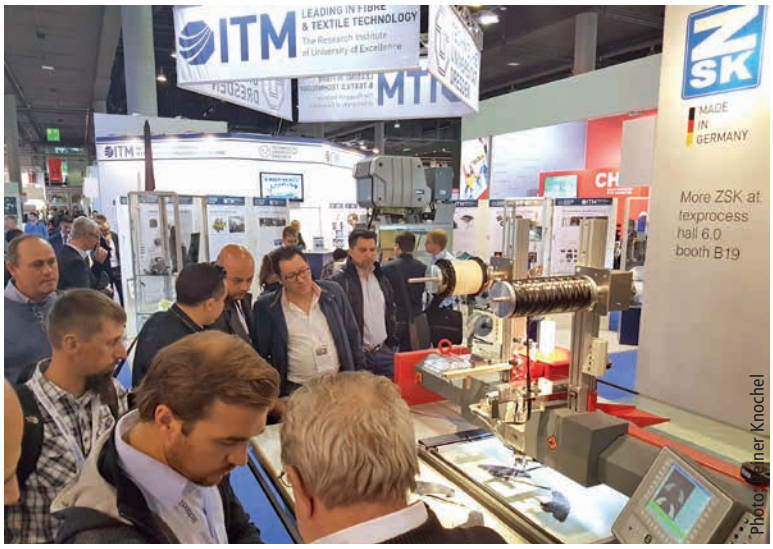


Photo: Rainer Knochel

JGW0100 technology from ZSK (carbon fibres)

Anyone who is anyone in the textile and clothing industry was gathering information in Frankfurt about new ways of embroidering and embellishing all kinds of textiles and materials. Alongside embroidery businesses, it was brand producers, designers and product developers who were increasingly to be found at the stands – and not only from the clothing industry but also from the automotive, sports and medical sectors. Presentations of embroidery machines were not limited to a single hall or to just one of the fairs: some suppliers such as ZSK and Tajima (Filacon) had stands both at Texprocess in Hall 6.0 and at Techtextil in Hall 3.0. It was a logistical master stroke both for the exhibitors and for the visitors. In embroidery, the focus at both trade fairs fell on two particular areas. The first was 'smart embroidery' – that is, ways of using embroidery to produce light, to conduct a current or to attract attention or offer a functional benefit in some other way. The second was a focus on the topic of 'mass customisation', meaning opportunities for mass production tailored to individual customers, which is seeing ever increasing levels of demand in the fields of embroidery and textile finishing. The Innovation Award was presented at the very opening of Texprocess and here, too, one of the prizes went to an eyecatching development from the world of embroidery. The 'Embroline by Coloreel' system invented in Sweden by Joakim Staberg allows exciting visual effects to be produced with embroidery – in achieving gradations of colour, for example, that are difficult to produce at present. For this purpose, a white polyester base thread is coloured on the embroidery machine itself in the widest range of colours, opening up completely new options in terms of logistics and design. Another magnet for attracting the public was the embroidered art and charity project 'Gardening the Future', created by ZSK from Krefeld, Germany, and Ercigoj Art from Slovenia. The 1911 painting 'Blue Horse 1' by the expressionist Franz Marc was reinterpreted in embroidery by Ercigoj Art. Digitisation of the pattern alone required several months, before the picture could be embroidered for the first time in 41 colours and with over a million stitches. The glow of the viscose embroidery yarn that was used, and the stitches punched laboriously by hand, furnish the embroidered work of art with depth and grace from every angle. Alongside many more new machinery and software developments in the field of single- and multi-head embroidery, ZSK also vividly demonstrated, in association

> All of the important manufacturers of embroidery machines, software, yarns and accessories presented their innovations in Frankfurt.

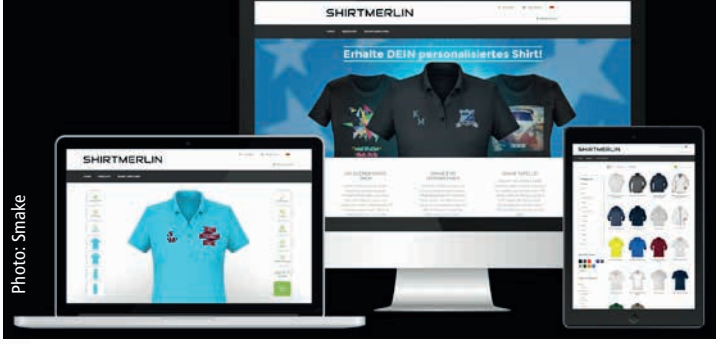


Photo: Smake

Smake E-Commerce graphic

Embroidered colour gradations with Embroline technology

with Smake GmbH from Castrop-Rauxel, the opportunities that are present in the area of mass customisation. The experts at Smake offer customers modules tailored to their requirements for their online shopping systems, so that the individual organisational and production steps required for their embroidery and print orders can be optimised.

Innovations to delight

In PulseID, Pulse Microsystems offers a hands-free solution that works within seconds for mass personalisation, using the customer's existing ordering system. PulseID is designed to save time and money and to prevent manual errors. A pattern is read in with a barcode; then, using automatic colour and needle assignment, it is faultlessly allocated to the correct machine.

With the Fortron F 8154, Stickmaschine.de is also offering a 'personalised mass production' solution. This machine works with 54 needles (and hence colours) with automatic colour assignment, and is thus highly suited to linking with online shops.

Amongst the products demonstrated by Tajima was the newest generation of laser bridges from Italian manufacturer Seit. Highly precise combinations of embroidery and laser technology become possible, as does the ability to laser several layers of a wide range of materials – without causing damage to the other layers. This precision impressed many visitors not only from the fashion industry but also from the automotive sector. For these target groups in particular, and for other applications using leather, Alcantara or similarly demanding materials, the 'PAX series' from Tajima, in collaboration with the Italian studio Auriga, will undoubtedly be of interest. A combination of two multi-needle heads – one to embroider the heavy materials, the other to perforate these materials or leathers – allows a wide range of creative and technical design options without warpage or faulty positioning.

What's new in yarns?

There are innovations in the field of embroidery yarns, too, principally in relation to technical developments. Amann of Bönnigheim, for example, introduced the latest generation of silver-coated sewing and embroidery yarns with its Silver-tech 120 product. This specialist thread has applications in smart textiles, anti-bacterial textiles and in textiles with electrostatic conductivity properties.

Another supplier of conductive yarns is Imbut, based in Greiz. In collaboration with the Institute for Special Textiles and Flexible materials (TITV Greiz) it has developed Elitex, a highly conductive polyamide yarn with a coating of pure silver. The yarn is available in different gauges and designs including insulated yarns and elastic yarn for various applications in embroidery, weaving and knitting.

Coinciding neatly with its 90th anniversary, Gunold presented 'Cry', a highly innovative reflective yarn. It is available in two thicknesses and is suitable both for embroidery and for decorative seams.

Now it can only be hoped that the upward trend in the textile and embroidery sector continues; already, many take an optimistic view of the future and are excited to see what will develop from the ideas presented in Frankfurt.

[Reiner Knochel]

Internet addresses of companies mentioned in the article:

www.tajima.de | www.zsk.de | www.coloreel.com | www.ercigojart.com | www.smake.company | www.pulsemicro.com | www.stickmaschine.de | www.seitelettronica.it | www.tajima.com | www.studioauriga.it | www.frti.ch | www.amann.com | www.imbut.de | www.gunold.de

CALENDAR OF EVENTS

Milano Unica
07/11/17 - 07/13/17 | Milan
www.milanounica.it

CPM – Collection Premiere Moscow
08/30/17 - 09/02/17 | Moscow
www.cpm-moscow.com

Bread and Butter 2017 by Zalando
09/01/17 - 09/03/17 | Berlin
www.breadandbutter.com

Munich Fabric Start
09/05/17 - 09/07/17 | Munich
www.munichfabricstart.com

Techtextil India
09/13/17 - 09/15/17 | Mumbai
www.techtextil-india.in.messefrankfurt.com

56. Chemiefasertagung Dornbirn-MFC
09/13/17 - 09/15/17 | Dornbirn
www.dornbirn-mfc.com

Première Vision Paris
09/19/17 - 09/21/17 | Paris
www.premierevision.com

Composites Europe
09/19/17 - 09/21/17 | Stuttgart
www.composites-europe.com

FILO – Int. Fachmesse für Web- und Wirkgarne
09/27/17 - 09/28/17 | Milan
www.filo.it

A+A
10/17/17 - 10/20/17 | Dusseldorf
www.aplusa.de

32. Hofer Vliesstofftage
11/08/17 - 11/09/17 | Hof
www.hofer-vliesstofftage.de

Int. Conference on Textile Coating and Laminating
11/08/17 - 11/09/17 | Berlin
www.intnews.com/TCL

Since 1992, Oeko-Tex has followed its own, timeless mission of supporting companies in the implementation of greater sustainability

Photo: © Damircrudic / Getty Images

"Toxic substances in the wardrobe" – in the early 1990s, the textile industry acknowledged the need to change its approach to chemicals

Photo: © Winona van Alstyne / EyeEm / Getty Images

Jubilee

25 years of Oeko-Tex

"Confidence" is timeless and one of the most important factors in making buying decisions. Just in time for its 25th anniversary, the Oeko-Tex Association launched the „Confidence 2025" campaign, which expresses the meaning of the Oeko-Tex System at an international level. Its mission is to build trust in products and companies in the textile industry and, in the future, also in the leather goods sector.

Oeko-Tex realigned its brand image at the end of 2016 – since then the umbrella brand has been Oeko-Tex. The aim is to continue to strengthen this in the future and to build on the trust which has developed over a quarter of a century. Since 1992, Oeko-Tex has followed its own, timeless mission of supporting companies in the implementation of greater sustainability and offering consumers reliable guidance when making their purchasing decisions. The topics, social demands, and even the definition of responsibly-aware operations, are forever changing – but the need to be a pioneer remains. In the future the Oeko-Tex Association will set itself the task of responding to the coming challenges in the textile and leather industry. Regardless of the direction in which the industry develops in the next 25 years, Oeko-Tex will be by the side of companies along the textile chain and provide advice and assistance as well as independent expertise.

Oeko-Tex Standard 1000 for production facilities working in a sustainably, environmentally and socially responsible manner (from 1996) anaged,environmental

A quarter of a century of textile testing expertise and independence: Oeko-Tex enables both companies along the textile value creation chain and consumers to make responsible decisions to save our planet – and this has been the case for the past 25 years. Time to reflect: In our following review and outlook, we summarise the most important milestones in the success story of Oeko-Tex. If you would like to find out more about sustainability and Oeko-Tex, we recommend the Oeko-Tex website and our online magazine.

Photo: © Lane Oatey / Blue Jean Images / Getty Images

The 1990s: Oeko-Tex grows as an association and in the market

In the years following 1992, more and more independent textile testing institutes join Oeko-Tex: in the first year of its existence alone,it welcomes Testex (Switzerland), Centexbel (Belgium), IFTH (France), DTI (Denmark) and Swerea (Sweden). In 1996 two further certification systems follow: with the Oeko-Tex Standard 1000, B2B certification is available for production facilities working in a sustainably managed, environmentally and socially responsible manner. With certification as per the Oeko-Tex Standard 100plus, a label can be granted with which products can be recognised for being manufactured sustainably as per Oeko-Tex Standard 1000 and also for being tested for harmful substances in a human-ecological manner as per Standard 100 by Oeko-Tex. Oeko-Tex thus recognises the topic of sustainability as a future-focused area very early on. The Association is thus ahead of its time: initially, the market does not take up these two labels to the extent required as the standards are very demanding for many companies.

1992

Toxic clothing

In the early 1990s, Stern, Spiegel and other newspapers run articles with titles such as "Allergierisiko Textilien" [allergy-risk textiles], "Gift in Kleidern" [toxic clothing] and "Öko-Label im Gespräch" [eco label under discussion]. It is a time in which the topic of irritants is omnipresent in the media, whether relating to food, rain, or clothing. This gives the impression that all textiles and apparel are bad and dangerous. The manufacturing textile industry is under enormous pressure. The experts from the Austrian Textile Research Institute (ÖTI) and the German research institute Hohenstein recognise this too. Companies who already have their textiles tested for various harmful substances by one of these institutes do not actually have the opportunity to demonstrate these efforts externally and to consumers. In numerous meetings between the ÖTI and Hohenstein, the idea was forming that a common, standardised and global label could be created for the monitoring of textiles, clothing and accessory materials which indicated to the end consumer that: this product been tested for harmful substances and offers high-level and effective product safety with respect to chemical substances that are harmful to health.

Photo: fotolia

In the early 1990s the streets are filled with people experimenting with fashion. Meanwhile the manufacturing textile industry is under enormous pressure. The topic of irritants is omnipresent in the media

The pioneer in human-ecological textile testing and effective consumer protection is founded

In 1992, the International Association for Research and Testing in the Field of Textile Ecology, in short Oeko-Tex is established. And so the Oeko-Tex success story takes its course. The product certification Standard 100 by Oeko-Tex (until autumn 2016, known as: Oeko-Tex Standard 100) is the first Oeko-Tex product on the market – and would become the most well-known Oeko-Tex label. It is issued for all types of textiles and clothing accessory materials that are successfully tested in accordance with the human-ecological criteria of the standard. If the content, for example, of prohibited colorants, pesticides, formaldehyde or heavy metals is below specific, strictly defined threshold values, the item of clothing or bedding is given this label and it is clearly visible. The test criteria and valid threshold values have a scientific basis and are modified, or if necessary, tightened, at least once a year or as required. Oeko-Tex thus makes the first fashion brands and suppliers of home textiles who receive this certification early pioneers of product safety.

The 1990s

The 1990s are characterised by buzzwords such as Generation X and Generation Golf. Merchandising products like Tamagotchi, daily soaps, tramp stamps, new media, the internet, mobile phones and the scandalous Lewinsky affair are just some of the catchwords from this eventful decade that shape our view of the world. Whereas the fashion on the catwalks is decidedly understated, the streets are filled with people experimenting with fashion. Many ready-to-wear collections evoke a feeling of understated luxury, as accentuated by the creations of Helmut Lang, Jil Sander, Armani and Calvin Klein.

(Source: Modeopfer110)

2000s

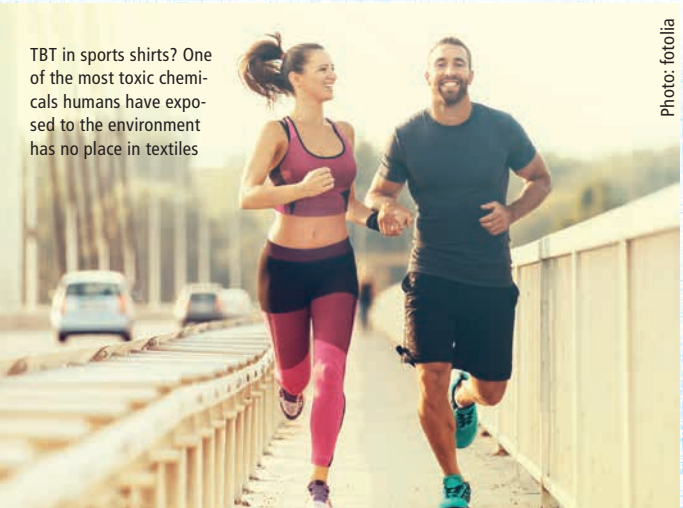
The daily lives of people in the industrialised world are increasingly being transformed by digitalisation. Everything is speeding up, being simplified, is more exciting and everyone can always be reached everywhere. A sense of adventure fills the air. In the noughties, we all have high expectations for the future. On 11 September 2001, an unexpected attack shakes the USA and marks the beginning of a new era for the population of the world.
In fashion terms, the noughties are a fast-moving time with plenty of diversity. Designers draw on the trends of former decades and create new and wild combinations. What was already the case in the previous decade – when fashion was influenced by music genres – continues into the new millennium. Hip-Hop and Metal feed into individual youth cultures and create their very own style of dress.
(Source: Modeopfer110)

The Oeko-Tex tests for harmful substances are fundamentally based on the respective purpose of the textiles and materials. The more intensive the skin contact of a product and the more sensitive the skin, the stricter the human-ecological requirements that need to be met

2000–2009

TBT in football shirts

In 2000, tributyltin and dibutyltin are found – according to a finance and consumer show, "in high concentrations" – in the shirts of a Bundesliga football club – the manufacturer is a well-known producer of sports articles. Tributyltin, more commonly known by the abbreviation TBT, kills plants, animals and microbes in high concentrations and is usually used for ship's paint – as protection against algae, rot and corrosion.
Karstadt, Kaufhof and Hertie remove the shirts from their shops. Alarmed by this news, further textiles are examined for organotin compounds in the following weeks. Even though it was later found that there was no scandal as the TBT and DBT contamination of the shirts had been greatly exaggerated and was only just above the detection limit possible for analysis, the Oeko-Tex Association includes the parameter "organotin compounds" in the Standard 100 testing system just two months after these incidents. There is an unanimous opinion that substances such as TBT or DBT do not belong in textiles and accessory materials and must be regulated and tested accordingly with strict limit values.



TBT in sports shirts? One of the most toxic chemicals humans have exposed to the environment has no place in textiles

Photo: fotolia

From pioneer to international industry benchmark

This rapid reaction shows the benefit of Oeko-Tex tests for harmful substances both for the textile industry and for consumers compared with statutory specifications: as a testing association of independent institutes, Oeko-Tex can react to current market developments and findings very quickly and with no bureaucracy. For many criteria and requirements relating to testing textiles for harmful substances, Oeko-Tex sets standards in accordance with the Standard 100 and, still today, takes on a pioneering role. In contrast, the process of developing and implementing statutory specifications can often take many years before they can finally take effect and be used – usually with the inclusion of transition periods.

During this time, the Standard 100 establishes itself as a global standard for textiles tested for harmful substances. Even though some companies in the textile industry do not actively participate in the Oeko-Tex certification system, compliance with the Standard 100 is required by countless brands and retailers in their procurement and delivery conditions.

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www.oeko-tex.com/standard100

Photo: © Anne-Sophie Bost / PhotoAlto / Getty Images

The path to sustainable textiles

In the spring of 2011, associations for sports articles and shoe manufacturers, retailers and trade associations join together to form the Sustainable Apparel Coalition (SAC) – a non-profit organisation with the goal of establishing a consistent standard for the evaluation of sustainability in the clothing, home textiles and shoe industries. The members now include Adidas, C&A, Ecco, Esprit, H&M, Levi's, Nike, Primark and the WWF, amongst others.

2011

The answer is Step

The Higg Index developed by the SAC gives the companies a standard scoring model to evaluate the sustainability of the products from the raw materials to their disposal and to identify areas in which further optimisations are necessary – a real innovation in the textile industry.
The Oeko-Tex Standard 1000, which is still in existence in 2010, does not yet offer any scoring of this type. The integrated consideration of all company areas from production facilities (environmental management, environmental performance, social responsibility, chemicals management, health and safety, quality management) and the goal of continual improvement of the achieved sustainability solution are indeed included implicitly but are not yet specifically formulated and communicated. The Oeko-Tex Association recognises this potential for improvement and develops the new Step by Oeko-Tex certification (Step = Sustainable Textile Production) for production facilities which is based on the Oeko-Tex Standard 1000. The Step by Oeko-Tex certification thus introduces scoring of this type to the Oeko-Tex portfolio.

Photo: © Squaredpixels / Getty Images

Scoring: Transparency from the beginning

2012
20th anniversary

In 2012, on the occasion of its 20th anniversary, the Oeko-Tex Association launches the "Company of the Month" campaign. Almost 10,000 companies around the world can apply if they have their products and/or production conditions certified in accordance with the Oeko-Tex requirements. The goal of the campaign is to show the public that numerous companies in the textile chain take their responsibility for their manufactured products, the environment and their employees very seriously and act in a sustainable way. From the incoming applications, an Oeko-Tex jury selects one company each month and publishes a detailed company portrait on a special campaign website. All companies selected for Company of the Month are automatically included in the selection for the Oeko-Tex Sustainability Award which was first presented in June 2013.

Low point Rana Plaza

On 24 April 2013, a nine-storey commercial building called Rana Plaza collapsed near the capital of Dhaka in Bangladesh. It also accommodated five textile factories. The accident cost 1,138 people their lives and over 2,000 people were injured even though cracks in the building had been discovered a day earlier and access had been blocked by the police. The collapse of the building complex brought to light in a particularly tragic way the desolate working and safety conditions in these textile factories. Further research carried out in the textile, clothing and shoe industries around the world shows that this area is often still in a terrible mess. However, there are also many companies who are already very advanced and innovative in this regard.

2013

More health and safety and social working conditions

With the Step by Oeko-Tex certification system, an up-to-date issue of this certificate for environmentally and socially responsible production facilities has been available to the textile chain since July 2013. Amongst other things, Step requires that production facilities apply extensive social criteria and comply with the necessary safety regulations in the workplace, but also highlights all other company areas that are necessary for a comprehensive and objective sustainability assessment. The extent to which a company already works in a sustainable manner is shown in a clear and transparent way on the certificate by means of a three-level scoring system.

2010s

The 2010s have so far seen the revival of austerity-era period pieces, hipster and alternative fashions, 1980s-inspired neon colours, from 2012 to 2017, unisex early 1990s-style elements influenced by grunge and skater fashions. In the early 2010s (2010-2012), many of the fashions of the mid to late noughties live on in Europe, the USA, South America, Australia and East Asia, above all the indie pop look, reflecting elements from the seventies, the counter-culture of the sixties and contemporary alternative fashion. Popular global fashion brands of this decade include: Forever 21, Topshop, Topman, Uniqlo, Christian Dior, Hollister, Abercrombie and Fitch, Ben Sherman, Lacoste, Penshoppe, Bench, H & M, Neun West, Kashieca, Mensch, Burberry (above all in China from 2010-15), Monsoon, River Island, Dorothy Perkins, Trainer, Marks and Spencer, Hugo Boss and Alberto.
(Source: wiki/ 2010s in fashion)

Moving with the times: the Oeko-Tex Association currently offers seven different kinds of certification

Oeko-Tex Sustainability Awards

With the presentation of the Oeko-Tex Sustainability Award at the end of June 2013, the Oeko-Tex Association draws attention and raises awareness within the textile industry and the general public that, in spite of negative examples such as Rana Plaza, there are numerous companies along the textile value creation chain who implement their responsibility for their products, employees, and the environment in an exemplary manner through outstanding sustainable actions in their daily production. The non-monetary prize 2013 was awarded to the following companies in five categories:

- Sung Hing Industries Holding Limited, China (environmental management)
- Mattes & Ammann GmbH & Co. KG, Germany (social responsibility)
- Veramtex S.A., Belgium (safety management)
- YKK Corporation, Japan (quality management)
- Lenzing AG, Austria (product innovation)

2015
150,000 Standard 100 by Oeko-Tex certificates issued

On 30 June 2015, Oeko-Tex General Secretary Georg Dieners and Robert Löcker, Managing Director of the ÖTI – Institute for Ecology, Technology and Innovation (Vienna) issued the 150,000th Standard 100 certificate to the Austrian embroiderer Ernst Böhler GmbH. The family company from the Vorarlberg region manufactures high-quality embroidered products for the home textile and fashion sector and since 2004, has had its products tested for harmful substances by the ÖTI in Vienna. "We are pleased that we can share this success with Ernst Böhler today," recounts Georg Dieners at the presentation of the certificate at the production facility in Lustenau. "The high levels of approval and its prevalence along the textile value creation chain clarify that the Standard 100 has a practical use for companies and that it provides optimum support in important areas – for example, as a model in operational quality assurance, but also in communication or in marketing to business customers and end users," continues Dieners.

Establishment of the Partnership for Sustainable Textiles

In autumn 2014, the Partnership for Sustainable Textiles is founded as an initiative of the German Development Minister, Gerd Müller. The members of the partnership work together for more sustainable production conditions in the textile industry. In addition to companies, the members also include non-governmental organisations, associations, unions, federal ministries and scientific institutions and organisations who develop standards for the textile industry. The common goal: social, ecological and economic improvements along the textile supply chain. The idea behind it: many members can achieve something together where a single company or organisation may fail. They can use local synergies, learn from each other and together achieve better framework conditions in the production countries.

Photo: Textilbündnis/T.Ecke

Dr. Gerd Müller, Development Minister, 2015 in Berlin

2014

Active support

Oeko-Tex actively supports the textile partnership from the outset through cooperation in working groups and has been a member since 2015. In contrast to German Development Minister Müller, however, Oeko-Tex is of the opinion that there are already sufficient solutions for the required product label and the implementation of greater transparency and social responsibility along the textile chain – e.g. Step certification or the Made in Green label.

> "More transparency for consumers and tailored solutions for industry and trade.

Photo: Christ

2017
Further label
"Leather Standard by Oeko-Tex"

In keeping with the claim of offering the consumer reliable guidance and consumer protection against harmful substances for as many products available in retail outlets as possible, Oeko-Tex launched a further label in January 2017. The Leather Standard by Oeko-Tex is awarded to leather goods of all types such as jackets, bags or belts which have been tested for harmful substances and which meet the strict requirements of the standard.
At the same time, with the current Oeko-Tex system, companies in the textile industry have a tailored and very practical toolbox which they can draw on to meet the growing requirements in the area of sustainability at a global level. Oeko-Tex enables responsible and transparent chemicals management, provides support in the monitoring and optimisation of environmentally friendly production processes and in the establishment of fair and safe working conditions, and permits clear communication to the end customer with regard to proof of their own product responsibility.

And what will be in 2018?

The spirit of the times has changed recently: Fair trade has developed from a niche area to a trend topic. Environmental awareness has increased significantly, even for textiles. Today demanding end consumers are questioning the sustainability of products more than ever before. Oeko-Tex's answer is the Made in Green by Oeko-Tex product label. Introduced in April 2015, this label identifies textiles that are manufactured under environmentally friendly and socially fair working conditions in accordance with "Step by Oeko-Tex" and which have been tested for harmful substances in accordance with Standard 100 by Oeko-Tex. The label is a great success: the Swiss lingerie company Calida is one of the first brands to use this label and end consumers can now easily see that it is a trendsetter in matters of sustainability. More companies are expected to follow in 2018.

Future

Photo: © Eric Audras / Getty Images

Fair trade has developed from a niche area to a trend topic. End consumers are wanting more and more sustainable products

Photo: Oeko-Tex

Georg Dieners has been steering the fortunes of the Oeko-Tex Association for the past two years. The German-born expert set aside a generous portion of his time to speak to textile network and to answer our questions on the environment and sustainability. His views on whether our planet can still be saved and the fundamental changes that need to be made in the textile world are featured in our online magazine.

textile network
www.textile-network.com

Technical Textiles

Sourcing in China?

The Middle Kingdom, as China is sometimes known, is coming into ever sharper focus as a production site for high-technology products. An undergraduate dissertation, "Analysis of industry structure, taking technical textiles in the Chinese textile market as an example", tackles the question of whether China is an interesting source market for technical textiles, from the point of view of a German business. At the forefront of this is the extent of backward integration.

Summary of findings

Following the ending of quotas, China's external trade policy has developed in a very attractive way, due to close cooperation. Yet there is still more to do. Trained staff are available, although there is enormous competition for them. Given the quantities available at low cost, access to raw materials is unbeatable. In the field of technology, no other country at present is attacking Europe's dominance so effectively. Infrastructure on the whole is good, though still highly variable. Certification is readily achievable and thus similarly attractive.

The cultures across China are very different; they are certainly cross-compatible but it is important to be aware of the differences, in order to avoid conflicts and inefficiencies. The market power of the purchaser is equivocal: widespread opportunity for substitution balances out the high degree of dependency, so that buying power is neither particularly great nor negligible. Among suppliers, it is the fibre producers that hold the greatest power in the market but this is true across the world. Overall, the market power of customers is to a large extent balanced out by that of the suppliers.

Extent of savings potential

Costs in China are substantially lower than in Europe, and are thus highly attractive. Moreover, the quality meets the requirements and is therefore similarly attractive. Reliability of supply and in particular flexibility are high, because the entire textile supply chain is available; the potential for savings is therefore correspondingly high. To illustrate the findings more convincingly, the strengths are first weighted (see Fig. 3), using the 'Harvey balls' system as a visual representation of the results: the fuller the circle, the more attractive that strength is (see Fig. 4). Protection of intellectual rights has improved, particularly since China's accession to the WTO. Even so, legal certainty as it exists in Germany cannot be presumed and protection remains a major challenge even today. It is worth bearing in mind, however, that there is a risk of forgery even when buying from Europe.

The dissertation builds on the basic design of the 'Five Forces Model' developed by Michael E. Porter. On this model, there are five forces that affect the attractiveness of a market. The model is designed to inform the decision on how to enter that market. This dissertation, however, tackles the exact counterpart of this, namely sourcing. Here the aim is to determine whether a market is attractive as a buying source and if it is, to derive a sourcing strategy. For this purpose, Porter's model has been modified. Six forces are at work here: export-orientated foreign trade policy, access to resources, compatibility of cultures, market power of the purchasers, market power of the suppliers and savings potential. In summary, the model can be visualised thus: the stronger the green forces are and the weaker the red, the more attractive the market is as a buying source.

Recommendations

The dominance of Chinese fibre producers makes it imperative to buy fibre from China. Indeed, the marked increase in quality and recent experience suggests that buying even the finished product makes sense. It is important, though, to take steps to secure the appropriate level of quality (TQM). To be successful, cultural characteristics and peculiarities have to be taken into account.

Supplier integration is important, in order to guarantee low costs, good quality and a high degree of reliability of supply over the long term. An empirical study has demonstrated

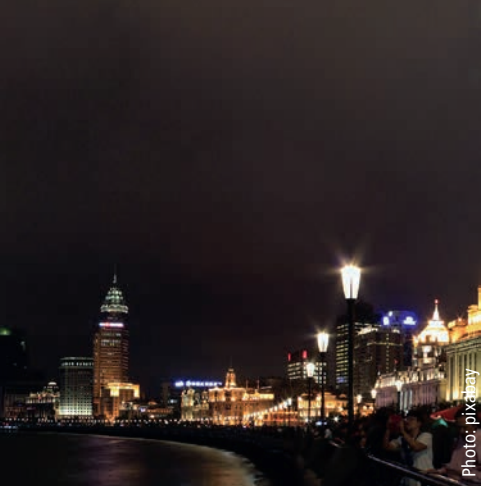


Photo: pixabay

Shanghai at night

For the sourcing strategy the Porter´s model has been modified

the link between success and supplier integration. In China, a country where harmony is expected, a cooperation agreement would appear to be essential. Overall, attractiveness in all six forces can be improved through integration. It is vital to have a representation office in the country staffed by an employee of the company who understands the business culture and philosophy, the product portfolio and the company's business goals. The aim should be a comprehensive supply chain management plan, since there are few industries in which there is such wide variation between products and versions in terms of price, quality, delivery times, availability and being up-to-date.

Areas deserving criticism include the significance of each party's bargaining power (little relevant literature), cultural compatibility (regional differences) and the absence of a risk analysis (e.g. exchange rates, energy price changes, implementation of new environmental protection laws). According to the study, there are countless additional forces affecting this market. Moreover, a precise analysis of the locations themselves must be undertaken. Strong regional differences mean that the attractiveness of the market as a buying source will vary enormously. This dissertation was able only to touch on these aspects. And the complexity of the tasks involved must not be underestimated – this is where many businesses come to grief. Good planning and execution, therefore, are absolutely essential. It is worth noting in this respect that implementing a TQM plan requires a lot of time as well as cost. The geographical time difference, which is a significant constraint on communication, is another factor that must be taken into account.

Taken as a whole, the risks must not be underestimated. The danger of passing up an association with an attractive source market is significantly higher than the risks that it poses. The margins available, which are still high, should be used to build a Chinese supplier into a purchasing source: this is where the pioneering advantages lie, since it seems inevitable that China will be producing ever greater volumes of technical textiles in the near future.

[Malte Krautwald]

Malte Krautwald


Photo: adpic

China: In the field of technology, no other country at present is attacking Europe´s dominance so effectively

Photo: Lenzing

„Any reducing in the use of plastics helps to protect our environment. In agriculture suistanable materials should be used. This is good for us humans and for the environment," Marina Crnoja-Cosic, Head of Technical Textiles, Lenzing

LENZING

More sustainability in agriculture

Avoiding plastic is also in agriculture a topic of key importance. At Techtextil 2017 Lenzing presented for the very first time a botanic solution. The topic of plastic has top priority on the EU's agenda, particularly in connection with the European measures regarding the circular economy. This generates a central starting point to optimize the life cycle of plastics and recycling. Another reason for initiatives in this field is that 80 percent of the waste polluting our seas is plastic. Agriculture uses 6.5 million tons of plastic products per annum. This includes agricultural films, wraps under layer, silage films, stretch films, steel. The majority of the plastics used in agriculture are trashed after use.

With its innovations of Tencel branded lyocell fibers, Lenzing is offering a solution to avoid plastics. These fibers, made from the natural raw material of wood, are particularly well suited due to their fiber profile. If used, they reduce the use of plastics in agriculture.

100% compostable

Tencel fibers are 100 percent biodegradable and even 100 percent compostable. When a material is compostable, the nutrient cycle of organic materials under the influence of atmospheric oxygen and insects in the soil breaks down the material. Carbon dioxide is released as are water-soluble minerals, which can be used as fertilizers. A percentage of the intermediate products created during the decomposition phase is converted to hummus. The compostability of Tencel fibers offers a considerable and completely natural advantage for agriculture.

Optimum stability

The high strength of Tencel fibers enables the reduction of material use, particularly with support strings. Tencel strings are much thinner than cotton strings and have a higher strength. The load capacity of support strings of this kind, which has to be up to 80 kg depending on the crop, is assured throughout the growth period of the plant. The fibers are pure and have no contaminants. They are tested according to the EU criteria for food contact use and can therefore be used by agriculture for food products without any concerns.

"At the moment, only several products, such as support strings, ropes and nonwovens, are in use. However, Tencel fibers have great potential in agriculture. Mankind faces a plastics problem if we consider that plastic takes up to 400 years to decompose," Marina Crnoja-Cosic, head of Technical Textiles, comments. "Any reduction in the use of plastics helps to protect our environment. In agriculture in particular, sustainable materials should be used. This is good for us humans and for the environment," Crnoja-Cosic continues.

[www.lenzing-fibers.com]

AMSILK

Innovative Biosteel high-performance products

Amsilk GmbH, the world's first industrial producer of synthetic silk biopolymers, and leading yarn manufacturer Gruschwitz Textilwerke AG are extending their existing three-year collaboration in yarn development by forming a strategic partnership, designed to pave the way for further innovations in high-performance yarns. The two companies first joined forces in 2014 to further develop and commercialise the Biosteel fibre. Although Gruschwitz is steeped in 200 years of tradition, it is by no means locked in the past, but is known for its dynamism and innovative spirit. The company from southern Germany has developed, for example, a special coating technology used in extremely resilient off-shore ropes made from DSM Dyneema. It also produces sophisticated yarns for Johnson & Johnson, a global market leader in medical textiles. In 2015, the collaboration between Amsilk and Gruschwitz led to an industrial breakthrough: Rather than relying on specialised knitting machines to process Biosteel fibre, the companies optimised the process to make the silk biopolymers compatible with conventional knitting machines. This resulted in the first-ever textile fabric to be made from synthetic, biotechnologically produced silk fibres, which was nothing short of a revolution in the textile industry. This successful development work formed the foundation for the collaboration between Amsilk and Adidas announced in November 2016. Read more about the new partnership in our online-magazine.

Photo: Amsilk

Amsilk is a young and dynamic company with an innovative product

[www.amsilk.com]
[www.biosteel-fiber.com]

Diolen Safe Yarns

Sustainable, flame-retardant and antimony-free

Sustainable materials and designs present a key challenge in times of dwindling resources and commodities. Sustainable production – placing equal importance on environmental, social and economic issues – is a long-term vision for TWD Fibres and its subsidiary FR Saftey.

In addition to many speciality and high-quality yarns, TWD Fibres also produces inherently flame-retardant polyester yarns under the Diolen Safe trademark. Low-flammable properties are permanently embedded into these yarns during the spinning process, meaning that they will not diminish through abrasion, ageing and frequent washing. Thus, these yarns guarantee long-lasting safety compared to subsequently treated materials. This process of directly embedding flame-resistant properties is also beneficial from an ecological standpoint as additional chemical applications and pollutants can be eliminated. Diolen Safe textiles by TWD Fibres, exclusively sold through FR Safety Yarns, meet all established international fire regulations. They are frequently certified and approved for their intended use by different testing laboratories. Currently, Diolen Safe yarns are the only polyester yarns that have passed both the tests for low-flammable yarns as well as the Cradle-to-Cradle (C2C) standards.

Photo: Jochen Günther, Messe Frankfurt

Sustainable production – placing equal importance on environmental, social and economic issues is a long-term vision for TWD Fibres and its subsidiary FR Safety

Antimony-free mattress ticking

Antimony oxide (Sb_2O_3) is used as a catalyst in the processing of base materials for the production of polyester fibres and filament yarns worldwide. Therefore often found in textiles, these antimony compounds can be partially dissolved, especially by perspiration, and absorbed through the skin or inhaled. This could lead to irritations of the skin, eyes and lungs in sensitive people.

Polyester yarns are particularly popular in mattress ticking as they are easy to clean, easy to handle and abrasion-resistant. However, there are alternative polyester yarns free of antimony, yet with identical properties – something that TWS Fibres has specialised in. In order to guarantee end-to-end traceability and accountability, TWS Fibres does not source its raw materials from Asia and has instead moved its entire production chain to Europe. Their in-house laboratories as well as independent external institutes continually monitor and assess the quality of and antimony content in Diolen Hypoallergenic yarns.

[www.frsafety.de]

Photo: Lenzing

LENZING AG

Botanic carpets and rugs

After successfully conquering the world of bed linen, Lencel – a lyocell fibre made by Lenzing – has set its sight on another interior essential: carpets.

Traditionally, carpets are made of coarse and long fibres similar to wool, meaning that the usually thin and short fibres of cellulose are unsuitable. Until now. Lenzing has created a new generation of Tencel fibres that are thicker and longer than standard cellulose, specifically for textile flooring. With this novel application of Tencel the custom-made fibres also lend their unique properties to carpets and rugs.

Tencel gives carpets a particularly high dye affinity. According to Lenzing, the smooth surface of its fibres and their soft and silky touch, also make it a highly comfortable alternative to conventional textiles.

Additionally, the fibre's excellent moisture absorbing and releasing properties can balance out fluctuations in indoor temperature and humidity. Thus, moisture is prevented from accumulating on walls and windows, proactively protecting against mould. These special moisture-regulating abilities improving indoor climate and hygiene are what sets Tencel apart from synthetic fibres. Another advantage of Tencel is its resistance to moths, as they feed on proteins found in wool but not in cellulose.

[www.lenzing.com]

Fairtrade cotton picker in India

Fairtrade cotton

Sustainable work clothing on the up

Sustainability is becoming an increasingly important topic for many textile companies. Fairtrade cotton offers companies the opportunity to support small farmers in developing countries and to sell textiles with a clear conscience.

Work clothing made of Fairtrade cotton helps companies to improve their own sustainability balance sheet, e.g. in their sustainability report, as they are committing to sustainable procurement. Internally they can also position themselves as responsible employers that set great store by high-quality equipment for their employees.

Making sustainability visible

At the start of 2016, the provider of work clothing as a rental service CWS-boco switched its boco Profi Line workwear to Fairtrade cotton. The fabric of the clothing is made up of polyester and 35% cotton, which is being changed with immediate effect to Fairtrade cotton. The work clothing is primarily worn by skilled tradesmen and industrial workers. There are many benefits to this switch: local farmers benefit first and foremost. They receive fair pay, permanent jobs and humane working conditions. The origin of the clothing also becomes transparent. For instance, the wearer can enter a code to be found on the label of the clothing on the Fairtrade website: they will then find the country of origin, the name of the farmers' cooperative and more about the projects that have already been realised there, thanks to the Fairtrade Premium.

What does Fairtrade achieve?

Some 1.6 million small farmers work on cotton fields and plantations every day in Asia, Africa and Latin America to produce items of cloth-

When buying clothes, consumers rarely think about how and where they were produced. This doesn't just apply to everyday clothes. The choice of work clothing usually depends on design, functionality and price alone. However, in an era of increasing company awareness and growing responsibility, the origin of materials is playing a more and more important role. Some manufacturers of work clothing, such as CWS-boco, are implementing a controlled supply chain for their items. "Fairtrade work clothing will gain additional significance in future. Municipalities and cities are backing sustainable procurement, meaning that demand will increase in this area. For skilled tradesmen, on the other hand, the Fairtrade label on clothing is primarily about the image they convey to their customers," says Fatima Röse, Product Manager at CWS-boco Germany.

Cotton worker Sapna Mandloi at the Pratibha Fairtrade cotton farm in India

Photos: Suzanne Lee

Fairtrade cotton farmer Sugna Jat from India in action

ing. However, although around a third of humanity is dependent on such small farmers, they are paid poorly and unfairly for their work in most cases.

Fairtrade strengthens local organisations, supports producers and works to promote fair trade practices. On the one hand, it is ensured that families owning small farms are paid appropriate wages for their work. On the other, humane working conditions for farmers and plantation workers are required and promoted. Moreover, compliance with social, ecological and economic standards is regularly checked throughout the entire value chain. For instance, these criteria include a ban on child labour and discrimination, as well as the existence of regulated working conditions. Sustainable and environmentally friendly farming is also targeted, forbidding the use of dangerous pesticides. The economic standards cover criteria such as the payment of fixed minimum prices and the Fairtrade Premium, the creation of transparent trading relations and proof about the flow of goods and money. The organisation's ultimate goal is to create a better position for small farmers and workers in developing and emerging countries on the global market and to enable investments in cooperatives.

Photo: CWS-boco

Boco Profi Line is now available in Fairtrade cotton

Doing good with your own work clothing

"Choosing boco Profi Line supports cotton farmers and their families in India and Senegal," confirms Dieter Overath, Chairman of the Board at Transfair e.V., the charitable organisation that awards the Fairtrade seal for cotton in Germany. No additional costs arise for companies; they are all borne by CWS-boco. The two farmers' cooperatives from which CWS-boco gets its cotton receive not only a fixed minimum price but also an additional premium that they can use for larger community projects. The environment is also protected, as the use of genetically modified cotton is prohibited, as are chemical fertilisers and high volumes of water.

Longer use of clothing

One option for companies looking to use clothing sustainably is a rental service. CWS-boco offers suitable work clothing for countless industries and areas. Company logos or staff names can be affixed to it on request. The company makes the clothing available to customers, regularly collects worn items from them, washes these items and repairs them where required, and then returns the clean clothing. The clothing is produced for long-term use and is therefore very hard-wearing. In short, companies using the rental service are backing the concept of reuse rather than throwing away.

[www.cws-boco-scm.com]

IVGT

IVGT

Good atmosphere at Techtextil

This year's trade exhibition in Frankfurt inspired the whole industry. After a 4.8 percent increase in foreign sales, German companies were reporting even before the trade fair a rise in domestic turnover of 5.5 percent over the previous year. At the beginning of the fair, over 35 percent of textiles producers, across all stages of the manufacturing process, were positive in their expectations for sales over the next six months. 52 percent of IVGT members (IVGT – Germany's largest textile association) expected the situation to remain unchanged. According to a survey of visitors by Messe Frankfurt, 42 percent of them rated the current competitive position as good. This is also supported in surveys by the Federal Statistical Office, which show that orders for technical textiles in March were 20.1 percent higher than at the same time last year.

Future of the textile industry

For the third time now, the IVGT invited students from German textiles universities to an informative lunch event during Techtextil. The room in Hall 4.2, made available free of charge by the fair organisers, rapidly filled up with over 430 attendees from technical universities in Albstadt-Sigmaringen, Hof/Münchberg, Kaiserslautern, Mönchengladbach, Reutlingen, Zwickau and from the University of Aachen.

Now that the subjects of smart textiles and sustainability have become almost universal in university syllabuses, the Association presented developments over the period from 1890 to the present day, by means of seven short films. Even in the early days, vibrantly coloured textiles were used for advertising and display purposes. The possibilities offered by today's e-textiles, however, go way beyond that. In fields of application such as medical technology and sport, in particular, conductive textiles act as sensors for measuring bodily functions, as channels for muscular stimulation or as an element of therapy for stroke victims. The second topic, sustainability, was introduced by four member companies using current and brand new developments in non-woven fabrics. Demand for recyclable and renewable raw materials has until recently been something of a challenge for producers, since the primary concern with technical textiles is functional capability. Two producers of filament yarns presented their latest developments, which meet both requirements, and two other member firms gave presentations on the use and finishing of these types of special yarns. Following the lunch, many students accepted companies' invitations to their stands in the exhibition halls. In response to the positive feedback, there will be another 'info-lunch' at the Frankfurt Techtextil in 2019.

Photo: IVGT

Some 430 participants from German technical universities attended the IVGT 'info-lunch'

European cooperation

An international trade fair such as Techtextil always also offers the possibility of meeting old contacts and even getting to know new ones. IVGT members took every opportunity to do so. The wide range of such opportunities included a round-table discussion with manufacturers from the Czech Republic, more than 16 informative discussions with network partners from the Russian association, a 'hot-spot tour' of selected mobile technology producers, any of the numerous press conferences, the get-together for ribbon and braid producers and the network gathering of the European Technical Textile Club. The last of these was attended this time by 110 manufacturers from Belgium, Germany, France and Italy. All activities were united under the banner: IVGT – the textile industry network.

[www.ivgt.de]

The role model of Roboskop was the eagle. It manages to maintain an enormous area in its field of vision at a height of more than a kilometre and at the same time focus on a small mouse down on the ground

Zünd

The target: Batch size 1

Manufacturers are adapting their manufacturing processes to single batch runs. Yet the costs for single unit production are expected to be very close to the price point of serial production. This requires the use of the most modern, digital production tools, combined with a highly efficient production workflow. At the same time, all parts and production data must be transparent and be able to be tracked consistently throughout the entire production process.

A critical step in the production of an office chair is the cutting of fabric. König+Neurath updated this process to the state of the art in spring of 2016 with a new Zünd Cutter G3 L-3200. A roll storage system for material management and feeding that provides space for up to 300 rolls of textiles was procured at the same time.

Prior to their investment, a multi-layer cutter was used for fabric cutting. Due to the necessary manual nesting and other restrictions, the fabric utilization achieved by König+Neurath with the multi-layer cutter was ineffective at best. The goal for the new single-layer cutter was to achieve an optimization of 10 to 15 percent and thus reduce scrap material. "We have clearly improved our fabric utilization and we still have some headroom," states Thomas Selbach, Head of Production for chairs.

In addition to a significant increase in effectiveness, it was also the stated goal of König+Neurath to automate cutting as much as possible and integrate it into a digital workflow. The system should require only one person to operate. Zünd was even able to meet these specifications. The Zünd cutter and roll storage system are operated by just one person. Because most cuts for office chairs and organizing systems are done on the Zünd cutter, single shift operation has its limits. Selbach elaborates: "This is why we will be introducing overlapping shifts in the near future and using substitute employees during scheduled breaks to ensure that the Zünd Cutter keeps working, even during breaks."

In spring of 2016, König+Neurath updated its fabric cutting process to the state of the art with a new Zünd Cutter G3 L-3200

Digital into the economic future

As Selbach sees it, the continued digitalization of production is the only way to financial success in the future: "The benefits of digital cutting are apparent in the visualization interface on the cutter monitor alone. It displays the nested cut parts in a single overview." The cuts are already being created in the engineering department. Order transfers are now completely paperless, which means physical cardboard templates are no longer needed. All relevant parameters such as material stretching or the degrees of hardness of foams are also calculated digitally to precisely determine the material allowance. Modern software determines the order in which jobs are processed. Manual interventions in the job queue are, therefore, no longer necessary. After production, the performance data, such as running and cutting times, daily cuts and speed are stored in the system. This guarantees permanent monitoring of effectiveness. Thanks to the complete digitalization of their cutting operations, König+Neurath can now process single runs and very quickly and efficiently produce sample models or prototype chairs.

[www.textile-network.com]
[www.zund.com]

TECHTEXTIL 2017

Robotex

Product Development and Quality Inspection, everyone has experienced the paradox for themselves: If you have to look for small details (such as material defects) in a large area with a magnifying glass or microscope, you quickly lose track of time and incur a loss of accuracy.

With Roboskop by Robomat the search for a material defect in textile materials is now more efficient. The solution is based on the combination of the fastest and most powerful tablet using Windows and high grade digital cameras with the highest resolution. Image recognition software, a light box and the motorized control of lens and axles.

The Roboskop sees like the bird of prey when compared to a conventional microscope and identifies the errors on the surface and emulates the detailed resolution: multiple cameras with the highest available megapixel density combined with integrated image recognition allows for the detection of miniscule material errors of only 1/100 millimeter (10 µ) in size. The image recognition software of the surface microscope provides real-time information pertaining to the type and extent of the problem: Frequency, area, diameter, statistical distribution and other deficiency categories are automatically detected, marked and logged.

[www.textile-network.com]
[www.robomat.eu]

Gerber Technology

Bring on the digital technology revolution

Gerber Technology, headquartered in Tolland, Connecticut and with its base for the D-A-CH (principally German-speaking) region in Ismaning, close to Munich, presented some impressive and innovative CAD/CAM solutions at this year's Texprocess/Techtextil.

Accu-Mark 3D demo at Texprocess

Trade visitors were particularly enthusiastic about the Accumark 2D and 3D cutting software and about the integration of Gerber CAD and PLM software – specifically Yunique PLM V7, which offers many new features including the new plug-in (incorporated into Design Suite) tailored to the way in which the creatives work.

In a conversation with textile network, Yvonne Heinen-Foudeh, Marketing Director Emea at Gerber Technology, revealed that interest in digital topics was remarkably high: "Small, mid-sized and even large players in the fashion industry were all clearly highly motivated and preparing to create their own (individual) digital reality." New solutions for cut-order planning – with Accu-Plan software and networking of the design/cut department with the cutting room and stitching/processing via the cut-ticket option and labeller – struck a chord with the industry. "Many companies also showed a lively interest in our approach to IoT applications (the internet of things: direct communication between CNC systems) with GerberConnect," continued Yvonne Heinen-Foudeh.

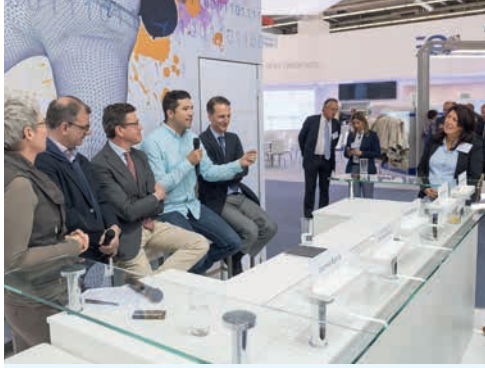
A talk to Peter Morrissey

Our New York correspondent, Manik Mehta, managed to gain an exclusive interview with Peter Morrissey, Senior Vice-President at Gerber Technology. "With the ability to transfer data easily through our Yunique PLM Design Suite plug-in," commented Morrissey, "designers can now concentrate on designing." The Design Suite plug-in, he said, was very easy to install, giving the customer direct access to new features through the Adobe store; Yunique PLM was a tailor-made fashion PLM system that allowed clients to carry out both the installation and automatic updating through

Peter Morrissay

Gerber Technology has subsidiaries in the USA, Portugal, China and elsewhere, as well as representatives in Cambodia, Vietnam, India and Hong Kong. At 130 sites around the world, businesses in a broad span of sectors rely on the advice and high-level service of the company. According to Pete Morrissey, Gerber's global market share is currently 30 to 40 percent in the fields of clothing, transportation (aircraft and automotive), lifestyle and many others. About 50 percent of its business is in clothing.

"Asia is our fastest-growing market," Morrissey notes. In the meantime, the clothing industry is also seeing a spread in the practice of 'reshoring', which means bringing production back again, closer to the point of sale. The converse is also occurring, however: "Not only European and American companies but also Indian and Turkish businesses are starting to discover the continent of Africa for their sourcing." Morrissay also points out that increasingly, Chinese businesses are investing in Africa in order to gain free access to the US market through the AGOA agreement, so procurement and product flows are currently changing once more.



Digitalisation for fashion – hype or reality? Why it's time to embrace your digital reality!

Photos: Gerber Technology

Voting with the feet – as the digital revolution starts rolling in, the clothing industry is filled with the anticipation of a goldrush – view of Gerber Technology's exhibition stand

the Adobe Add-ons marketplace. "We want to assist our customers in achieving maximum efficiency," said Morrissey, and the latest innovation, the Design Suite plug-in, was ideally suited to this. Designers can, for example, create new colour palettes and access existing palettes easily with the Color plug-in; with the Image plug-in they can access all of the Adobe Illustrator digital masters as well as sketches, graphics and CAD in combination with Yunique PLM.

In addition, the Style plug-in module allows innovative styles to be created on Adobe Illustrator from sketches, with all modifications and updates immediately available in Yunique PLM. Morrissey went on to stress that Gerber Technology's software and hardware solutions encouraged connectivity across the entire supply chain and would help the customer to achieve shorter cycles with optimised outcomes across the board. The fashion industry, he said, was on the brink of a revolution in the implementation of the next level of digital technology applications.

"All of those involved – from the large corporations down to small businesses – are tackling digitalisation," he explained. "Startups are springing up. All of this will change the supply and value chain – the process chain from design to end consumer – for ever." The fashion and clothing sector, he continued, had been seeking cost efficiencies for many years. "Fashion cycles are becoming ever shorter and the share of online purchases is constantly increasing. Companies are under heavy competitive pressure and are seeking to dispose of their stocks as rapidly as possible." And yet it is not always existing stocks that are in demand in the market. "Mass customisation – the move towards fashion and clothing that is personalised in its design and fit – is achievable with our technology. The winners will be those who rely increasingly on digital technologies, so as to prevent production errors."

[www.gerbertechnology.com]

[Manik Mehta]

Design Suite – screenshot

DIGITALISATION

Hype or reality?

Gerber Technology invited the international press to an interesting panel discussion at texprocess 2017 about the digital reality! The conclusion from the talk by Yvonne Heinen-Foudeh, narrator and Gerber Technology spokesperson Emea: "Start now - to be ready tomorrow".

A gesture of gratitude for the panelists: David Gerber's book about his father and founder of Gerber, Heinz Joseph Gerber – The Inventor's Dilemma – The Remarkable Life of H. Joseph Gerber

The Panelists (at the top) from the left to the right:

Leonie Barrie, just-style Managing Editor

Prof. Dr.-Ing. Dipl.-Ing. Michael Ernst, Head of the Virlab – Virtual Laboratory – and holder of the chair for textile product development at Niederrhein University, Mönchengladbach/Germany

Michel Byvoet, the founder and CEO of Douelou NV, located in Diepenbeek/Belgium.

Peter Santora, Vice President of Softwear Automation, Atlanta/GA, USA, developer for robotic sewing solutions without any direct human labour.

Karsten Newbury joined Gerber Technology in October 2014 as Vice President and General Manager, Software Solutions. In that role, Karsten leads Gerber's CAD, PDM, and PLM activities.

Lectra

Tradition goes digital

Given the choice, would you continue to bank on existing structures and production processes or invest in creating a digitalised business model? Many manufacturers are currently asking themselves this very same question, particularly those that have a long tradition.

Photo: OVS

OVS uses Lectra PLM in development

After all, it has taken them many years to build the structural core of their businesses and to establish themselves as reliable partners for their suppliers and customers. Although these companies are the mainstay of most industries, they must not lose sight of the fact that the marketplace is changing. Today's consumers are looking for high-quality products that are customised yet affordable. Yesterday's production processes simply cannot live up to these high expectations. The only way forward is to embrace Industry 4.0 coupled with a digital supply chain.

Industry 4.0 and a digital supply chain

Based on a study by the Centre for European Economic Research, German development bank Kreditanstalt für Wiederaufbau recently revealed that, in the period from 2013 to 2015, around 83 percent of SMEs had made headway with the digitalisation of their businesses – and for good reason, given that the switch brings many benefits.

Furniture embraces digitalisation

Furniture maker Godfrey Syrett celebrates its 70th anniversary this year. Established in the post-war Britain of 1947, the company used to be a major supplier to the National Health Service (NHS). Today, the manufacturer offers high-quality furniture solutions for educational establishments and office environments. Since its early beginnings, the firm has seen the furniture market undergo significant change. In many industries these days, the work environment is characterised by a need for mobility such that office furniture has to be flexible and functional, yet also modern and design-led. At the same time, customer expectations are rising with respect to quality and lead times. Godfrey Syrett's manual production process was, therefore, no longer in a position to deliver on either of these counts. In a move to shorten lead times without compromising on quality, and to develop the product range with a maximum degree of flexibility, the company decided to transform its production set-up. Working in collaboration with Lectra, a supplier of integrated technology solutions for the fabric, leather, textile and composites industry, Godfrey Syrett digitalised its entire pre-production and production processes. The staff now have the capability to create their patterns digitally whilst cutting is carried out automatically. Introducing a digital supply chain has enabled the furniture maker to increase

Automated cutting with Vector reduces material consumption

Photo: Lectra

Moving towards Industry 4.0 with the Versalis digital cutting system for leather

its production capacities by 70 percent. Automatic cutting has led to annual material savings worth 170,000 Euro. This has had a positive effect not only on profitability: "We've worked hard to reduce any negative impact we have on the environment and we were recently awarded two prizes for sustainable production. With the help of Lectra's solutions, we've been able to cut material wastage by around 20 to 30 percent, and in doing so have strengthened our commitment to enhancing sustainability," says David Hall, Sales and Marketing Director at Godfrey Syrett.

Leather at the push of a button

The automotive industry has been a pioneering force in the field of digitalisation. The big corporations have been investing in the digital supply chain for some time. Audi is taking this a step further by building its high-end models in a smart factory – a prime example of Industry 4.0. Not wanting to be left behind, suppliers are having to adapt to these changes quickly and efficiently. One of Europe's leading tanneries supplying the automotive industry is embracing change by digitalising its leather cutting processes. Established in 1958, the Italian Gruppo Mastrotto operates one of the biggest just-in-time logistics hubs in the leather industry, guaranteeing delivery within 48 hours. With 20 production and logistics locations in Italy and around the world, the traditional company delivers 21 million square metres of leather to its customers every year. The increasing desire among car buyers and thus also car manufacturers for ever more individualised cars is resulting in a growing number of product configurations and faster product changes, bringing greater complexity to the supply chain. In response to this development, Gruppo Mastrotto decided to invest in digitalisation, opting for Lectra's Versalis leather cutting solution. The digital cutting room makes it possible to cut hides to the highest quality and without interruption, whilst increasing capacities and, in so doing, cutting costs. "Delivering automotive parts isn't just about working through orders," says Alberto Silvagni, Automotive General Manager at Gruppo Mastrotto, "It's also about meeting different customer needs in terms of design and volume. With our old punching machines, we would never have been able to meet the expectations of OEMs in the way that we can with our new digital solutions."

Fashion – touch and go

The demand for high-quality customised products at affordable prices is rising, above all, in the fashion industry. "Fast fashion is a successful concept, that reflects customer wishes. High-end designs are being taken and moved from the drawing board to shop shelves within two to three weeks and sold worldwide at very reasonable prices," explains Chris Nicolaes, Managing Director Lectra Deutschland. OVS, the leading Italian fashion maker for men's, women's and children's clothing, has implemented this hugely successful concept. OVS was founded as part of the Coin Group in 1972. Its sister brand UPIM has been operating in Italy since 1928. Even though it can look back on a long tradition, this company offers today's customers a state-of-the-art digital omni-channel experience. The company has developed an App that enables consumers not only to shop online, but also to visit the in-store virtual changing room. Using the digital wall with an integrated camera, they can take selfies, whilst retrieving information on other products and their availability in different sizes via the touchscreen, before ordering the clothing of their choice and having it sent straight to their doorstep. This digital offering is backed up by a fully networked supply chain. OVS relied on the Fashion PLM from Lectra to reorganise its entire product development process, from the design right the way through to production. The software solution brings together all the data and processes relating to the collections' product life cycles in a central data platform. Though based in different locations, staff can work on the same reference data at the same time. The Fashion PLM enhances teamwork, minimises errors and prevents tasks from being carried out more than once, paving the way for shorter lead times.

The fourth industrial revolution is in the starting blocks with digital supply at its very heart. Nicolaes concludes: "Many long-established companies are lagging behind when it comes to digitalising their business models. Switching to a digital supply chain is providing industrial pioneers with hard and fast benefits and opportunities. Unfortunately, latecomers run the very real risk of missing the boat entirely," so Nicolaes.

[www.lectra.com]
[www.godfreysyrett.co.uk]
[Jacqueline Kellner]

Chris Nicolaes, Managing Director Lectra Germany

Jacqueline Kellner, Fashion & Marketing Manager Director, Lectra Germany

IFKT

Swiss National Section

This year's International Congress of the International Federation of Knitting Technologists (IFKT) took place on 19th May 2017 in Zurich, hosted by STF, the Swiss Textile College. Along with its Swiss members and IFWS affiliates, the Congress welcomed guests from its national sections in Germany and Austria as well as numerous STF textile technology students, representing the next generation of textile experts.

First on the agenda were five talks by specialists: Reallook AG's CEO Andreas Giggenbühl introduced Selfnations, an innovative programme with a clever algorithm that makes it possible for customers to order individually tailored jeans online. Using this technology, only 9 percent of first orders were returned, compared to an average industry wide return rate of over 50 percent.

Werner Baumann of Uster Technologies AG presented different testing instruments for quality control. Walter Bowals of Amsler Text provided information about the manufacture of fancy yarns and their properties. Andreas Hämmerle of Tecc-no-Tex GmbH talked about the role of the textile industry in the wider context of innovation and how technical textiles helped reduce the weight of cars as well as their emissions. Clemens Kaplan of Zimmer Maschinenbau GmbH showed printing and coating systems that are still being produced in Austria.

Uster Tester 6

Following a tour around STF, Schellenberg Textildruck AG, a poster child of Swiss business development, opened its doors to congress visitors. The company has been family-owned since its foundation in 1946 and never wavered in its commitment to high quality and technological advancement. Today, its three-shift operation processes 5.6 million linear metres every year. In order to be able to quickly respond to customer requirements, Schellenberg Textildruck has expanded its logistics system with a warehouse containing a vast stock of partially pre-treated raw materials and around 2,000 printing templates. The famous "Schellenberg Touch" has been developed by the company founder and continues to be refined and perfected with every generation. Thus, industry experts can immediately identify genuine Schellenberg products by their visual and textural qualities, which are sought after by the top names in the industry. A look at their client list reveals renowned brands such as Louis Vuitton and Mey. Urs Schellenberg explained how this Swiss enterprise keeps its leading position on the world market thanks to its high-quality product range and a respectful and success-oriented team spirit across the entire production chain.

Coating lines for customer tests and product development by Zimmer AG

The day's programme finished with the general assembly of the IFKT Swiss National Section. With all agenda items ticked off, interesting conversations and a stimulating exchange of ideas over dinner, lasting well into the night, provided the perfect end to a busy day.

The IFKT Swiss National Section extends its thanks to STF, particularly Sonja Amport (Director) and Holger Neubauer (head of the textiles department), for hosting the event as well as E. Schellenberg Textildruck AG and Urs Schellenberg for their time and support.

[www.knittingfed.com]

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The next industry meeting in Italy is Milano Unica in July

Photo: Fotolia

Milano Unica

Where do we go from here?

The markets have so far been relatively calm in their response to Brexit and Trump. There was general consensus at Proposte in Cernobbio in early May that business with the USA is, in fact, more buoyant than before. However, German dress shirt maker Olymp is already feeling the consequences of Brexit.

In an interview with German newspapers Stuttgarter Nachrichten and Stuttgarter Zeitung in February of this year, Mark Bezner, who steers the fortunes of Bietigheim-Bissingen-based Olymp, stated that he had pushed up the price of Olymp shirts in the UK by 10 percent. He blamed this latest move on the dramatic fall in the value of sterling. Olymp has around 800 members of staff and posted annual sales of over 240m Euro in 2016.

The next industry meeting in Italy, also for dress shirt manufacturers, is Milano Unica, the international trade fair for textiles and fabrics. It is scheduled to run at the exhibition centre in Rho, Milan, from 11 to 13 July 2017.

In the run-up to the fair, textile network spoke to Ercole Botto Poala, President of Milano Unica, about the current state of affairs.


Photo: Olymp Luxor

In the dress shirt study "Hemden 2017" by German magazine Textilwirtschaft, Olymp has reasserted its position on the German market as the leading brand among the sector's 31 most important suppliers.

textile network spoke to Ercole Botto Poala, President of Milano Unica


Photo: Milano Unica

Ercole Botto Poala

Textile network: How did the buyers at Milano Unica in Milan and the subsequent edition in Shanghai respond to Donald Trump's election in the USA?
Ercole Botto Poala: It's obviously difficult to predict the future, but it's certainly clear that our products are top quality and are already having to contend with high duties as a result. If the US wants to remain competitive in terms of quality, it will have to invest in know-how and expertise. You need more than just one term in the White House to effect this kind of change. And I don't think that the United States has the political will at this time to get to grips with one of the most traditional forms of industry which delivers positive results, but over a long period of time. It's not really part of the USA's DNA.

Textile network: And how are buyers responding to Brexit?
Ercole Botto Poala: Everybody here has adopted a "wait-and-see" approach.

Textile network: How important are the US and UK markets for Italian companies?
Ercole Botto Poala: The latest figures show that exports to the UK are stable and positive, having recorded a 1.5 percent climb. It's still a good market for Italian-made products, in spite of everything that has happened. It's a very different picture in the USA, the most important market in the world. Here, every little change for the better or worse has an immediate and direct impact on our exports. But I'm still sticking to my positive forecast for 2017.

Textile network: Have any UK exhibitors withdrawn from the next Milano Unica in Milan?
Ercole Botto Poala: The date has been brought forward to mid-July. We haven't received any cancellations from the UK. On the contrary, some British exhibitors are actually returning to Milano Unica.

[The interview was conducted by Ingrid Sachsenmaier on behalf of textile network]

Photo: Benetton

Stella Jean Capsule

IWTO

Benetton joins IWTO

In March of this year, the Italian Benneton Group became a member of the IWTO (International Wool Textile Organisation). Based in Veneto, it is the first European fashion company to join the organisation and in doing so, has underlined its commitment to environmental issues. Benetton Group participated in the IWTO's annual congress at the beginning of May in Harrogate, UK. To join the IWTO underscores the importance Benetton ascribes to knitwear and wool.

[www.benettongroup.com]

ITALY

Laura Biagiotti died

She had a predilection for white, she loved working with cashmere and had a gift for creating fragrances. Renowned fashion designer Laura Biagiotti has passed away unexpectedly at the age of 73 after suffering a heart attack in Rome. The "Queen of Cashmere", as she was fondly known in the USA, dedicated her "Roma" fragrance to the Italian capital, and presented it in a bottle resembling a fluted pillar. In her younger years, Laura Biagiotti had actually wanted to become an archaeologist. However, after completing her degree, she had a change of heart and decided instead to work at her mother's fashion studio. This is where she discovered her passion for designing cashmere fashion for slightly larger women. Together with husband and doctor, Gianni Cigna, she travelled the world, as an ambassador for Italian fashion. After the death of her spouse in 1996, Laura Biagiotti welcomed her daughter into the business. The 39-year-old will continue to run the company in the memory of her mother.

[www.laurabiagotti.it]

CONFINDUSTRIA MODA

Moving forward together

The Italian Confindustria Moda is the new umbrella organisation for several associations in the fashion industry, making it the second biggest association of its kind in Italy. Based in Milan, the organisation will be steered by President Claudio Marenzi of the northern Italian luxury fashion house Herno and will begin operations in early 2018.

Around 600,000 people are either directly or indirectly employed in the fashion sector. President Claudio Marenzi believes that the foundation of the fashion association "is of historical significance for Italian-made fashion," continuing, "We are an ambassador or our art, we are creative and productive, and we give consumers the ability to dream." The 67,000 companies, that constitute Italy's fashion industry, amass an annual turnover of roughly 88bn Euro. Foreign markets have a significant role to play, with 62 percent of sales generated abroad.

Claudio Marenzi has been President of the fashion association Sistema Moda Italia (SMI) since 2013 and head of Pitti Immagine (Florence) since 2017. His deputy at the new association is Cirillo Marcolin, who is similarly well connected in his role as President of the FIAMP (Italian association for fashion accessories) and ANFAO (Italian association for optical equipment).

The new body is planning to move into premises in Milan's Corso Sempione next year at the very latest. The building will accommodate not only the offices of all the member associations but also events, trade fairs and exhibitions.

The member associations will remain independent and will continue to focus on their main areas of interest. The umbrella association will focus, among others, on the provision of legal advice as well as on research, which will be allocated its own division.

[www.sistemamodaitalia.com]

Photos: adpic

Photos: Emi-G

USA

The sock capitol of the world

Gina Locklear had wanted to join her family's sock manufacturing business in Fort Payne, Ala., since she was in college. That was in the early 2000s, when the U.S. industry's decline was in full swing. Momentum toward cheap imported socks was robbing the northeastern Alabama town of its revered reputation as the "Sock Capitol of the World."

Locklear's parents started Emi-G Knitting in 1991, naming it after their two daughters, Emily and Gina. With the industry in a free fall, there was little incentive for Locklear to join the family business following her college graduation. "There's wasn't a job for me to come home to then, and we thought the business was going away," Locklear recalls. "Anyway, I did a few other things." During this time, she also gained an appreciation for all things organic. She believed she could produce socks made from organic cotton, brand them and be successful. Locklear took her organic sock concept to her parents, Terry and Regina Locklear, in 2008, and convinced them that was the future of the company. A year later, she created the Zkano brand, and three years later, the Little River Sock Mill brand. Both use organic cotton and the socks are made through sustainable manufacturing processes. Zkano is sold primarily online while Little River is sold in specialty boutiques. Little River, named after nearby Little River Canyon, was selected as a 2015 American Made Award Winner by Martha Stewart American Made, which honors American entrepreneurs. Moreover Locklear and her socks were the subject of a profile by The New York Times in 2016.

"We literally started from the ground up," Locklear says. "I knew how to make socks for other people, but I didn't know how to make socks and sell them. There was a big learning curve."

The brands use organic cotton grown in Texas. Yarn comes from a spinner in North Carolina, using low-impact dyes.

Locklear says she receives emails every day from customers expressing happiness about the company making socks in the U.S. Zkano and Little River operate lean, with just 15 employees, some of which float between Locklear's sock operation and her parents' greige goods business, which produces athletic socks.

"We have been lucky with our labor situation," Locklear says. Emi-G Knitting employs an arsenal of more than 140 Sangiacomo machines. They are a mix of new and vintage. The Zkano brand, comprised of colorful fashion socks for both men and women, reaches across different markets and is green and organic focused. Locklear says people who buy her socks like supporting U.S. manufacturing and are also intrigued by the use of organic cotton. The sustainability aspect is the "cherry on the top" of the operation. The Little River brand has primarily targeted women, but it launched a men's line during the fall of 2016. Both brands emphasize sustainability in their manufacturing operations.

Socks are now trendy on fashion runways, Locklear says, which helps fuel her optimism. Men want to wear "crazy and bold" sock styles as a way to accessorize a basic look. She notes that her company has seen considerable growth in men's fashion socks.

So far, Locklear has eschewed advertising in favor of doing press interviews and getting the company's message out through its website. She is passionate about the business.

"I love getting out there and telling people what we do" , says Locklear. "2016 was a great year and we will keep growing. More and more people are buying our socks and they love them and our quality. I see that continuing to happen. We try to do as much press as we can to get the word out there. We have a great sales team that takes our socks to various trade shows."

Don't expect Emi-G to broaden into other product areas. Socks will always be the focus. Growth will come from new sock designs and Locklear says the company will continue to offer more sock options each season.

[www.zkano.com]
[John W. McCurry]

Zkano and Little River – socks made from Organic Cotton

A video on the company's website helps tell the story of the company and Fort Payne's sock-making heritage. Gina Locklear says that helps spread the excitement to a broader audience. She also notes that the greater Fort Payne area, which once was home to nearly 150 sock mills, now has less than 20. For Gina Locklear the biggest challenge is not unlike that of other small businesses: A small budget requires considerable creative thinking.

Gina Locklear (left) with her parents Terry and Regina Locklear


Many guests


Many discussions

Many speakers

Photos: Prime Source Forum

12th Prime Source Forum

The future of fashion sourcing

The 12th Prime Source Forum, a textile and apparel (T&A) industry event, took place in mid-March in Hong Kong. Over 40 speakers from Asia, Europe, Africa and North America spoke on topics related to the T&A business, trade, marketing, financing, new development and technology. The event comprised two keynote speeches, six sessions and eight CEO dialogues.

What does the future fashion sourcing landscape hold? Given that the supply chain involves many countries, it is important to keep a flexible mindset and agile operation. Buzzwords used at the Forum included speed, integration, consumer first, collaboration, agility and flexibility. There was general consensus that China would remain a key manufacturer whilst becoming an important large-scale market. Africa is considered the last frontier.

The next 10 years

Manufacturing will be moved closer to the consumers – local for local. E-commerce, online retail, big data collection, fashion platforms, technology and innovation are key components of the T&A industry going forward.

Although China is growing at a slower rate, it is still expanding at 6.5 percent. China is still a good place for T&A manufacturing. The producers who can survive in China are the best and most successful. They will flourish in spite of rising labour costs. In fact, the increase in wages is helping this industry to grow, restructure, upgrade, transform, differentiate and innovate its production, thus driving China's T&A industry to the next level. Meanwhile, some of the leading manufacturers in China are setting up operations in foreign countries in a significant way, especially in South-East Asia and Africa. In the next ten years, China's successful T&A companies will take the money made in China to invest all over the world, following and supported by the Belt & Road Initiative and Made in China 2025. The whole of Asia will emerge as a huge market, with China at the forefront. After all, China is growing fast as a market while shrinking as a manufacturer.

2025

By 2025, there will be 66 new airports, 5,500 railway stations with 120 million overseas tourist holidays being made by Chinese visitors. In the next 5 years, China will be home to 1.34 million HNWIs (High Net Worth Individuals) which corresponds to 54 percent of the upper middle class. Looking across to India, although the growth of its infrastructure is still lagging behind, it is an interesting place to keep an eye on.

E-commerce is the rising star of fashion supply chain management. Although it is challenging in terms of payment, taxation, regulation and duties, it is nevertheless an exciting area. It not only helps big manufacturers but also the smaller ones, provided logistics cost are kept in check. Five years ago, online trade was a PC business, but today it is a mobile business that is increasingly moving to cloud technology.

Bowing to the growing strength of e-commerce, especially among the millennials who are prime spenders and tech savvy, many retail stores and malls are closing down in the US. The bricks-and-mortar stores are fading in number but are not going away. Shopping malls will continue to function as showrooms where consumers go for a real shopping experience before purchasing their items online. It is important to create a balance between online and offline stores, even at a time when digital stores are gaining market share.

In the era of big data, consumers are eager for differentiation of style. Technology and innovation are driving the next new normal for the T&A industry. There are great business opportunities and more money to be made in the coming years using big data information. Digitalisation will force companies to reinvent themselves. Information and automation will emerge as the leading factors of change and growth. Technology based fashion platforms will drive sales in totally new directions with virtual and augmented reality devices enhancing online sales. Tech savvy millennials will transform the global economy.

China is changing

China is evolving into a very mobile phone-driven economy. It is leading the way in online spending, which accounts for 48.5 percent of consumer spending in China, 40.3 percent in Asia, and 32.2 percent in North America. In 2005, Asian household consumption reached US$ 7tn, rising to an estimated US$ 33tn by 2030. This compares with an expected US$ 17tn in the US and US$ 16tn in the EU. This indicates that Asia will be driving consumption through e-commerce. Both brands and manufacturers need to contribute to this end. Finding a good partner with the same vision is paramount and critical if companies are to work together.

The era of chasing the cheapest price has come to an end. Africa is the last frontier for the T&A industry. It offers a great opportunity to manufacturers of all product types, especially T&A as it employs many workers and helps Africa to earn much needed foreign currencies. Ethiopia has a clear vision to build its country by establishing a quality T&A industry. Its advantage for manufacturing lies in its government endorsing and supporting strategy, unlike those in South-East Asia. The government's alignment with the industry is critical to its success. The Hawassa Industrial Park, flagship park in Ethiopia with state-of-the-art facilities was built specifically for the T&A industry in just nine months and was opened in 2016.

Read more about Africa and the Hawassa Industrial Park in Ethiopia in our Online-Magazine.

[Vicky Sung]


Photo: pixabay

56. DORNBIRN-MFC

An idea- and network generator

Overall, more than 700 participants from 34 nations visited the Dornbirn-MFC last year (80% from Europe, 15% from Asia, 5% from the Americas). In 2017 some delegations from Asia and the Americas have confirmed their participation.
The European characterised innovation platform for the fiber industry and the various stages of the value chain should act as idea- and network generator – each participant is part of the success of the event. Help shape the "Innovation Community" and encourage your business associates to visit the meeting.
For the introductory lecture in the field of protective applications a speaker of NASA/ USA could be acquired on the issue of flame retardend textile fibers for space research. Inter alia a reputable global producer of protective clothing will present the latest developments and the requirements of the preliminary stages of the supply chain.
In the field of sportswear Vaude the innovative and repeatedly rewarded outdoor brand will enrich the topic with its presentations. Appealing contributions from industry and research will be delivered on the issue of functionalization and ecological manufacturing process.
In order to generate a more interactive and more vivid programme sequence additional discussions within the main topics are being planned.
Top-class key note speeches with foresighted and partly provocative perspectives will give fresh momentum to all participants.
Expert Panel "Textile & Nonwovens Waste" – a Threat or Opportunity?" the day before the opening of the Congress:
This highly topical issue will be handled precisely by an expert team from the fiber industry, the downstream stages, retail and for the first time from the waste disposers (Waste Management Companies).
The current preliminary programme with details about the lectures, updates and registration forms can be found at

[www.dornbirn-mfc.com]

More than a 100 expert lectures concentrate on the following key themes:
- Fiber innovations
- Fibers, textiles and nonwovens for hygiene and healthcare applications
- Fibers, textiles and nonwovens for protective applications
- Fibers, textiles and nonwovens for sports and leisure wear

56. Dornbirn Man-made Fibers Congress (Dornbirn-MFC)
13 – 15 September 2017
Communicating the Future of Man-made Fibers

BERTHA BENZ PRIZE 2017

Weaving ultra-stable metal cells

Dr.-Ing. Cornelia Sennewald has been awarded the Bertha Benz Prize 2017 for her doctoral thesis on "Generative Structure, Technology and Weaving Loom Development for Unique 3D Cellular Structures in Lightweight Construction". Cornelia Sennewald, Engineer at the Faculty of Mechanical Science and Engineering at the Technical University of Dresden explains: "In the processing of lightweight metals such as aluminium, casting processes have reached the limits of what is physically possible. The next leap in quality towards markedly lighter and more stable structures can only be achieved through the manufacture of metal cells. These are made by weaving wires together in such a way that they create ultra-strong connections with the minimum use of material." The award-winning thesis was completed at the Institute of Textile Machinery and High-Performance Material Technology (ITM), which is organised within the Faculty of Mechanical Science and Engineering at the Technical University of Dresden.

[www.tu-dresden.de]

About the Bertha Benz Prize

The prize is awarded by the Daimler and Benz Foundation for an outstanding doctoral thesis by a female engineer. Endowed with 10,000 Euro the prize is presented every year during the Bertha Benz lecture programme.

Daimler and Benz Foundation

Driving knowledge – The Daimler and Benz Foundation supports the generation of knowledge. It focuses on promoting young scientists, interdisciplinary collaborations and research projects across all scientific disciplines. The non-profit foundation is on a par with the big German foundations that are committed to supporting science.


Photo: Mirko Kraiwon/ITM

Together with her colleague Dipl.-Ing. Michael Vorhof, Dr.-Ing. Cornelia Sennewald checks the structure of the 3D woven metal cells

Exclusive series - Industry 4.0 explained - Part 4.1

Working World

In the previous issue, human-machine interaction was discussed in considerable depth. In the context of this topic and the move towards Industry 4.0, the world of work will inevitably change in a diversity of different ways. The following article examines selected aspects of the changing world of work against the backdrop of textile production.

Characteristics of working world transformation

As part of the digitization process, work tasks become more and more flexible in terms of content and time and work activities are assisted, for example through the collaboration with robots. Mobile devices will be part of everyday life as work equipment or an interface to the machine and will play an important role for instance in the planning of the work organization. The respective workplace will be adjusted individually to the employee and supplemented by virtual working environments. The employees working in flexible forms will enjoy a new way of leadership through mobile and networked work and have to qualify and develop on-the-job.

Current perception and discussion

In society the change of the working world in the course of digitization is currently controversially discussed. Fears of increasing information overload and complexity, an increasingly rapid change, excessive demand and job losses dominate the negative scenarios and predict a rise in mental stress.

On the other hand, there is the unanimous opinion that physical stress will be significantly reduced by means of various assistance systems, such as human-robot collaboration. Also a displacement of humans from the production by robots is hard to imagine, since fine-motor activities are still a great difficulty for robots, especially when dealing with textile materials. According to surveys, task areas and the range tasks of production work will change in the course of digital transformation, hence the necessary competencies of the employees will also be shifted. This development can be answered through the targeted strengthening of important specialist skills and key competences, such as the overall process understanding, the IT knowledge, the willingness to learn, the ability to communicate (including to machines) and problem solving competence. Increased psychological stress can be countered, for instance, by information technology assistance systems that filter the huge amount of data into relevant information. Exemplarily, these developments can be described very well in the case of a machine operator.

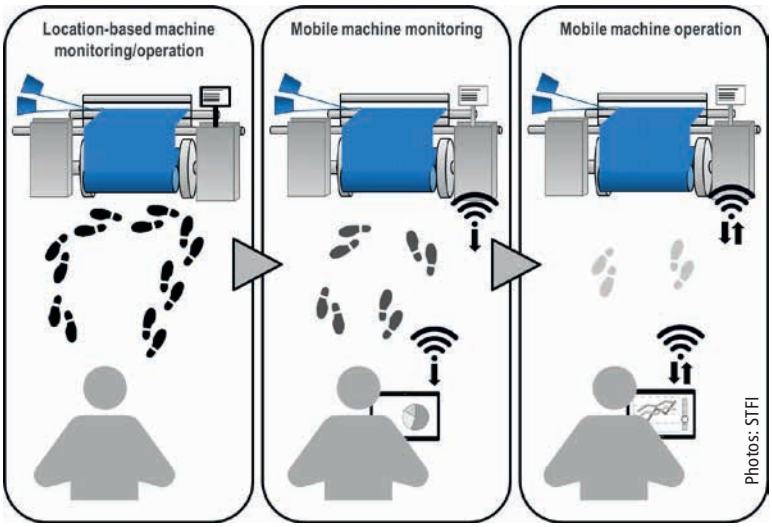

Figure 1: Stages towards mobile machine operation

Stages towards mobile machine operation

For the machine operator, for example of weaving machines, there is currently a high effort in the documentation of actions on the machines to be supervised. In addition, monitoring of the machines requires enormous walking distances. Despite all this, there is no transparency about process events as well as parameters and states of the machines and tools in the periods when the operator is not on site.

By upgrading the machines with networked sensors, it is possible to recognize when the intervention of the operator on the machine beco-

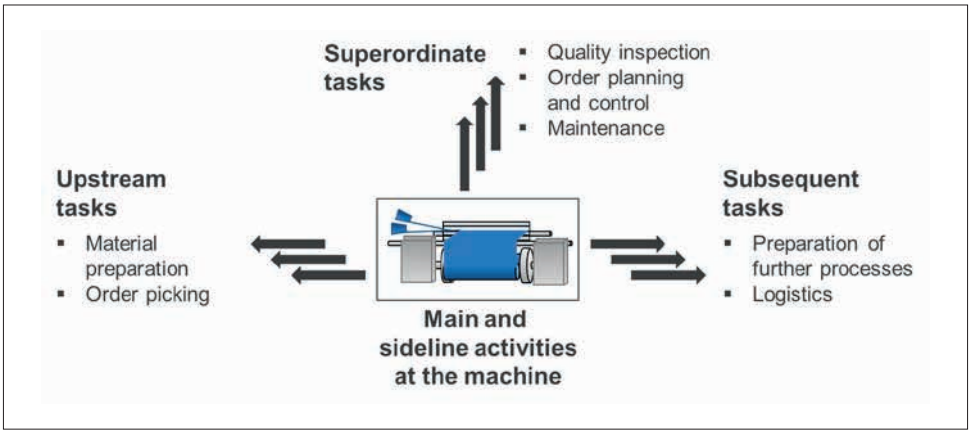

Figure 2: Expansion of the area of responsibility using the example of the machine control

mes necessary. Corresponding information is transmitted from the machine and sent to the operator's location-independent mobile device (see Figure 1). In the case of a multi-machine operation, the employee can be on site as quickly as possible by visualizing the machine information, e.g. for determining the default-to-actual deviation on the machine (machine speed, efficiency or number of stops) and correct any faults. Intelligent data analysis (temperature, tool status, vibrations, or produced quantity) allows the operator to evaluate the machine status and, if necessary, pass it on to request appropriately qualified personnel. In addition, the mobile device allows entering activities carried out on the machine directly into the production system.

Furthermore, there is a high effort for the machine operator to always have to be on the machine in order to remedy problems by "simplest" activities. The use of mobile devices with the possibility of interacting with the machine allows the operator to perform corrections automatically. Thus, the operator can view the status of the machines to be supervised at any time and initiate actions on the machine remotely in the context previously defined events and situations (such as rebooting the system after automatic, non-manual troubleshooting). Operating activities can be documented and evaluated automatically. However, safety aspects must also be considered when operating from far.

For example, existing security systems can be supplemented by systems of area monitoring, so that no persons are in danger areas when the machine activity is resumed.

The benefits of mobile (multi) machine monitoring and control are enhanced productivity due to reduced running distances and reduced documentation requirements for the employee as well as increased transparency for the long-term prevention of production interruptions. Based on up-to-date information – in real-time – the employee is offered a digital assistance for better decision-making. Accordingly, in the case of simultaneous errors on several machines, a prioritization of troubleshooting with regard to the complexity or urgency of the job can be carried out. Reaction times are shortened; allow quickest possible interventions and thus corrections of a plan deviation in the multi-machine operation.

At the present time, two different scenarios for the machine operator of the future are being discussed in research (Fraunhofer IAO). In the so-called automation scenario, work steps are determined by "technology". Each machine situation triggers an action for the operator. The employee carries this out without any decision-making scope. The operating extent and the monitoring effort are thus reduced. Here, suppression tasks are expected to a lesser extent and are only indicated to the machine operator if he can solve them by way of small-scale solution assistance. The employee remains in his main deployment area and performs a few upstream and subsequent tasks.

In the opposite tool scenario, there is scope for action and decision-making, such as the selection of the next job, prioritization or optimizaton of the employee. There is an optimal transparency about the process, which enables the employee to make the right decisions and to optimize his actions. Messages on relevant machine data and statuses as well as additional information assist the operator in recognizing, evaluating and correcting process/machine faults. Depending on the work situation, the employee decides independently about the execution of sideline activities, such as changing the warp beam or creeling the bobbins.

The two "extreme" scenarios are process-, machine- and situation-dependent and can change within the value-added chain, which is why the overall process can be described as a hybrid scenario.

Change in the area responsibility

The central question in the design of an Industrie 4.0-compliant working environment 4.0 should be: How can the digitalization support employees to perform a highly productive and, at the same time, low stress work? In part 4.2 in the next issue we will give you some examples about the new working world.

[Robert Mothes, Dirk Zschenderlein
Sächsisches Textilforschungsinstitut Chemnitz e.V. (STFI)]

Whereas the previous issue of textile network 5-6/2017 took a closer look at the interaction between man and machine, Part 4 of our series is devoted to the changing world of work in textile production. In Part 4.2 in the next issue we give some examples.

Part 1: Networked Production, Part 2: Smart Maintenance, Part 3: Human-Machine Interaction, Part 4.1 /4.2: Working World

Who What Where | The textile suppliers guide

FIBRES AND YARN

The next issue of textile network will be published on 22th August 2017 and these are some of our topics:

Photo: Ilona Schulz

Guimaraes Home Textiles Show
Textile Network visited the small home textiles fair in the north of Portugal. We report on the latest developments and products from a country with a long tradition in textiles, an abundance of creative brand manufacturers and efficient contractors.

Digital colour management
In the fashion industry colour plays an important role both in the design and production of the collections. When it comes to colour management and communication, textile company Takko Fashion relies on the multispectral systems from Caddon. The measuring process creates visual colour impressions and was developed by Caddon Color Technology GmbH in Aachen, Germany (R & D).

Photo: Takko

Taking climate protection seriously
What impact do our actions have on the climate and the environment? This question is of ever increasing relevance to logistics companies and their customers. Hermes Germany is committed to reducing its CO_2 emissions along the supply chain – and on all fronts.

Photo: Fotolia

Photo: Belvedere Wien

Vulgär? Fashion Redefined
The exhibition "Vulgär? Fashion Redefined" at the Winterpalais Prinz Eugen in Vienna explored the limits of what is deemed "good" taste. The diverse definitions of the "Vulgar" were shown through breath-taking fashion creations from the Renaissance to the present day.

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Network

Success at Techtextil/Texprocess

textile network is at home not just in print but also in the digital media. When we tell a story on textile-network.de or textile-network.com, we continue writing it in the print edition, we share it on Facebook, comment on it on Twitter or introduce it on YouTube. We are networking every day and in every possible way. You can join our network too!

Photos: Iris Schlomski

Thank you all for a fabulous trade fair! textile network and the VDMD

Jana Kern (Kern Kommunikation), Prof. Dr. Andre Matthes (TU Chemnitz), Jörg Diekmann (Oeko-Tex), Sophia Schneider-Esleben (SSS) with Iris Schlomski and René Lang

Stephan Gunold (Gunold), Antoine Doubacis (The Patternclub), Joachim Rees, (Multiplot), Jürgen Brecht (Marc Cain), Michael Nothelfer (caddon printing) with Iris Schlomski

We would like to take this opportunity to extend our heartfelt thanks to our wonderful interviewees who joined us "on the white sofa" and the VDMD team for the fantastic collaboration at our joint "Space in Living" appearance at this year's show! Based on the fair's special event "Living in Space", we set up our "Chill Lounge" in the foyer of Hall 4.1, Stand FOY 86, where we held daily interviews with interesting personalities from the industry. The 19 short interviews focused on issues currently facing the industry. If you missed the interviews or would like to listen to them again, the videos and podcasts will be available on our website from August 2017 (in German)!
This year's appearance in Frankfurt was an incredibly enjoyable experience for everyone involved and we are very keen to intensify our dialogue with you, our valued readers – simply join our network and get involved!

Your team at textile-network

An association-talk: Silvia Jungbauer, Gesamtmasche; Mara Michel ,VDMD and Michael Pöhlig, IVGT. The interview was conducted by René Lang, President of VDMD (on the left)

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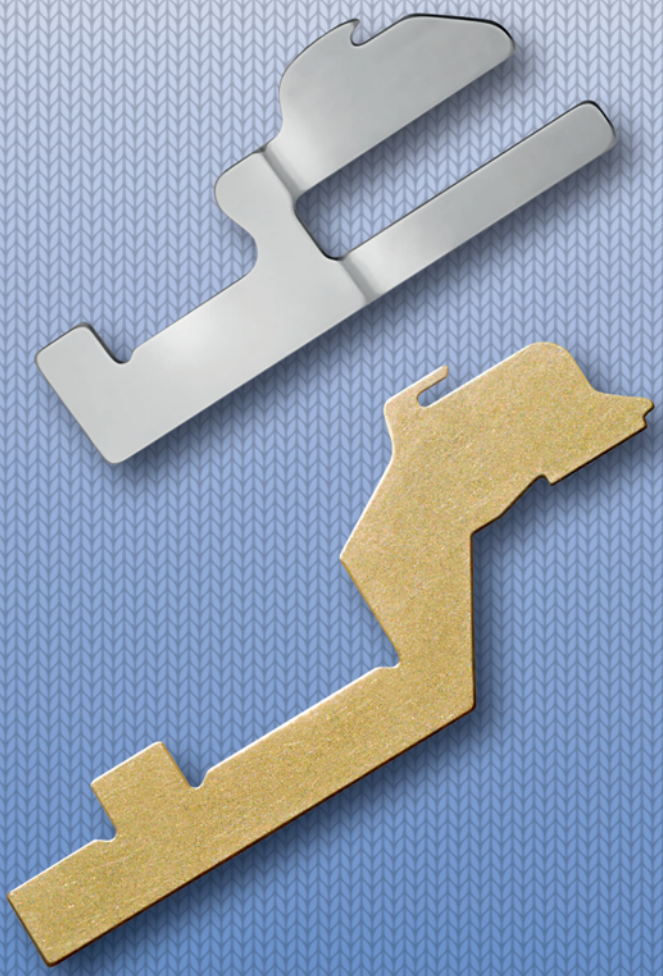

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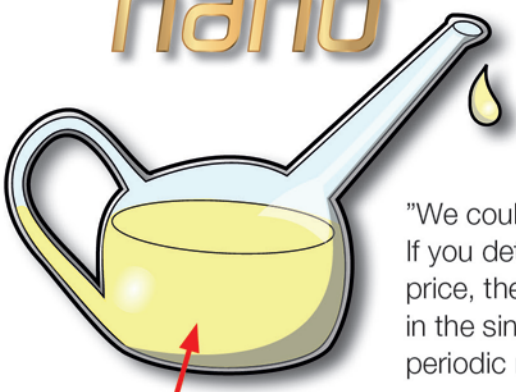

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