

WORLD FOOTWEAR

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Private equity descends on footwear

Children's shoes pose big dilemmas

Safety first for factory operatives

Next generation of virtual design

wtp
PUBLISHING

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UK-based Hotter Shoes has carved a niche in the 'grey' market and is among a number of brands bought by private equity firms in recent months.

Image: Hotter

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IBC.Advertiser/Reader Enquiry Service

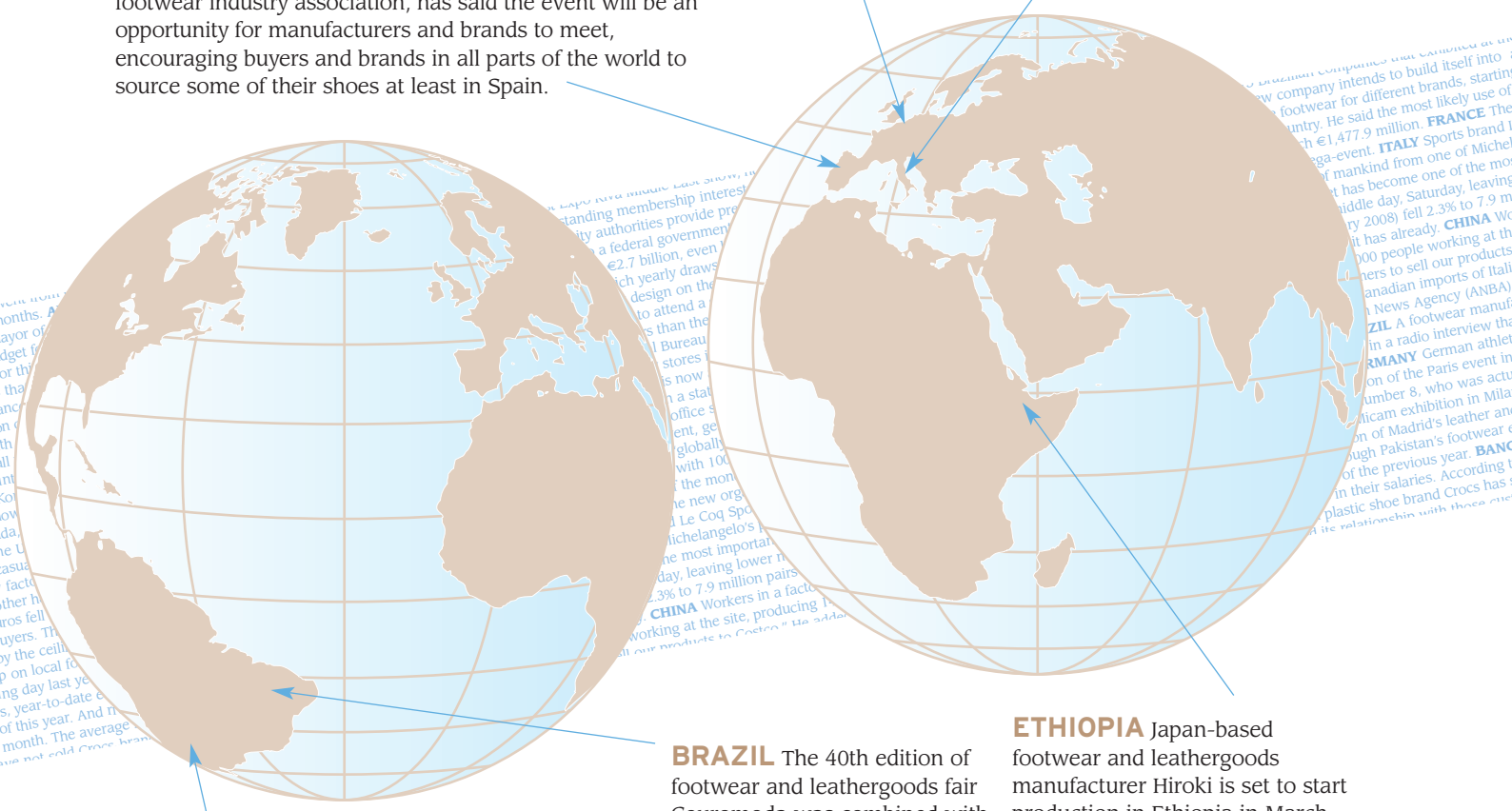


News

NETHERLANDS Ancient shoes uncovered in Scotland in 2011 are on show at the Dutch Leather and Shoe Museum in Waalwijk from February until May this year. Fieldwork on a new supermarket for retail group Tesco in the town of Camelon, near Falkirk, uncovered a large collection of women's, men's and children's shoes dating from the period the Romans spent in the area (from 138 AD to 161). The museum said the collection is "out of the ordinary" because of the large volume of shoes it contains and the great variety it contains.

SPAIN A new event called Co-Shoes International Workshop will take place for the first time in Alicante in October 2014. There has been talk of a new footwear event in the city, which is at the heart of much of Spain's shoe production, for many years. FICE, the country's main footwear industry association, has said the event will be an opportunity for manufacturers and brands to meet, encouraging buyers and brands in all parts of the world to source some of their shoes at least in Spain.

ITALY Italian footwear manufacturers association Assocalzaturifici has collaborated with the Ministry of Economic Development for a study of online counterfeiting. According to Assocalzaturifici, revenue lost because of counterfeiting is between €190 million and €240 million per year. In 2012, fake footwear with a value of €17.2 million was sequestered in Italy. Cleto Sagripanti, president of Assocalzaturifici, said: "You often hear about brand counterfeiting, with the idea that only the great brands suffer from this criminal phenomenon. In reality, it is also a problem for small- and medium-sized companies, namely the make-up of the Italian manufacturing sector as a whole."



ARGENTINA Chief of the Argentinian government's cabinet of ministers, Jorge Capitanich, has held talks with representatives of the footwear, tanning and leathers goods industries and suggested that the government was preparing to stop raw and semi-finished hides from leaving the country. This move would guarantee a supply at relatively affordable prices of finished leather for footwear and leathers goods manufacturers. The country's minister for industry, Débora Giorgi, has said she believes the ban will help boost the value of leather-sector exports. In the last ten years, the country's footwear sector has grown by 300%, generating 35,000 jobs with 80% of the domestic footwear market satisfied by Argentine-made shoes.

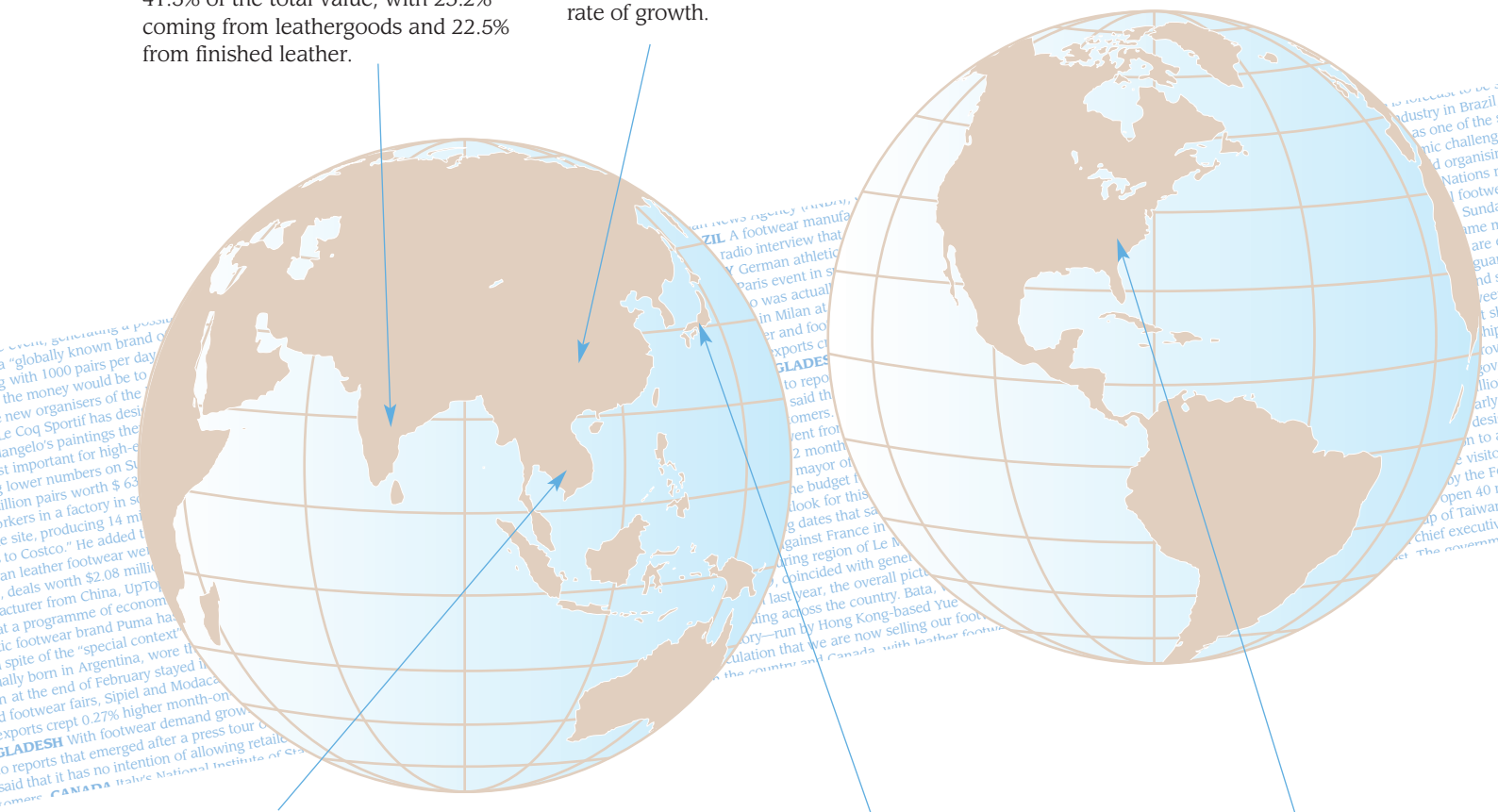
BRAZIL The 40th edition of footwear and leathers goods fair Couromoda was combined with the Sao Paulo Pret-a-Porter show to create what organisers describe as the country's "biggest business week ever", attracting 1,100 exhibitors and 104,000 visitors. Francisco Dos Santos, president of the Couromoda Group, which organised both fairs, said: "Couromoda is recognised internationally as a dynamic, innovative fair that generates actual business results, boosting the development of the footwear chain."

ETHIOPIA Japan-based footwear and leathers goods manufacturer Hiroki is set to start production in Ethiopia in March, producing leather shoes, garments and bags for export to the Japanese market. Youngil Song, president of Hiroki Addis, said: "We decided to open a factory in Ethiopia because of the availability of quality leather raw material. It is one of the finest leathers in the world." "Hiroki's decision to invest in Ethiopia is welcome, as it focuses on high quality products," said Tadesse Haile, state minister for industry. "They recognise the unique character of Ethiopian leather."

INDIA India's leather-sector exports increased by 17.1% in the first eight months of the current financial year, April-November 2013. These exports brought revenue of \$3.8 billion into the country in 2013, compared to \$3.2 billion for the same months in 2012. On announcing the figures, the Council for Leather Exports said footwear exports accounted for 41.5% of the total value, with 23.2% coming from leathersgoods and 22.5% from finished leather.

CHINA At least 16 workers died following a fire at a shoe factory in the town of Wenling, in Zhejiang province. Firefighters rescued around 20 of the people working in the unnamed factory, with five of these being treated in hospital afterwards. It took firefighting teams three hours to get the blaze under control. An investigation into the cause of the fire is under way.

● Chinese brand Belle International said it is continuing to open new stores across mainland China. In of the fourth quarter of 2013, it opened 481 stores, taking its total retail footprint to 13,183 footwear stores, in addition to 5,894 sportswear outlets. Analysts of the Hong Kong Stock Exchange, where Belle is listed, have suggested the company's determination to keep expanding its retail network may be affecting its rate of growth.



CAMBODIA Six North American trade associations have sent an open letter to government and industry stakeholders in Cambodia urging an immediate end to the violence and protests regarding Cambodia's minimum wage. It calls for stakeholders to develop a regular wage review mechanism to "promote both the short- and long-term health and stability of the Cambodian garment and footwear industries". The American Apparel & Footwear Association, the Canadian Apparel Federation, the National Retail Federation, the Retail Council of Canada, the Retail Industry Leaders Association and the US Fashion Industry Association said: "Our industry is committed to ensuring that all the products that they produce, source and sell are manufactured under lawful and humane conditions."

JAPAN The Japan Leather and Leather Goods Industries Association has reported that the country produced 1.24 million pairs of leather shoes in November 2013, 5.2% fewer than in November 2012. However, it produced 1.52 million pairs of rubber/plastic shoes in the month, 1.8% higher than the year-ago period. The value of consumption for footwear per household rose 2.6% for the month to \$16.

UNITED STATES US sportswear brand Nike has committed to provide resources and partnerships in the US to help reshape the way kids take part in sports and play. The commitment is aimed at providing America's children with early, positive experiences in sports and aligns with Designed to Move, the framework for action that Nike spearheaded with more than 70 organisations aimed at reversing the physical inactivity epidemic around the world. Former US president Bill Clinton joined basketballer Kobe Bryant to promote the project. Research has shown that the healthcare costs associated with this physical inactivity epidemic are going to cripple our economies," said Mr Clinton.

● The US Department of Defence has begun evaluating domestically manufactured athletic footwear sources for procurement. "One way we can make America a magnet for new jobs and manufacturing without increasing the federal deficit is to make sure that the athletic footwear purchased by entry-level military recruits is manufactured by US companies like New Balance," said US Senator Susan Collins, who has been instrumental in pushing the new move. The Berry Amendment says soldiers should wear American-made uniforms where possible, however, since 2002 for the army and 2008 for the Air Force, recruits have been given an allowance to choose any brand of athletic shoe.

Footprints

MICAM SHANGHAI 'A SUCCESSFUL MODEL', MINISTER SAYS

Italy's minister for economic development, Flavio Zanonato, has described Micam Shanghai, the Italian high-end footwear industry's trade exhibition in China, as "a successful model of internationalisation for Italian products".

The third edition of Micam Shanghai will take place in the Chinese city from March 24-26. It will include 260 exhibitors from Spain, Portugal, Brazil, France, Turkey and the UK, as well as Italy, presenting their collections for autumn-winter 2014-2015 to an audience of qualified buyers from all parts of China, as well as from Hong Kong and South Korea.

Speaking at a meeting in Beijing to boost trade between Italy and China, Mr Zanonato stated that the event "constitutes a great opportunity for growth overseas" for the Italian footwear industry.

SENIOR SATRA FIGURE DIES

Graham Butlin, a former director of SATRA (Shoe and Allied Trade Research Association), has died aged 84.

He was with the UK-based institute for 32 years and was director for 14, retiring in 1991 aged 61.

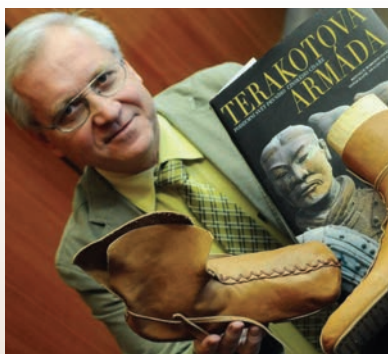
In the 1960s he led the team responsible for a number of shoemaking innovations including moist heat setting, which won the Queen's Award for Technology.

The company describes him as one of the "most influential figureheads in the footwear industry of its time".

Mr Butlin was awarded the OBE (Order of the British Empire) for services to the footwear industry in the 1983 New Year's Honours List.

CHINA'S COMPANIES SHOULD USE AFRICAN LABOUR, SAYS ETHIOPIAN PRESIDENT

Ethiopian president Mulatu Teshome believes China's investment in Africa will enable the superpower to counter rising wages in its homeland and help it to remain competitive, adding that



CZECH FOOTWEAR INDUSTRY FIGURE DIES

A senior figure in the European footwear industry, Petr Hlavacek, died January 10 at the age of 63, in Borsice in the Czech Republic. Mr Hlavacek was emeritus dean of the country's Bata University at Zlin.

Apart from scientific work, particularly on developing footwear for people with diabetes, Mr Hlavacek was interested in shoe history.

Projects he worked on with his research team included the shoes worn by the 5,000-year-old Alpine mummified man, Ötzi, and those worn by China's Terracotta Warriors.

In 2005, he received an award from industry body UITIC for technological developments and as a member of the United Nations Industrial Development Organisation's (UNIDO) leather panel, he helped organise a high-level industry event in Zlin in 2000.

On learning of his death, former UNIDO colleague Ivan Král said of Petr Hlavacek: "His positive, constructive approach, and his commitment, integrity and competence, set standards hard to maintain. He leaves behind an amazing legacy, and for that he will be always fondly remembered."

Mr Hlavacek authored the children's footwear article on page 28.

Africa could capture a significant proportion of the 80 million manufacturing jobs that China is expected to shed.

He said Ethiopia-based Chinese companies can sell to the US and European Union and avoid the import duties they would face if they were based in their own country.

Chinese shoemaker Huajian Group is looking to invest \$2 billion in the country. "What we are witnessing in Ethiopia nowadays in terms of the country's manufacturing capacity would have been unimaginable 10 years ago. Government officials would have never conceived we could have a single factory where 10,000 workers are employed under one roof," added Mr Teshome.

WOLVERINE CEO TO LEAD TWO TEN BOARD

The US-based Two Ten Footwear Foundation has named the CEO of Wolverine, Blake Krueger, as its president for the 2014-2015 term, the charity's 75th anniversary.

Diane Sullivan, CEO of Brown Shoe Company, has been named vice-chair, with new board members including

David Bensadoun, president of ALDO Global Retail; Patrik Frisk, president of Timberland; Dave Grange, president of Lacoste Footwear North America; Scott Meden, executive vice-president of Nordstrom shoe division; Liz Rodbell, president of The Hudson's Bay Company; and Clifton Sifford, CEO of Shoe Carnival.

"Over the last 75 years, the footwear industry has rallied together for one important social cause – promoting the dignity and welfare of shoe people and strengthening our footwear community," stated Neal Newman, president of Two Ten.

Mr Krueger said: "During my career in the footwear industry, Two Ten has been an important focus area of support for Wolverine Worldwide and for me personally. Lending our time, talent and financial assistance to Two Ten is a natural extension of how we support our communities and our footwear industry colleagues in times of need."

Wolverine's brands include Merrell, Sperry Top-Sider, Hush Puppies, Saucony, Keds, Stride Rite, Sebago, Caterpillar Footwear and Patagonia Footwear.

INDIA NEEDS AN EXTRA 4 BILLION SQUARE-FEET OF LEATHER PER YEAR

The twenty-ninth edition of the India International Leather Fair (IILF) formally opened on January 31 in Chennai.

In an opening address, the chairman of India's council for Leather Exports, Rajendra Kalan, said the country's leather sector had achieved growth in value of 17% in the first nine months of the current financial year, April-December 2013, and that he expected 20% growth by the end of the fiscal year in March, with exports reaching a value of \$6 billion.

India has a target of reaching \$14 billion in the value of its leather exports by 2017 and Mr Kalan said that if this target is to be met, tanners in India will need to produce an additional four billion square-feet of leather by that time.

"India produces about two billion square-feet of leather a year," he said, "but that is not enough."

SPAIN OFFERS BEST VALUE FOR MONEY, FICE PRESIDENT CLAIMS

The president of Spanish footwear industry association FICE, José Sanchís, has said his member companies have been preparing for the last 25 years to become export-focused and that, with the domestic market in severe difficulty since the start of the economic crisis in 2008, this policy is paying off.

"This is the reason why Spanish shoes are now on sale in more than 150 countries around the world," he said in a recent interview with specialist media in Spain. "And to get to where we are today, our manufacturers have had to understand that their main competition was not from rival companies in south-east Asia, but those in other parts of Europe, especially Italy."

Mr Sanchís said a focus on innovation across the whole of the footwear supply chain and "magnificent, leading-edge design" had led to Spain's footwear sector offering the best value for money in the entire global industry.

WORK COLLECTIVELY TO PROMOTE CHANGE, SAYS NIKE

In response to the recently published World Economic Forum (WEF) report, 'Towards the circular economy:

Accelerating the scale-up across global supply chains', Nike's vice-president of sustainable innovation has said the industry must pull together to achieve change. Hannah Jones, who took part in the WEF annual meeting in Switzerland, said Nike's vision includes harnessing innovations to design out waste.

"While Flyknit and other Nike-led technologies have greatly advanced the integration of sustainability and performance, materials innovation is not a problem we can solve alone. Creating a sustainable palette of materials would be disruptive to the world of making, but it's also incredibly complicated," she said.

"It is clear that no single company,

organisation or government has the ability to tackle this innovation challenge on their own. Instead, the innovations required to create the future will require new models of collaboration. We need to catalyse capital, capabilities, science and technology and resources far beyond the boundaries of our own supply chain.

"By working with other companies, NGOs, government agencies and stakeholders across the system, we can build a shared vision for addressing our toughest sustainability challenges. By tapping into this collective genius, we will all be better positioned to advance our business models and innovate at entirely new levels." 



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Products & Services

CAMTEX LAUNCHES CAMBRELLE WITH CELLIANT TECHNOLOGY

Shoe lining manufacturer Camtex Fabrics has announced its Cambrelle brand is now available with Celliant's mineral fibre technology.

Celliant is a patented blend of 13 optically responsive minerals that absorb the energy the body emits and recycle it back to the body, according to manufacturer Hologenix. It claims that fabrics made from its fibres improve circulation and increase tissue oxygen levels by over 7% enabling cells to metabolise glucose into ATP (adenosine triphosphate, an energy-bearing molecule). This helps improve performance, endurance and strength and reduces pain, aiding muscle recovery and healing, it says.

Camtex managing director Kieran O'Hare said: "The new Cambrelle with Celliant range enables Cambrelle to remain at the forefront of shoe linings and complements our already impressive range, which includes recycled Cambrelle, Cambrelle with Amicor and Cambrelle Conduct alongside regular Cambrelle, which is now made in both the UK and China."

DANISH GOVERNMENT POSES QUESTIONS OVER LEATHER SUBSTITUTES

The Danish government has issued companies in Denmark with a new set of guidelines warning them about the possible dangers of phthalates. Phthalates are widely used to make plastic materials, especially PVC, flexible, soft and pliable, "much-coveted properties", according to the paper.

This makes phthalate-containing PVC useful for many purposes, the Danish government has said, and it listed so-called "artificial leather products" as a specific example.

One of the main aims of the 32-page document is to help buyers in Danish companies and companies overseas that export to Denmark to limit and, in time, eliminate phthalates from the products they source or sell. It talks of a

"market conversion" that is taking place, partly because of REACH legislation to regulate chemicals in the European Union.

There is an easy solution for consumer product companies that have used PVC and other plastics as a substitute for leather in shoes and other applications: to substitute the substitutes with leather.

OEKO-TEX REVAMPS CERTIFICATE STANDARD 100

The testing firm the OEKO-TEX Association has updated the valid test criteria and limit values for product certification in accordance with OEKO-TEX Standard 100.

As of April 1, the specifications for perfluorooctanic acid (PFOA), used to make footwear and textiles waterproof, will become much stricter.

Four longer-chained, perfluorinated compounds will also be included in the criteria catalogue with the same limit values as PFOA. The reason behind this is the inclusion of the chemicals in the ECHA Candidate List with substances of very high concern (SVHC) as part of the REACH legislation.

All the perfluorinated compounds (PFCs) regulated by OEKO-TEX will be listed in a separate substance category, and not, as previously, in the section 'Other Chemical Residues'.

FREUDENBERG ANNOUNCES SPUNLAI D IMPROVEMENT PROJECT

Nonwovens producer Freudenberg is to upgrade its spunlaid production; footwear is one of the application areas the company believes it will be able to serve better.

The company is investing several million euros at its production sites at Durham, North Carolina, US, and Kaiserslautern in Germany. Both investment projects relate to "the further technical development of existing lines" but will enhance product quality, Freudenberg has said.

It said it was going ahead with the development because of demand in its target markets, including footwear, for

higher-quality materials with improved performance properties.

MAPPING EXERCISE TO GAUGE INDIA'S DOMESTIC FOOTWEAR MARKET

While keeping its ongoing focus on external trade, India's Council for Leather Exports (CLE) has announced that it will commission a new study in the coming months to map the extent of the country's domestic leather and footwear industry.

Speaking at a press conference at the India International Leather Fair in Chennai at the start of February, the CLE said that official footwear consumption figures suggest 1.8 pairs per person per year in India. With a population of 1.2 billion people, this puts the size of the domestic footwear market at 2.16 billion pairs a year.

However, the council made it clear that this figure may not be accurate. It said: "We know that, with a population of 1.2 billion people, our domestic market is a very good one but the real numbers are not so easy to gauge. This needs mapping and we intend to commission a big consultancy firm to carry out this mapping exercise, starting in the next two months."

EXPANDED EVONIK FOAM PLANT UP AND RUNNING

German industrial group Evonik has successfully begun operations at its new production facility in Darmstadt for Rohacell structural foam, following an investment of approximately E6 million.

Rohacell is a structural foam based on polymethacrylimide, which is used in fibre-reinforced composite parts for lightweight applications.

Evonik's new facility will increase the polymerisation capacity at the site by 50% thanks to extensive automation using robotics; cycle times have dropped by almost half.

"The facility enables us to account for the increasing demand and growth strategy for Rohacell," said the company's head of performance foams, Dr Andreas Hoff, when operations started. 📍



Backtrack

World Footwear's publishing cycle and limitations on space make it impossible for us to run more than a carefully selected sample of news from across the industry. However, we publish hundreds more stories on **www.footwearbiz.com**. The site is updated every day with news from every continent and every part of the industry, making footwearbiz.com one of the most

comprehensive archives of news anywhere on the web for the global footwear industry.

We list below just a few of the headlines that have appeared on the site in recent weeks –

www.footwearbiz.com allows you to read those you have missed.

14.02.14

Growth for Church's in 2013

12.02.14

DSW 'satisfied' with flat sales

11.02.14

Dip in Jones Group revenues for 2013
Micam will have a record number of overseas exhibitors in March

07.02.14

Jack Wolfskin's overseas sales relieve slump in domestic demand

06.02.14

Footballer Ibrahimovic's boots raise €22,000

05.02.14

Double-digit worldwide growth for Ferragamo

04.02.14

Baffin relaunches 'purely Canadian' Heritage boot

03.02.14

Under Armour reports 25% jump in footwear revenue

31.01.14

Chinese sports brand bucks trend with 15% revenue increase

30.01.14

Lamebo heads to India

29.01.13

Funding available for shoe firms in Pakistan to attend Italian fair

28.01.14

Keen hands out 'responsible outdoor participation' grants

27.01.14

New CEO and president for Patagonia
Brazilian footwear brand opens boutique in Tunisia

24.01.14

Coach's bet on footwear fails to pay off

23.01.14

Main Group to take part in Chennai fair

22.01.14

Private equity firm buys Hotter Shoes
Award for Icebug

21.01.14

Chinese body finds high levels of chemicals in children's shoes

20.01.14

Dexter seeks hand-sewn shoe revival
Merrell pushes Wolverine towards a record 2013

NEW

Cork-latex footbeds with antibacterial effect



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Hotter was bought by Electra Private Equity in January.
CREDIT: HOTTER

A recent spate of footwear brand acquisitions by private equity and investment firms has put the sector under the spotlight. But what is it that these investment groups like and how can the shoe industry benefit?

Capital gains

They were once described as “locusts” by a German politician, owing to a reputation for buying struggling companies, stripping assets and then exiting with a healthy profit, but private equity firms seem to have put that reputation behind them. True, the focus will always be on returns but by enabling brands to grow quickly through a mixture of investments, contacts and know-how, those on the receiving end can often be catapulted into markets they would have struggled to access alone.

The past two years have seen a spate of footwear brands fall under private equity ownership or receive backing from investment firms. Just before Christmas, the US-based Jones Group – owner of Brian Atwood, Kurt Geiger and Stuart Weitzman – was bought for \$1.2 billion by Sycamore Partners, while in mid-January Swiss asset manager Da Vinci Invest bought Bruno Magli from UK hedge fund Fortelus. Other recent deals include Apax’s purchase of Cole Haan from Nike for \$570 million, Blackstone’s \$200 million investment for a 13% stake in plastic shoe brand Crocs, and Marwyn Management Partners’ purchase of upmarket rubber boot brand Le Chameau.

This trend is partly driven by increasing consumer interest in brands and owning multiple shoes for different occasions, says Gareth Whaley, head of the retail and leisure team at Silverfleet Capital, which bought UK-based footwear retailer Office in 2012. “Also, shoe retailers potentially offer international expansion opportunities as fashion trends become more homogeneous across the world.”

This potential for growth is key. Focusing on the “grey” rather than fashion market, UK-based shoe manufacturer Hotter received a \$21 million investment from Gresham Private Equity in 2007 which enabled it to grow from five standalone stores to 56, while online sales increased 300%, helped by investment in the website, an enhanced digital marketing programme and improved IT infrastructure.

This growth, with sales doubling in the past four years, attracted the attention of Electra Private Equity, which had been tracking Hotter’s progress. “It epitomises what we look for in a buyout investment – a really strong UK-headquartered business with not only a UK growth story but also proven international potential,” says Alex Fortescue, chief investment partner of Electra Partners. In January, Electra bought the business for a reported £200 million from Gresham, and the company plans to launch an international website in the first half of 2014, driving further sales in the US and rolling out sales channels in other markets.

High-end focus

In the luxury footwear market – one of the fastest growing segments of the luxury sector, according to consultancy Bain & Co – brand positioning also plays a key role. Having a supply

chain that is “coherent” with the story is vital, says Alexandre Hamaide, managing director at EmCap Partners. “If you are a luxury brand and you’re manufacturing in Portugal or in Eastern Europe or China, this is not coherent. If you want to take a brand abroad and you want to market it as a luxury product, the Made in Italy or Made in France aspect is very important,” he says.

EmCap, a high-end-focused investment firm, backed luxury Italian shoemaker Alberto Moretti in December. “The market for shoes is very dynamic, both in mature and emerging markets,” explains Mr Hamaide. “On the emerging markets side, which is our focus, department stores dedicated to shoes are growing and there is more and more space dedicated to it. The Level Shoe District in Dubai Mall – opened by Chalhoub, one of the big distributors in the region – is one of the largest spaces ever allocated to shoes. Takashimaya in Singapore is doing the same, so there is a trend that retailers are allocating more and more commercial and space resources to shoes.

“If you look on a micro level, in the fashion or luxury goods industries in general, the footwear segment is one of the most dynamic with less inertia than other accessories such as bags or apparel.”

He points out that the leaders in the luxury shoe segment didn’t exist 20 years ago – Christian Louboutin developed through a sole entrepreneur and Jimmy Choo grew with the help of private equity funds. Leathergoods brands, however, such as Hermes, Gucci and Louis Vuitton have been established for decades – 100 years in the case of Hermes. “For this reason, we see the market for footwear and for luxury shoes in particular as more open to innovation – the clients are more open to change, to trying new brands, which we thought was very attractive.”

One of the first things he looks at in terms of small or up-and-



Alberto Moretti (right) joins designers (l-r) Erica Pelosini, Louis Leeman, Paul Andrew and Edgardo Osario to celebrate the first anniversary of Dubai’s Level Shoe District. CREDIT: LEVEL SHOE DISTRICT



Dr Martens increased sales by 27% to £160.4 million in the year to March 2013.

CREDIT: DR MARTENS

coming brands is scalability: if the growth strategies bear fruit the brand needs the ability to increase production. Alberto Moretti established his eponymous brand three years ago in Tuscany, with skilled workers and resources on its doorstep as well as a supply of high quality leather from the country's tanneries. The Moretti family's factories have been making footwear for Car Shoes, Salvatore Ferragamo, Gucci and Prada among others for decades.

"It is very important to have that history and understanding of shoe manufacturing because you can't improvise manufacturing shoes from one day to the other, it's a complicated process," adds Mr Hamaide. "Having a knowledge of manufacturing in-house is very important."

Brand strength

Lower down the scale, it might not be the supply chain story that is most important but the strength of the brand philosophy and how it resonates with customers. US-based Permira in January closed a £300 million deal for bootmaker Dr Martens, a brand that has been headquartered in Northamptonshire, UK, since the 1960s and is synonymous with rebellion and youth culture. "We were attracted to Dr Martens' brand authenticity and heritage, and its loyal customer base," says Cheryl Potter, head of Permira's consumer team. "Through our investments in the consumer sector [Valentino and Hugo Boss], we have identified a long-term growth trend in premium brands."

Much of Dr Martens manufacturing is done in China, having moved from the UK in 2002. Fabrizio Carretti, head of Permira's Milan office, says this, alongside its design skills and flexible cost base, gives it the ability to react quickly to changing trends. "We like the fact that Dr Martens is a lean and agile company," he explains.

Most of these types of deals typically involve taking seats on the board, to help steer company direction. They sometimes also involve management removal – as was the case with Cole Haan's CEO, who was replaced by the former CEO of Converse (although details of the departure are not known) – but Carretti cites Dr Martens' management as a reason for investment.

"The management team, led by CEO David Suddens, has

delivered an impressive turnaround and growth of the business since 2002 by focusing on product innovation, investing in the brand, improving operational performance, continuing the roll-out of retail stores and expanding internationally," he says. "Dr Martens' ambition is to complete its transition to a fully multi-channel consumer retailer, in order to better respond to the needs of its consumer. This is the strategy that we are backing."

Growth strategy

Mr Hamaide and Michelangelo Mantero, founder of GenCap Advisory and another investor, took seats on Moretti's board as part of their deal. A short-term priority is to open a standalone store in Paris or Milan and, later, London. "Consolidating the brand's presence in Europe is one of the keys to addressing foreign markets," explains Mr Hamaide. "In parallel, we are initiating talks with potential partners in international markets. The US is still a great market for footwear and the Far East is also very interesting – Hong Kong, Singapore and then China – and the Middle East."

Middle Eastern buyers are estimated to have spent 20% of their luxury budget on shoes in 2012, according to analysts, and Moretti gained recognition for a pair of 24-carat gold loafers for men and high-heeled pumps for women which went on sale in the Level Shoe District last year. "Our partner is currently working on a store in Abu Dhabi, which should be open in the next two to three months, so this is really coherent with what we want to do and where we are today."

The second part of the growth strategy, product development, involves increasing the size of the collections either to cater to a larger clientele without lowering the quality or brand positioning, while also increasing the number of shoes you can sell to existing clients, either on a wholesale or retail basis.

Some Private Equity firms might be known for an aggressive stance or job shedding, but most recent footwear investments seem to have been relatively straightforward – on the surface at least. It seems to be it is a trend that is unlikely to abate any time soon with Mr Hamaide and peers "closely monitoring" the sector. "We think there are great opportunities in this market," he says. 

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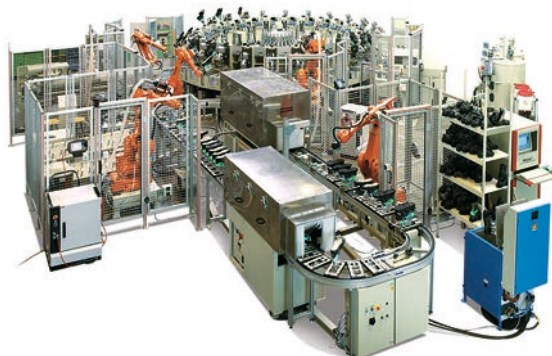


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New trade policies: how will they affect us?

The world is effectively getting 'smaller', with shoes typically crossing multiple borders before they reach consumers. Trade agreements, tariffs and partnerships have a huge influence on where factories locate or where brands choose to source from, with those benefitting from favourable conditions able to better compete or undercut rivals.

While talks can be arduous and drawn out, there are currently a number of important regimes being debated, including the Trans-Pacific Partnership (TPP) and the Transatlantic Trade and Investment Partnership (TTIP). New rules that apply to the European Union (EU)'s Generalised Scheme of Preferences (GSP) will also affect sourcing.

For manufacturers, brands and retailers these elicit a number of important questions: Which deals will affect me? What changes will I need to make to the way my business operates and who will pay? How can I take advantage of the benefits? Unfortunately, the answers are not clear: the talks are

A number of major agreements, including the Transpacific Partnership and Transatlantic Trade and Investment Partnership, could alter how footwear is sourced and traded around the globe.

confidential, so businesses need to arm themselves with the relevant information on what is being debated and how they might need to act so they are prepared when the time comes.

The long-running TPP debate

One of the biggest deals under debate and due to conclude at the end of 2014 (although it has already run beyond a number of deadlines) is the TPP, which includes the US,

CREDIT: PHB.CZ / SHUTTERSTOCK.COM

Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Peru, Singapore, Vietnam, Japan and now potentially South Korea. These countries are estimated to be responsible for 40% of the world's GDP and 26% of the world's trade.

The TPP aims to lift barriers to doing business overseas and boost economic growth by eliminating tariffs on goods and services, removing non-tariff barriers and harmonising regulations. For Asian countries, opening up North America could give access to some of the world's biggest spenders, and for the US, an agreement could boost its automotive trade with Japan. China is not included as it is negotiating a separate bilateral investment treaty with the US as well as other agreements in Asia.

For footwear companies, the TPP is particularly important. While typical duties on goods imported into the US average at about 1.5%, rates for footwear far exceed that; certain categories can be beyond 60%.

"Tough issues are still on the table relating to rules of origin and market access provisions – they describe how fast the duties are going to be reduced, and customs provisions, for instance what kind of requirements you need to clear a good," says Steve Lamar, executive vice-president of the American Apparel & Footwear Association (AAFA) and responsible for lobbying strategies on international trade.

Footwear tariffs

The footwear debate is centred on Vietnam. As the world's second-biggest footwear exporter after China, some believe that reducing tariffs will give it an unfair advantage, while others say it will benefit consumers by lowering prices and helping to create jobs.

A group led by US-based sportswear brand New Balance, which still has some domestic manufacturing, has petitioned for tariffs to remain. "Vietnam doesn't need a reduction in tariffs to continue to thrive," says its director of public affairs, Matt LeBretton. "We need tariffs to remain in place for our ability to continue to operate here. It is a very simple argument."

The Footwear Distributors and Retailers of America (FDRA) however has claimed that elimination of footwear duties will have no impact on employment in the US since 99% of athletic footwear sold in the US is made overseas, taxed at rates that can reach 67.5%. FDRA president Matt Priest claims "almost 100%" of the US footwear industry supports a TPP agreement that eliminates duties from the Pacific Rim countries. Nike, which makes most of its shoes in Vietnam and Indonesia, is also a vocal protagonist.

The FDRA argues that benefits will be passed on to consumers: "Normally, the import cost of a shoe is multiplied three times to derive the retail price. Assuming the entire industry is using a similar formula, and if duties are eliminated across the board, thereby lowering import costs, then it follows that the retail prices must also drop."

Vietnam's Leather and Footwear Association (LEFASO) has said the TPP could generate one million new jobs for the industry. However, footwear manufacturers there might have to lessen their reliance on raw materials from China, depending on the final terms of the deal, alter the sub-contract production mode and increase the ratio of domestically-made products to benefit.

Elsewhere, benefits are less clear cut. An adviser to the Mexican footwear manufacturing industry, Alberto Lerín, says

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shoemakers in the states of Jalisco and Guanajuato are still hopeful that their products will be excluded from the TPP. He said footwear companies in Mexico's two most important shoe-producing states were preparing a formal request. It would mean they would have no free access to other TPP markets, but what interests them is that their TPP trading partners, particularly Vietnam, would have no free trade access to Mexico. "Before the removal of quotas on imports from China at the end of 2011, Vietnam was the biggest exporter of shoes to Mexico," he said.

Mr Lamar admits there are likely to be "intense discussions" this year on the Rules of Origin (ROO) and market access provisions. "Will duties come off quickly or will they come off over a 10 to 15 year period and how will that occur?" he asks.

GSP: winners and losers

Countries affected by the EU's GSP will also start to see changes, as an overhaul came into effect on at the start of 2014. Introduced in 1999, the GSP is a preferential market access scheme aimed at providing developing countries with an added advantage. Of the 177 countries that previously benefitted from preferential access, only 90 remain from this date. Countries that have been excluded include Brazil, Argentina, Russia and the Ukraine and will now be exempt from the 20% reduction on the 12% duties (to total 9.6%) that the GSP affords.

The GSP+ was launched in 2006 as an incentive scheme for particularly vulnerable countries that have implemented key international conventions on sustainable development, labour

rights and good governance.

Towards the end of 2013, the European Apparel and Textile Confederation (Euratex) campaigned against Pakistan's bid to be included, saying it did not fulfil the necessary conditions and was already a leading exporter. Nevertheless, the EC in December agreed that Pakistan could be included, which the Pakistani government has said could boost its relatively small footwear industry.

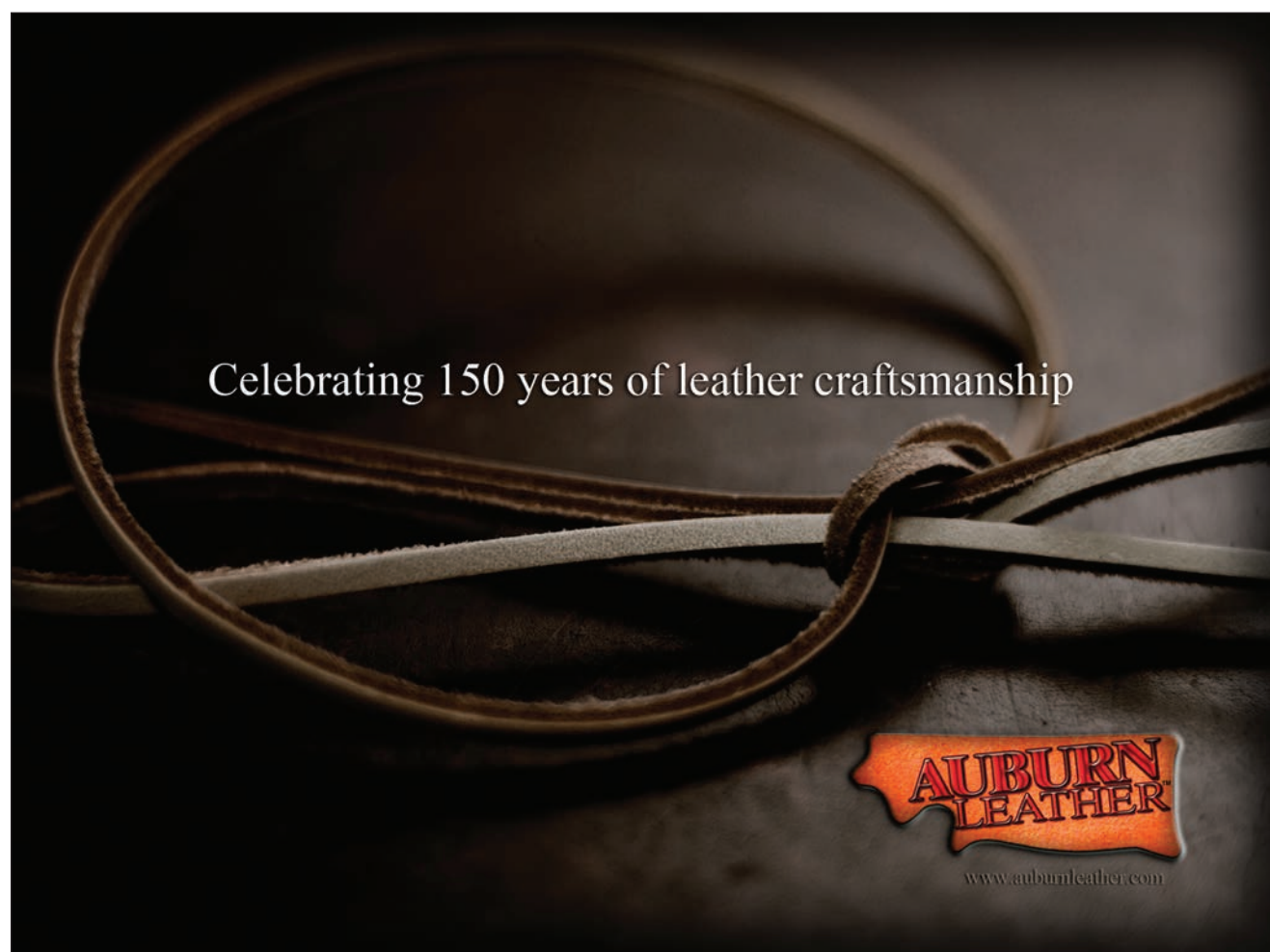
"I get quite a lot of questions on sourcing in Pakistan – there is a renewed interest," said Antonio Barberi Ettaro, a senior consultant on international trade to the EC. "There's quite a big difference between 12% or 9.6% and 0%; Pakistan is very glad to have it. The Philippines have also been admitted to GSP+ after some pressure from their clothing industry."

The Philippines' Department of Trade and Industry estimates inclusion could boost its footwear industry by \$28 million a year.

"The EC is mandated to make agreements but they still have to be ratified by European parliament and member states and I reckon this will take between 18 and 24 months," added Mr Barberi, adding that many companies are eagerly awaiting the free trade agreement (FTA) with India.

A similar deal with Vietnam is being negotiated. "There is a real sense of urgency in these negotiations – it seems the EC would like to close this deal in 2014," said Mr Barberi. "Here, duties would go from 9.6 to 0% but there are always the rules of origin discussions that come around the corner."

Vietnamese footwear exports hit a record \$8.4 billion in 2013, according to the Vietnam Leather, Footwear, and





Nike supports the elimination of footwear tariffs in the TPP; its biggest production centre is in Vietnam. CREDIT: NIKE

Handbag Association, an increase of 15% over 2012. Due to the expected advantages that will come from the GSP, TPP and other FTAs, the association has set an export target of \$12 billion for 2014 – an increase of 40% over 2013.

At the third round of talks, held in Brussels in November 2013, negotiators “made good headway” on the Vietnamese FTA. Three areas – customs and trade facilitation, technical barriers to trade and competition (anti-trust and mergers) – saw “particular progress” with the teams being able to conclude their technical work and reach agreement. The next round of negotiations will be held in Hanoi in March.

Sector by sector

It is not just the country-specific deals that could affect footwear companies: from the start of this year, footwear and machinery from China is also exempt from benefits – the EU has identified these categories as being “so competitive that they no longer need support to be successfully exported to the EU”.

The US’s Generalized System of Preferences (GSP) is a similar duty preference programme providing duty-free access to the US market to developing countries that meet certain criteria, such as labour rights and intellectual property rights protection. However, it lapsed in July 2013 due to Congressional gridlock with unclear timing for renewal, though it is thought it will be reinstated “as soon as possible”. Footwear has always been excluded from this GSP even though many of GSP’s beneficiaries produce footwear. In 2013, FDRA began campaigning to include footwear, in a limited capacity. It says this would save the US industry over \$100 million in import taxes each year.

US-specific

The US has its own tussles. The Affordable Footwear Act, introduced in 2009 with bipartisan support, would remove the duties on one-third of footwear imports, focusing on the mass-

produced items and children’s shoes. High-end luxury shoes are taxed at the lowest rate, usually around 12%, while more basic, mass-produced shoes can be taxed up to 48%.

“Removing import duties on the shoes bought every day will put needed money back into the hands of consumers,” says Blake Krueger, CEO of Wolverine and chairman of the FDRA. The association, among others, also campaigns for the miscellaneous tariff bill (MTB) that suspends import tariffs on products that have no domestic manufacturing.

“FDRA has been working behind the scenes to ensure all 40 miscellaneous tariffs related to footwear get high consideration and I think we are making good strides,” says Mr Priest. The most recent MTB expired at the end of 2012, and included 17 footwear bills that were up for extension. The House introduced an MTB on January 1, 2013 but did not see final passage.

Sticking points for TTIP

The other big global agreement under discussion and one which also accounts for about 40% of worldwide trade is the TTIP, launched in July 2013. It will make trade between EU countries and the US easier and has been described as the “biggest bilateral trade deal ever”. The European Commission says TTIP could boost the EU’s economy by €120 billion, the US economy by €90 billion and the rest of the world by €100 billion per year.

With the talks at an early stage, industry bodies are hoping they will have the opportunity to influence direction as negotiators discuss with stakeholders and advisers. In mid-December last year the AAFA and Euratex published a joint letter addressed to Michael Froman, US trade representative, and Karel De Gucht, European Commissioner for Trade, outlining the most pressing topics and to which there is expected to be an official response early this year.

Mr Froman has said of the deal: “The biggest opportunity, but also the hardest challenge, is getting our hands around the regulatory and standards piece. Both the US and Europe have

well-regulated markets that come to slightly different conclusions, and that creates unnecessary frictions for trade."

Safety and chemicals

The US and the EU maintain varying approaches to flammability that result in differing standards with respect to test methods, fabrics and product coverage. Similarly, standards on phthalates treat certain items of apparel differently, subjecting them to different standards. Variations also occur in how the two treat chemicals, meaning those preparing to take advantage of any incoming benefits need to be aware of the differences until agreement is reached.

The US has federal laws governing chemicals, while state laws might insist on tighter reporting or control. California in particular has its own standards that companies need to be aware of. Its Proposition 65 rule requires that businesses provide clear warnings whenever exposing the public to an 'unsafe level' of a listed substance. The list is regularly updated, for instance the plasticiser diisononyl phthalate (added to plastics to increase flexibility and used in footwear) was added in December, although industry groups including BASF have written to oppose its listing as a carcinogen.

The states of Washington and Maine are also deliberating a renewed focus on chemicals, "one of the main concerns to us", says Marie D'Avignon, manager of government relations for AAFA. "Both states are collecting information on what chemicals are in products so they can decide how to regulate it. August 2014 will be a big reporting deadline for companies with sales of more than \$1 million but less than \$250 million – and this applies directly to products that are in contact with the skin such as footwear."

Across the Atlantic, companies must keep an eye on the REACH chemical directive, which is more than 8,000 pages long and growing and includes registration obligations. "Retailers will ask manufacturers to name any Substances of Very High Concern, of which there are 151," warns Mr Barberi. "There is an obligation to tell your next partner in the supply chain. You should really take this into account." As an indication of the lack of transparency that can occur in complex supply chains, the big brands behind the Zero Discharge of Hazardous Chemicals (ZDHC) project – including Nike, adidas, Puma and New Balance – as a group found banned substances such as azo dyes, chlorobenzenes, heavy metals and phthalates in their supply chains on first inspection in 2012 and they are now working to eliminate these altogether.

The non-governmental organisation which 'inspired' ZDHC's creation, Greenpeace, is also keen on checking Article 33 – the 'right to know' for consumers – which dictates that the retailer has to answer questions on chemicals within 45 days. "We advise companies [that wish to start importing into the EU] to take REACH publication seriously and start an action plan now," warns Mr Barberi. "Analyse your current status, define your strategy, estimate costs, make a budget, implement a system, conduct risk analysis, internally train employees and communicate results."

The third round of TTIP negotiations was held last December in Washington and was described as "satisfactory" by the EU's chief negotiator, Ignacio Garcia Bercero. "We remain on track to deliver an ambitious trade and investment deal that should boost our economies, deliver growth and more importantly jobs for both Europeans and Americans at a time when it is



Ignacio Garcia Bercero, chief EU negotiator for the TTIP, met NGOs, unions, consumer groups and businesses during a week of talks in December. CREDIT: EUROPEAN UNION

most needed," he said.

EU negotiators will now work with US counterparts on the wording of provisions designed to make it easier to comply with each other's rules. The end of this third round marks the conclusion of the initial phase and paves the way for Mr Gucht and Mr Froman to hold a political 'stocktaking' meeting in March this year.

Time frames?

With the TPP and TTIP talks happening behind closed doors, it is very difficult to gauge exactly where they are up to, who is standing up for which opinion and where the pressures are coming from. A draft of the third round of TPP negotiations leaked by WikiLeaks brought criticism from the media and public; the TTIP has also been accused of being too secretive and pandering to the whims of big corporations.

It could also take a while until the partnerships come into force as, once agreed, they have to go through technical reviews and consultations and be ratified by the various governments. "Now's the time to think about them and help shape them, but you might not be able to harvest the gains for some period of time," says Mr Lamar.

Mr Barberi estimates most free trade agreements can take up to five years before they finally come into effect. "My advice is do your research and when you're looking at route to market, don't forget that you must first look at any regulatory environment, whether legislation or standards, and in many ways you may have to design your product to fit those standards," he adds. 



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A specialist in work, hunting and western-style footwear, and more recently casual shoes, too, Rocky Brands believes it has garnered great benefit from sourcing a substantial number of its shoes from partner manufacturers in the Dominican Republic, a policy with which it intends to continue.

Rocky Brands retains DR commitment

Rocky Brands prides itself on being a supplier and seller of footwear, as well as on its designs. But in terms of its retail and wholesale activities, a transformation has taken place over the last three years, according to chief executive, David Sharp, building up the group's e-commerce capabilities. Moving one of its online sales sites to a new e-commerce platform in 2013 resulted in a 20% sales gain; all of its online sales sites will move to the new platform, Demandware (which also boasts adidas, Crocs, Deckers, New Balance, Columbia, Rockport, Ecco, Puma and Converse among its clients, suggesting that it works well with footwear in general) during the first half of 2014.

Another obvious example is a new enterprise resource planning software application Rocky Brands launched in 2013, giving it extra insight into its business, particularly into where its money was going. Mr Sharp says all these investments will allow the company to reap important benefits in future years. But he points to another advantage, Rocky Brands' ability in "product acquisition", or sourcing its footwear from contract manufacturers.

Close to home

"We've been in the Dominican Republic (DR) for 26 years," David Sharp says, "and approximately one-third of what we sell this year will be manufactured there. The island is becoming extremely cost-competitive with Asia." Free Trade Zones in the Dominican Republic have had their ups and downs, but are still working well for products such as footwear. Shoes can be manufactured and shipped to export countries without intervention from the customs authorities, making trade-flows fast and easy. Then there is the question of proximity: it takes one-and-a-half days for a container ship to get from the DR to Miami. New Jersey is three or four days away and Houston five days. Manufacturing companies in the Caribbean country know that US brands of all kinds first set

Durango black harness western boot.

CREDIT: ROCKY BRANDS



up operations there to gain tax advantages, but many insist their US customers have stayed faithful to the DR because they receive good products at good prices from good suppliers who offer this substantial geographical advantage compared to competitors in Asia. With its pledge to keep sourcing such a high percentage of its shoes and boots from there in 2014 and beyond, Rocky Brands is clearly one such customer.

The DR works for Rocky Brands. A company-owned distribution centre in Logan, Ohio, close to corporate headquarters in Nelsonville, will also continue to be an important component of its supply chain network. Shoes will continue to come from Asia, too, of course, and to serve its customers on the west side of the US better, Rocky Brands recently entered into an agreement with a third-party logistics service provider in Washington State.

Quick kiosks

There has been another significant supply chain innovation in recent times, the installation at safety footwear customer sites of CustomFit kiosks, which allow the customer organisation to build its own online store with Rocky Brands. Once it's set up, employees can go to the kiosk or onto the internet at home and choose the shoes or boots they want from approved models. "There is no one with a solution like this," Mr Sharp continues. "We compete with Wolverine and with Red Wing, but they're not doing this." He says the technology provides a pretty strong price advantage: delivering a pair of shoes to a retail outlet on a truck had a sales cost of \$28, he says, compared to \$7 to ship a pair from a central warehouse. He knows that some customers will want to maintain "a physical presence" to their safety footwear purchasing and will opt not to install a kiosk, but the idea is catching on. From 27 installations in 2012, the figure increased to 276 in 2013, and Rocky Brands anticipates over 750 more in 2014. "It's merely an iPad encased in a fixture, located in the HR department or in the cafeteria," he explains, to dispel any notions of the kiosks involving complex and large pieces of hardware.

Diversified portfolio

Its commitment remains strong to having what Mr Sharp calls "a portfolio of diversified brands", playing in the western (Durango), hunting (Rocky, Georgia Boot and Mossy Oak), military (Rocky S2V) and work (Rocky4EurSole, Lehigh and Michelin) markets. Together, these segments account for only 13% of US footwear spend at the moment, which is one of the main reasons, the chief executive explains, why the group made a move in 2013 to acquire a new brand, Creative Recreation.

Creative Recreation is an "upscale sneakers" brand, founded in Los Angeles in 2002. Rocky Brands reached an agreement to acquire it from previous owner, Kommonwealth, at the end of October, paying around \$11 million for the privilege. Founder, Robert Nand, and his original team wanted to create shoes that had "the comfort of a sneaker with the materialisation of a dress shoe, the ultimate crossbreed of lifestyle footwear", and believe that's what they created with Creative. David Sharp limits himself to saying the acquisition will give Rocky Brands an "entrée into the larger casual market".



Rocky Brands hopes for a better year in 2014 for its Rocky4EurSole healthcare worker clog idea. CREDIT: ROCKY BRANDS

A lesson in quality

Sourcing good quality shoes from good quality manufacturing partners will always be important; the group knows there will be a price to pay for falling short in that. David Sharp has talked about problems with the launch in 2013 of Rocky4EurSole, a clog-style of footwear designed specifically for women in the healthcare industry. The shoes are built on a three-part system that allows the wearer to interchange two insoles on the clog shoe; a backless insole with a removable swivel-strap and a full-back insole, which means the wearer can choose clog, sling-back or full shoe. There are gains to be made in producing footwear for healthcare professionals, Rocky Brands believes, especially for women in healthcare. It estimates there are 14.3 million people in the US alone working in healthcare jobs and that 80% of them are women. It estimates that 2.5 million new healthcare jobs will come onto the market in the US by 2018. However, Rocky Brands' attempt to capture a share of this market in 2013 got off to a slow start precisely because, in the words of the chief executive, "some of the product that arrived was of poor quality". But he believes in the idea and says the company will go back this year with a better-quality product to the dealers it says it disappointed in 2013.



On trend camouflage-style Rocky Corn Stalker boots. CREDIT: ROCKY BRANDS



CREDIT: UITIC / CLIA

18th UITIC Congress

The 18th International Technical Footwear Congress of UITIC (International Union of Shoe Industry Technicians) was held in Guangzhou, China in November of last year and was considered to have been extremely successful. Once again, it attracted a large number of participants from across the world; in this instance, more than 300 from 30 countries.

Organised by UITIC in conjunction with the China Leather Industry Association (CLIA), the theme for this Congress was Corporate Social Responsibility. By all accounts discussions around what is still in many ways a sensitive and sometimes difficult subject were most positive. This is to be welcomed as the overall consensus of agreement expressed on the implications of CSR for the future of the footwear industry by such a wide spread and well qualified people is most encouraging. All the more so, as the Congress was also attended by representatives of many of the

industry's leading brands and organisations, not least among which was the European Confederation of the Footwear Industry.

UITIC was originally established in 1972 and is now active in 27 countries world wide. Its membership is composed of experts and technicians from associations and research centres and private companies covering all aspects of the industry.

Its aim is to develop technical knowledge within the industry. It does this partly by organising international conferences of industry experts on a regular basis and also by facilitating the exchange of information on new ideas and technical innovations between members.

In addition, it also offers the UITIC Award that recognises at international level, the work of people who make significant contributions to technological development in the footwear and related industries. There are three categories, technical, scientific and managerial, and it can be awarded

either for current work or something carried out in the past that has had a significant impact later on. It is normally only given to individuals rather than companies or groups of people.

Clearly, with such a spread and depth of expertise, UITIC and its conferences in particular are a great benefit to the industry as a whole. The latter feature many serious and thought provoking papers for further discussion and development. This most recent one has been no exception and included 37 presentations and posters covering a range of subjects that included product and process innovation, working conditions and human resources, customers and consumers, and business practices and CSR implementation. As only a limited number of people from the industry were able to attend and hear them at first hand, *World Footwear* has selected four that created considerable interest from which, with the generous assistance of the authors, it has produced the following articles. 

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Sustainability and the confused customer

DR. GERHARD NICKOLAUS, PFI GROUP

In January 2012, the Forsa Institute for Social Research and Statistical Analysis in Germany revealed the results of a survey carried out under the title of 'Project Earth: Our Future'. To its surprise, it found that a majority of the German population had no real idea of what the term 'sustainability' meant with only 8% making an immediate connection between it and environmental protection, nature conservation or the sparing use of resources, and a mere 4% associating it with renewable energy.

In fact, 36% of the people interviewed were unable to give an immediate response as to what sustainability meant to them as individuals and a further 30% offered a wrong or confused interpretation. So it would appear that in an economically advanced country such as Germany, 66% of people don't know what sustainability actually means even though 85% say they have heard about it.

WHAT IS SUSTAINABILITY?

There are many interpretations for the word sustainability, the best one probably being to create a permanent

balance between economic needs, ecological impact and political as well as social responsibility. Such a concept of sustainability is nothing new and in Germany was first specifically mentioned as far back as 1713 with regard to forestry. The interpretation then was simplified to one of never harvesting more trees than the forest could regenerate in time for the next generation to have the same amount of natural resource to exploit.

Is sustainability therefore an attribute of a product or of a process and, furthermore, what might be the most important aspect or aspects as far as consumers are concerned? By this we mean one or more aspects that do really affect an actual buying decision on a pair of shoes rather than something expressed in response to a research poll. It might just be normal consumer concerns such as appearance, fit, quality and, naturally, price. Equally, other less immediate factors may also have an influence. For instance, are the shoes free of harmful substances, are they 'environmental friendly', were they produced under good factory conditions using environmentally sound processes

and were the workers who produced them paid a fair salary?

If, as Forsa's findings suggest, consumers do not appear to understand the meaning of sustainability, would they in fact attach any extra value to a product that has been manufactured in a sustainable way? If they do, we must consider what this means for shoemaking itself. So, do those of us who are closely involved with the industry really know what all the implications are likely to be? Most probably do not.

FASHION AND SUSTAINABILITY

Fashion has played an important part in many consumers' lives in recent years, particularly as far as women and young people are concerned. The footwear and apparel industries have therefore been highly fashion driven in order to attract consumer interest and create sales. If there is in fact a growing consumer demand for sustainable products, could we be returning to the 'Good Old Days' when shoes were built as serviceable products and not just for visual appeal?

PROS

- Long life cycle
- Fair (normally higher) price
- Renewable resources
- Environmentally friendly production
- Recyclable
- Reduced energy consumption
- Supply chain supervision
- Production close to consumer market (low transport emissions)

CONS

- Fashion
- Attractive (low) price
- Design freedom (limitations in designer creativity)
- Technical investment
- Logistics, testing and auditing (cost)
- Higher labour costs

The Mao—or to use its traditional name, Zhongshan—suit so widely worn in China for much of the 20th century was a really sustainable product. It was long lasting, functional and certainly not fashion-driven. The style seemingly remained exactly the same throughout its existence so production was highly rationalised and, at the same time, made maximum use of available resources. It was also a highly practical garment to wear.

A strictly fashion-orientated product on the other hand by its very definition means high consumption of resources and high waste accumulation. And, as already said, a substantial proportion of footwear production is driven by fashion. Can fashion as far as the footwear industry is concerned therefore ever be sustainable? The straightforward answer is no, never completely. It can however become somewhat more sustainable.

A conventional shoe is a complex, multi-component product containing a wide number of different materials taken from a range of resources which makes it wasteful, expensive to produce and difficult to recycle.

- Plain and coated textiles
- Plain and coated leather
- Fibreboard
- Cardboard and paper
- Metal
- Soft and hard plastics
- Rubber
- Adhesives and solvents

A shoe designed from the outset to be completely recyclable is totally different in that it can be made from a single thermoplastic material such as PVC (polyvinylchloride), PA (polyamide), PP (polypropylene), etc. This means that it is both quick and cheap to make using a one-shot injection moulding process. It can also be ground into granules at the

end of its life which in turn can be mixed with fresh polymer for use in other injection moulded products. It does however have limits as regards fashion and wearing comfort and cannot be made from renewable resources. This, however, surprising though it may seem, does not necessarily mean it cannot be said to be 'sustainable'.

HIGG INDEX

The Higg Index 1.0 launched in June 2012 by SAC (Sustainable Apparel Coalition) was developed for the environmental performance of apparel products. It was based on life-cycle thinking and spanned the life cycle of the product concerned in terms of materials, manufacturing, packaging, transportation, use and end-of-life.

Higg Index 2.0, released last December, represents a further step forward and now also covers footwear. It is a tool designed to help companies measure and evaluate the environmental performance of their products across the entire supply chain (currently excluding retail) by identifying environmental sustainability hot spots and improvement opportunities. It asks practice-based, qualitative questions in order to gauge environmental sustainability performance and drive behaviour for improvement.

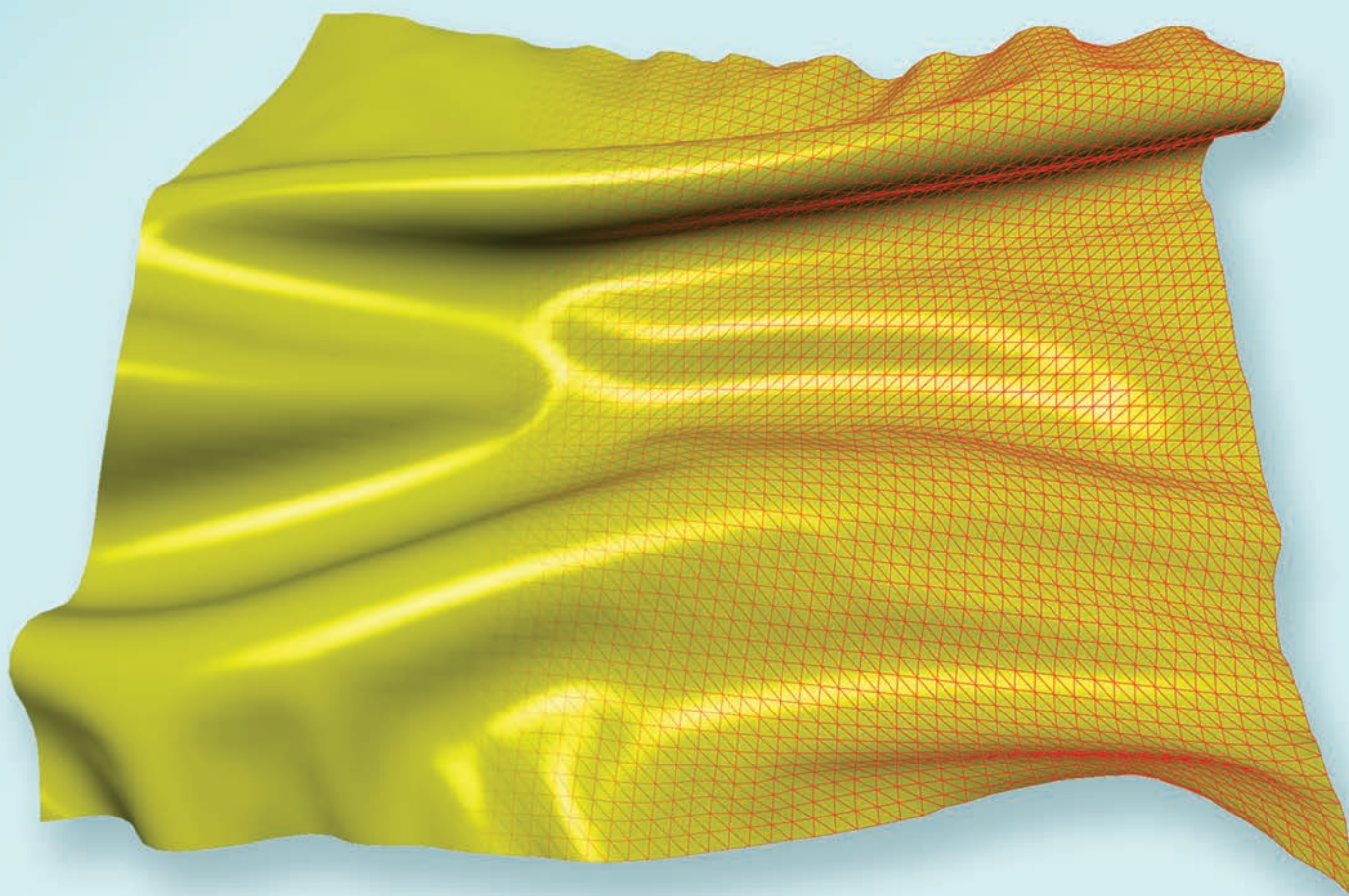
Sustainability is therefore not necessarily directly connected with purely environmental issues in terms of the use or non-use of natural resources although this does have an important part to play. To say that to be sustainable a product must be made from natural or regenerative materials is too simplistic an interpretation of the term.

RESPONSIBLE SUSTAINABILITY

Natural or regenerative materials can in some instances actually have a

strongly negative impact on the environment. Plantations for the production of natural fibres or petroleum substitutes can have a major effect on the environment as they often absorb a great deal of land at the expense of the natural environment or food production for human and livestock consumption. They also consume large quantities of water in regions where it is often scarce. Furthermore these natural materials are normally grown in monoculture plantations which, in most cases, require intensive use of pesticides or, increasingly nowadays, the use of gene manipulated plants to maximise the harvest. Sustainability therefore essentially means looking for technologies and materials that have less negative influence on human health, the environment and the consumption of non-recoverable resources.

What then is the rating today for a shoe which can be advertised as being sustainable? It should have a relatively high proportion of renewable materials from controlled sources, be comparatively hard wearing and use comparatively environmentally friendly production processes. It would also need to be manufactured entirely in one factory where production conditions for the workforce were also comparatively good. It should also demonstrate reduced energy consumption, increased recycling of production waste and be continuously free of harmful substances. Finally, it must be stressed that all these factors where applicable should apply for the complete supply chain. Sustainable therefore means everything which does not last only for a short period. Sustainability requires long term thinking and stamina. Sustainable shoes and their sustainable production consequently call for innovation. 



Next generation of virtual shoe design

MONIKA RICHTER, PFI GROUP

At the 16th UITIC Conference at Elche in 2008, I reported on the status of a research project concerning virtual shoe design being carried out by the Test and Research Institute Pirmasens (PFI) in conjunction with the Technical University at Chemnitz, Germany. This virtual reality system was being developed for footwear designers in order to provide them with the artistic licence to work as intuitively and creatively as always.

The system enabled a virtual shoe design to be created using a real last which doubled as a contact point for the

pen and for the virtual last to be moved. In order to do this, it was necessary to fasten the marker to the last, pen and designer's special glasses in order to determine their relative position (or tracking technology). Previously, styling lines had been drawn with a pen directly onto a solid last. Now, although the designer could still take the pen and draw lines on the last, there would only be a virtual image and no actual lines on the solid last itself. The styling lines were only visible on the virtual last.

To achieve this, it was necessary to know the position and movement of the last and pen in order to simulate

them in the computer program and so produce the virtual images (motion capture). This was achieved through the use of cameras. The tracking technology determining the relative positions of the pen and the last required this information for the system's computer software program. Furthermore, this program also needed to know the relative position of the designer's eyes in order to calculate a correct perspective of the virtual last and pen, which is why the designer needed to wear special glasses equipped with markers.

The software that was used offered

various methods to sketch lines and an interface allowed the transfer of line coordinates to 2D CAD systems. The program included all functions of a 2D system too. It was also possible to add a great deal of fine detail including individual upper sections, different material looks and textures, placing trims and accessories on the upper, 3D presentation of seams, lacing and different types of edge treatment.

This initial virtual design system could not however be used for all types of shoes, only sandals, low shoes and courts. This was because all lines had to be drawn on the surface of the last; it was not possible to draw anything outside that. The system could therefore not, for example, be used for boots and this caused a problem. A conventional CAD process uses only 2D construction for designing boots and this has some disadvantages. For instance, the designer cannot gain the true overall look of the design because the boot leg is flat. If he wants a real impression of the design for smaller or bigger leg girths, the boots have to be physically produced. That needs more time and the costs are higher.

At that time, there was also a lack of up-to-date information on foot and leg dimensions. German shoe producers had only very old and incomplete data at their disposal. Now things are much better and 3D data of more than 5000 adult feet and legs has been measured in a special research project.

ESSENTIAL DATA

To do this it was necessary to scan the geometry of legs from the sole of the foot up to the knee. PFI developed and built a prototype leg scanner that was both simple to use and at the same time capable of scanning the 3D geometry of both leg and foot. The scanned leg is displayed three-dimensionally and the measurement values exported for analysis in either spread sheet or CAD format.

During the measurement process, the computer permanently collects position data of the axes and the laser sensor. It then filters out position data that does not belong to the surface of the leg/foot and compensates effects based on surface colour variations and shadowing. This positioning data regarding the leg's surface is then

transformed into a Cartesian XYZ representation of the scanned leg. Depending on the density chosen, the program can register anywhere between 50,000 and one million points per leg.

Visualising the leg and foot using reference points is not however the best way to calculate measurements such as circumference, ball girth, etc., so these values are converted into surface representation formats showing measuring points, lines and circumferences for easier analysis.

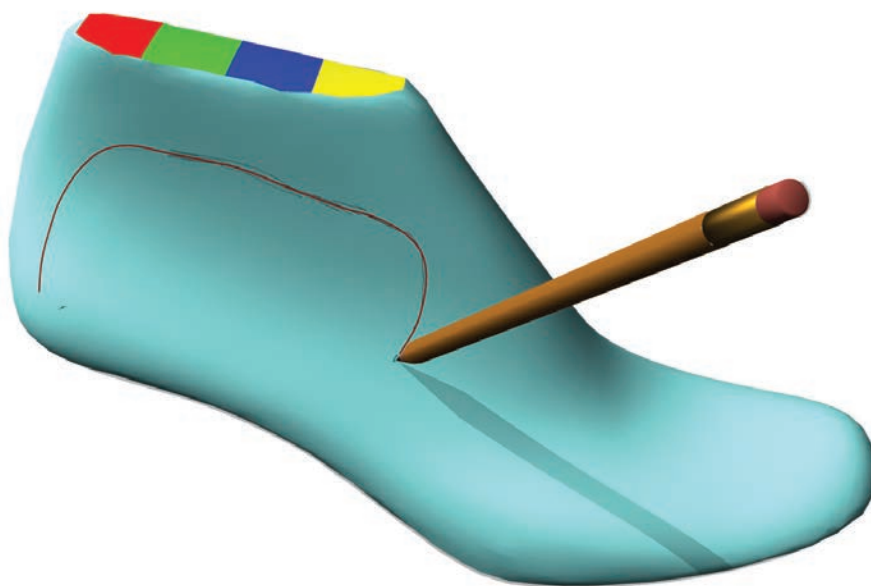
The data obtained helps the calculation of average values for important foot and leg measurements including calf, instep, circumference versus leg height, lower leg shapes, calf and shinbone position and orientation, all of which are useful for footwear production. The influence of heel height on foot and leg measurements has also been determined as a result of the project. In addition, guidelines for the design of lasts and shoes have been established and verified in practical fit and wear tests.

UPDATING THE SYSTEM

The large amount of data now available has enabled it to be collected into specific leg groups. This, in turn, has now made it possible to achieve a

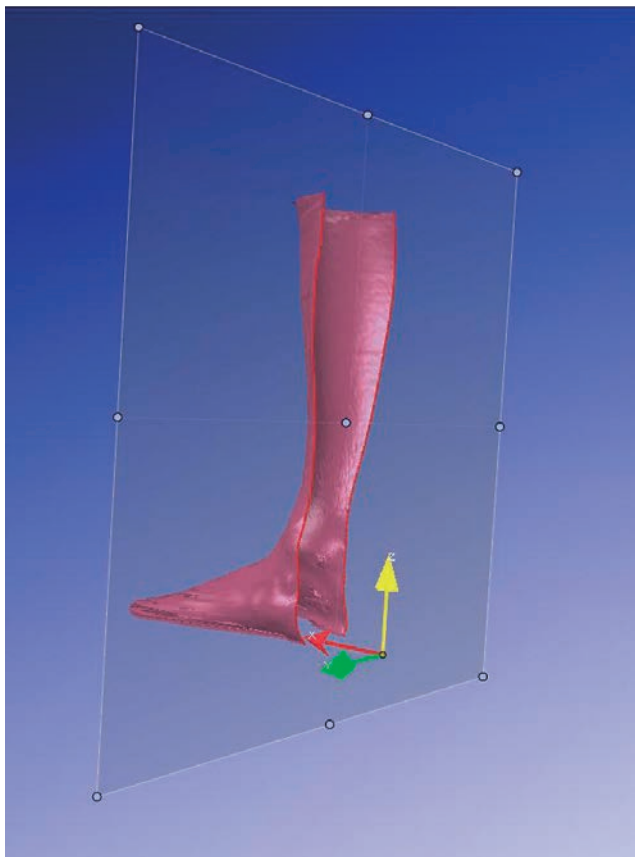
high level of accuracy as regards the final fit of boots. The point clouds enable the exact description of legs of women and men to be transcribed for virtual reality designing. Needless to say, there were some problems. The first was the asymmetry of human legs, the shape of which greatly differs from the ideal look needed in a boot and was therefore not accepted by designers. The second difficulty concerned last shape. The last to be used could not be altered even though it differed from the lower limb shape. In addition, we also had to take into account the importance of the heel girth.

The solution was to join the last and an idealised lower limb to produce an extended last. The area around the malleolus (bony protrusion at each side of the ankle) has been used as the equation area. The normal orientation of the last with its heel height is adjustable by parameters. The amounts allowed for the girth of lower limbs are the same as from the leg and only the shape has been changed. This method enables an easy exchange between different lower limb types. During the course of the project, the flattening of the 3D data has also been developed and tests have shown that boots constructed to this flat 2D pattern fit perfectly.



A designer is able to draw directly onto a virtual last exactly as if it was a real one except that the lines drawn will also be virtual.

CREDIT: PFI GROUP



Cartesian computer image of a leg scan.

CREDIT: PFI GROUP

ADDING DETAIL

The styling of boots frequently calls for some special design elements such as folds and zippers. A fold can be achieved by simple drag and drop a line with the upper 'stretched' in the neighbouring areas to compensate for the material the fold has taken up so as to maintain overall shape. This method allows the simulation of both defined overlapped and random folds.

The definition of different material parameters is also possible. The virtual surface consists of triangles which behave like a spring system. The thickness of the material, its contact with the last and the surface appearance of individual upper sections have all been included in the program. The representation of random folds is also possible using material simulations taken from the textile industry. The title image at the beginning of this article shows an example of a sheet of material simulated using the mathematical (mass-spring) model which is also used as the basis for generating creases on the upper material of the final virtual shoe.

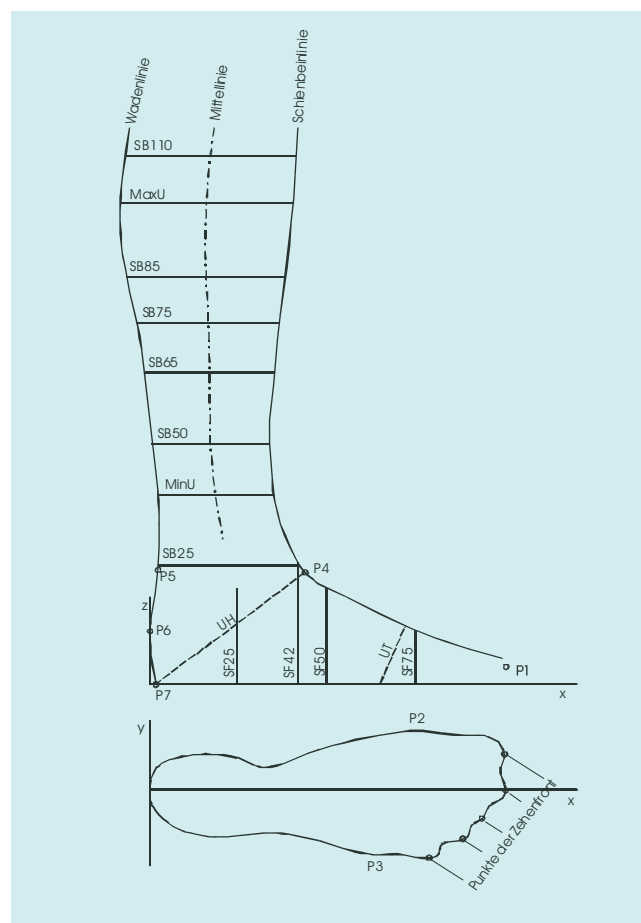
Zippers are often used as an element of the overall design as well as functional fasteners. In virtual styling, they have to follow the upper surface to ensure a realistic 3D effect. For that reason, zippers have to be built up from single elements and this also means that it is possible to reproduce different types of zipper. The generation of simple sole types is also important in order to have a realistic rendition of both shoes and boots. A parameter-controlled model has been specifically developed for this application and allows a variety of outsole designs to be created.

HAPTIC TECHNOLOGY

The new generation of virtual shoe design uses a haptic* device. This is necessary because the extended last does not exist as a real object. The device, in this case a haptic pen, allows the simulation of the extended last surface by a tactile feedback. The pen can be used for sketching, 'feeling' the material surface and selecting the menu functions. A 3D working environment has been developed around it that includes working space, focus distance and stereoscopic properties. To achieve the latter, shutter technology has been used for the monitor.

This new generation of virtual shoe design offers new prospects for a design process close to the current working methods of designers as artists. It now provides a design process for all types of shoes without using a real last. A realistic presentation of the design is achieved with a broad range of design elements and better fitting boots can be produced using the new data pool of lower limbs.

**The word haptic is taken from the Greek word haptesthai meaning to touch. Haptic technology is defined as being a tactile feedback technology which takes advantage of the sense of touch by using mechanical stimulation to assist in the creation of virtual objects in a computer simulation and to then both control and enhance them. It effectively does for the sense of touch what computer graphics does for vision. Designers can therefore 'feel' as well as 'see' the virtual product they are creating.*



Measured points, lines and circumferences.

CREDIT: PFI GROUP

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Predicting growth of children's feet

PETR HLAVACEK, THOMAS BATA UNIVERSITY, ZLÍN

The problem of harm to growing children's feet is a serious issue to which sufficient attention has not yet been devoted. A child's foot differs proportionally from that of an adult primarily in the fact that it is wider. Furthermore, the bones are not fully ossified and its cushioning function is different. The main distinction, however, rests in the fact that it is growing. In other words, children's footwear may be worn only for a limited length of time and, if worn longer, may become a cause for

deformation to occur.

If recommendations exist for establishing the safe length of wear of newly purchased children's footwear, they originate from a time when domestically produced footwear predominated in retail shops and local manufacturers tended to work from anthropometric measurements of feet in the child population. It has often been argued that precisely because local manufacturers used these anthropometric measurements in order to produce designs that satisfied the ethnic

characteristics of the local population, this was somewhat of a guarantee for healthy footwear.

Formerly closed markets limited the import of children's shoes and thus the shape and quality of children's footwear could be controlled at the national level. In the last decade of the last century, within a very short period of time, a shift occurred in production from industrially advanced countries to those of the Far East. Relatively effective national activities concentrating on education during the purchase of children's



footwear immediately began to lose effect.

Attempts at unifying opinions and proposals for a common approach within the EU have failed in practice with the result that the selection of shape, dimensional proportionality and use of material for children's footwear has been left to the will of manufacturers. Globalisation in footwear production has led to a deterioration of the conditions necessary for healthy children's footwear.

Another complication is the violation of rules for traditional systems of labelling shoe sizes where the orientation numbering of footwear manufactured in other size systems has created chaos in the labeling of shoe sizes. In practice, this has made it all but impossible for parents to select and purchase footwear dimensionally and proportionally suitable for their children.

Studies conducted in Germany and

Austria show that currently, the number of children wearing dimensionally inappropriate footwear is as much as some 40% to 60%. Other studies have shown that, while educational events have succeeded in reducing the occurrence of dimensionally inappropriate footwear, it is always for the short-term only.

LAWS OF CHILD FOOT GROWTH

Unlike an adult foot, a child's foot is growing. According to various studies, the average values for the lengthening of a child's foot over the period of one year fluctuate around 12mm. In fact, the annual individual growth in a child's foot length is varied and depends on a number of factors. In one of our studies, we monitored how much a child's foot length grows over a period of one year. Some 300 children aged between 3 and 16 split equally between boys and girls

were measured (*Figure 1*).

Two conclusions can be drawn from these results; annual growth decreases with age and annual growth oscillates around 10-12 mm (spurts around 20mm are negligible). While these facts are naturally known, the reaction of experts is surprising as shown by their recommendations in regard to the control periods for checking foot length and shoe size for children's feet (*Figure 2*).

ANALYSING CHILD FOOT GROWTH

From a series of performed anthropometric studies, various tables and graphs have been constructed. One problem lies in the fact that these results were completed on the basis of extensive measurements. In professional publications, longitudinal studies could not be obtained that focused on the base dimensions of the foot. On the other hand, there is however a series of



CREDIT: GDS / CONSTANZE TILLMANN

detailed studies focused on the growth of a child's body. Particularly interesting from this standpoint is the so-called Carlberg model. This renowned Scandinavian anthropologist distinguished three characteristic and mutually distinct courses of growth in children.

1. Prenatal course of growth, which is insignificant for footwear producers.
2. Standard (normal) course of growth which is very important and has hitherto been considered during the construction of footwear lasts.
3. Pre-pubescent growth spurts that have not yet been resolved.

One of the highest correlation coefficients for the dimensions of the human body applies to foot length values and body height. It is used, for example, in criminal investigations. We therefore applied the Carlberg model originally developed for the course of body height growth to the growth of children's feet. From this, it is more or less possible to draw the conclusion that growth in a child's foot is primarily influenced by the genetic disposition acquired from its parents, the composition and quality of nutrition and the degree of movement. The main major complication is additional foot growth that is difficult to forecast.

From extensive studies, we have succeeded in establishing how long a child's foot will become once it is fully grown from the foot length of its genetic parents. On the basis of the knowledge of the actual size of a child's foot and the anticipated final foot size after the completion of growth, it is possible to establish with relative precision, the speed of growth over the next few years. If the precise foot length and functional length of newly purchased shoes are known, we can determine how long the shoes may be worn without the risk of foot deformation.

MEASUREMENT

Actual foot length can be acquired in several ways. Today, for publication in professional journals, a contact-free scanner is required as this significantly reduces the deviations caused during manual measurement. Manual devices were once constructed in such a way that it was possible to acquire data about foot length in the French, English and metric systems. But, at the same

Figure 1: Differences between measured foot lengths December 2009 and December 2010.

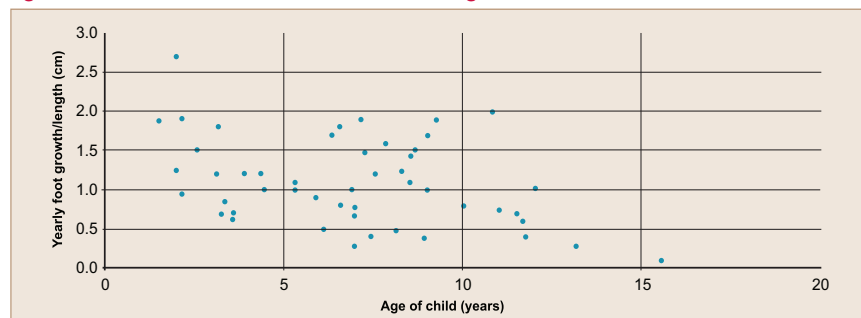


Figure 2: Recommended periods for control for new children's shoes.

Age		Recommended period	
Years	Months	Cheskin et al	Rossi, Tennant
	12 to 17	Every 2 months	
	17 to 29	Every 3 months	
2 to 6			Every 1 to 2 months
	30 to 47	Every 4 months	
6 to 10			Every 2 to 3 months
10 to 12			Every 3 to 4 months
12 to 15			Every 4 to 5 months
15 to 20			Every 6 months
20 plus			Each purchase of footwear

time, this is the main limiting factor because transfer between individual systems is not uniform. To increase the probability of acquiring objective data, it is necessary to start from the outline (not from a print) and to measure in millimetres.

The functional length of footwear is understood as the distance acquired after deducting the values of toe allowance from the length of tensile insole in worn footwear. This is the length needed so as not to restrict the function of the shoe in wear and to avoid foot deformation. Compared to foot length, this measurement is more complicated and requires more experience.

Toe allowance is usually comprised of two parts, the space that will be filled gradually by the growing foot and which should not be less than 6mm and the aesthetic space (also fluctuating around 6mm) that allows a pleasing toe shape. There must also be sufficient vertical height and the toe must not extend into it. The lowest overall recommendation for toe allowance in children's footwear should therefore be 12mm.

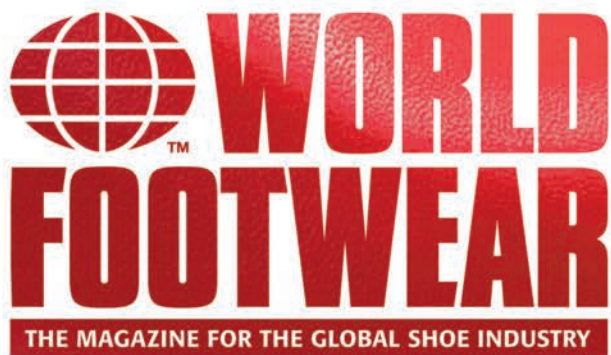
FOOT LENGTH VS. FUNCTIONAL LENGTH

In textbooks and manuals, a theoretical time period is recommended for parents to review the length of worn footwear with that of the growing feet at given intervals. But, even then, there are differences. A major deficiency lies in the fact that, today, there is no easy

gauge of a child's foot as far too few shoe shops are equipped with quality devices for measuring feet. Furthermore, consumers (in this case the parents of children) are unable to acquire sufficiently precise information about the functional length of worn footwear. Another factor which routinely prevents the use of these values is that all theoretical recommendations originate from an assumption that for newly purchased footwear, a child's toes do not extend into the toe allowance.

Options for prediction are based on acquiring precise data about a child's foot length, the functional length of the footwear's insoles and values for toe allowance. From these data, it is then possible to establish the length at which it is possible for a child's foot to grow without causing harm to the foot. Current facilities in retail shops for children's footwear using cashiers with computers and operational memory would make it possible to introduce a simple system providing important information that could contribute to reducing the occurrence of deformities in children's feet. 📌

Petr Hlavacek regretfully passed away in January (Obituary on page 4). World Footwear has nevertheless decided to publish Petr's article as a mark of respect and a tribute to his major technical contributions to the footwear industry over the years.



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Shoe manufacturing operations can generate harmful vapours and dust.
CREDIT: FOTO INFOT / SHUTTERSTOCK.COM

Ensuring worker safety

JOHN HUBBARD, SATRA

Operatives in footwear factories are potentially exposed to a number of risks during the manufacturing process, both physical and chemical. Responsible employers can take steps to control these risks and so create a safer working environment. This in turn will not only contribute to the long term well-being of their employees but also have an economic benefit by reducing the number of days lost through ill health and injury. Employers will also be able to demonstrate their commitment to staff welfare, often a key factor for encouraging brands to invest in new supplier factories.

Responsibility for managing health and safety in a factory should fall to a specific individual who has sufficient authority to make changes and

recommendations. They should also be able to report directly to the senior management such that health and safety is always given sufficient attention at executive level. Depending on the size of the organisation, the health and safety manager may be supported by a number of representatives from different departments.

Observing factory operations and talking to the operatives concerned will prove useful as operatives who have been performing the task in question will have an insight that may not be understood by an outsider. It is nevertheless important to be wary of attitudes of complacency that can come from doing a particular job for a long period which results in risky behaviour and the possibility that this behaviour will be passed on to other staff.

The level of risk can be quantified for many parameters by carrying out appropriate monitoring and comparing the results against legislative or best practice guidelines. This may indicate that some action is required to be taken to limit the exposure in particular workplaces. The steps that can be taken should be as follows:

- Elimination – is this step necessary?
- Substitution – is an alternative process or substance available?
- Containment – creating a barrier between operation and operative if practical.
- Extraction – removal of the risk at source; chemical hazards for example such as dust, solvents or isocyanates.
- The use of personal protective equipment (PPE).

PPE should only be used when all other options have been carefully considered as it only protects an individual and requires that it is used correctly and properly maintained. The PPE issued needs to be appropriate for the hazard involved and suitable for the individual. For example, breathing masks need to fit tightly around the face.

Whereas many physical hazards such as unguarded machinery and noise can be obvious to the operative and the effect dramatic and immediate, many of the potential chemical hazards are associated with insidious long term health effects following prolonged exposure. Measurement of these hazards, therefore, is important in order to understand the risk posed to workers using these substances and processes.

MONITORING FOR CHEMICAL HAZARDS

The different chemical species that can be present on the footwear production line will demand different monitoring techniques to determine if the levels in the atmosphere will pose a risk to operatives who are regularly exposed to these levels.

Exposure to solvent vapours can result from the use of adhesives, primers, cleaners and polishes. In many cases water-based alternatives are available but, where solvent-based chemicals are used, there are some key steps that can be taken to avoid exposing the operative to excessive solvent vapour levels. These include using covered pots to apply the adhesive, good housekeeping of contaminated materials and good extraction and ventilation in work areas. Under no circumstance should operatives use their fingers to apply adhesives, even to samples with difficult topography.

Different solvents will have different hazards associated with them which translate into different limits for the workplace explosive limit (WEL). The acceptable limit for acetone for example is fifteen times higher than that for toluene which is a recognised carcinogen.

Measurement of solvents is carried out using passive sampling badges which can be sent out to factories and

given to operatives for a typical working shift and returned to the laboratory for analysis. No additional sampling is required.

In the production of polyurethane, polyols are reacted with isocyanates to form the urethane linkage in-situ. Isocyanates can cause irreversible allergic reactions in the lungs if breathed in, even in very small amounts, therefore the control of isocyanates is important. Where possible, isocyanates are supplied in closed systems or in a form which limits the need for heating during use. Monitoring of isocyanates requires a complex pump impinger method followed by HPLC laboratory analysis.

Dust together with rubber fumes is measured using a gravimetric filter. Air is drawn through the filter by a calibrated pump and the weight gain of the filter measured and related back to the volume of air. Exposure to dust, including leather dust, can have a detrimental effect on the respiratory system. Particularly fine dust can be drawn into the lungs, so there is a lower workplace exposure limit for these respirable dusts than for general dusts.

Dust is normally controlled by local exhaust ventilation (LEV) equipment. A useful indicator for whether there may be an issue with dust is the accumulation of dust on horizontal surfaces in the factory; if these are observed then it is worth carrying out monitoring on representative selection of operatives. Key footwear production tasks that will generate dust are those involving cutting, scouring or abrading as shown in the title image.

Where LEVs are used they need to be efficient enough to control the hazard and therefore monitoring should be carried out after installation to demonstrate the effective control. However, it is also important to maintain and monitor the performance of the LEV itself so that the level of control does not diminish over time either through damage to the ducting or by blocking of the vent face. Each item of LEV should have a full check annually and be visually monitored on a daily basis. The exact requirements for each item will depend on the amount and type of substance to control.

PHYSICAL HAZARDS

As well as chemical hazards there are a range of physical hazards which should also be addressed within the workplace; these include:

- Noise
- Light
- Mechanical safety
- Electrical safety
- Manual handling
- Fire
- Slips, trips and falls

Many of the issues surrounding the physical risks may become obvious when tasks are observed. A common approach is for a scheduled walk round by different health and safety representatives on a regular basis. This will identify damage to equipment, poor housekeeping and incorrect utilisation of machinery. If changes are required it is often worth taking exposure readings before and after the remedial action to demonstrate to staff and management the positive impact investment in health and safety can bring.

Accidents and near misses that occur within the factory will reveal what the areas of concern are, so these should be recorded and investigated as a matter of routine. In order to ensure a full level of reporting of such incidents, the reporting scheme should avoid attributing blame and concentrate on what can change in the work place to prevent a similar or worse event occurring.

Everyone in an organisation has a role to play in promoting health and safety in a factory environment from the senior executives and managers through to the factory operatives. Cleaning staff and workers should also be encouraged to take a level of personal responsibility with their behaviour and attitude to risk. It has often been observed that in organisations where there is a strong culture of commitment to health and safety, workers will be more motivated and there is a positive correlation with production efficiency. In conclusion, health and safety should not be seen as an additional requirement for factories but as a demonstration of the commitment to a lean and efficient working environment. 

Innovators—a new series of features in *World Footwear* will aim to tell the stories of people, ideas and companies that have had a lasting effect on the industry. We aim to highlight outstanding thinking and practice, from groups or individuals, that still benefit shoe enthusiasts today and tell a powerful story. We begin the series with Tinker Hatfield, vice-president for design and special projects at Nike.

30 years in shoes, and counting

This year is Tinker Hatfield's thirtieth in shoe design. He joined Nike in 1981, but it was 1985 before he embarked on his first footwear projects. Two years later, his first Air Max design came out, causing a storm with the air cushioning unit at the heel. Nike used a Beatles song (Revolution) in its advertising campaign for the first Air Max, which no one had ever done before. Something was in the air, you might say.

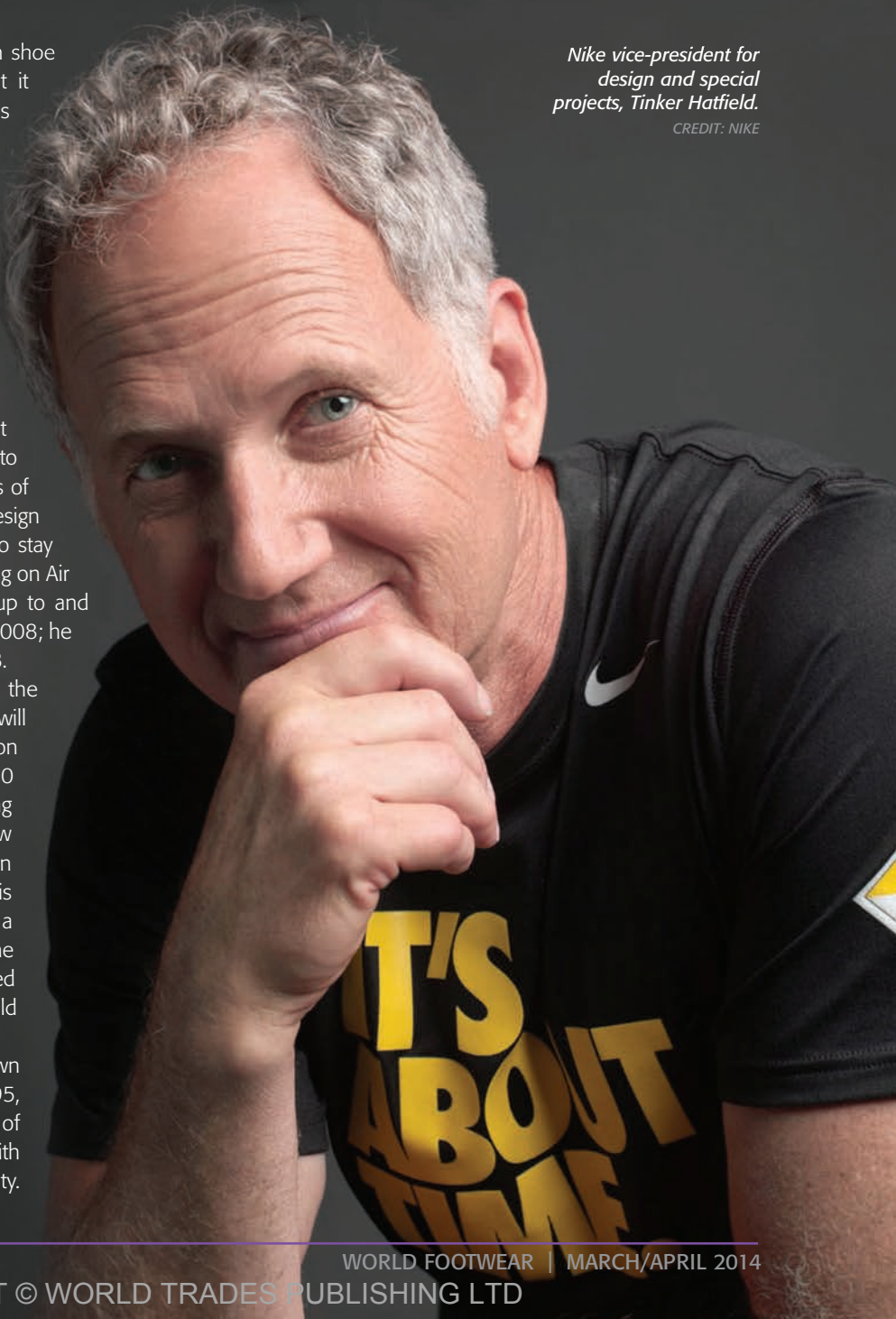
In parallel, he worked on the Air Jordan III, the first version of the basketball shoes to include a visible air unit for cushioning and the 'Nike Air' logo on the heel. Legend has it that basketball star Michael Jordan had been ready to walk away from Nike after the first two versions of the shoe that bears his name, but that the design Tinker Hatfield came up with convinced him to stay with the brand. Tinker Hatfield continued working on Air Jordans, leading the design of every version up to and including XV, and made a return for the XX3 in 2008; he also co-designed the Air Jordans 2010 and XX8.

On the Air Max side of the business, the revolution continues. In spring 2014, Nike will release three new takes on the Air Max 90 version of the shoe: the Air Max Lunar 90, Air Max 90 Jacquard and Air Max 90 Ice, incorporating technologies such as Lunarlon foam, no-sew construction, jacquard weaving and Phylon cushioning material. The brand's contention is that, when he introduced Nike Air as a cushioning system, Tinker Hatfield changed the design of running shoes for ever. And he changed the company: from 1987 on, Nike said it would "let innovation speak for itself".

When asked, as he often is, to pick out his own favourite, he chooses the Air Jordan XI from 1995, for the creativity of the design and its use of innovative materials, including Cordura nylon, with leather, in the upper for lightweight durability.

*Nike vice-president for
design and special
projects, Tinker Hatfield.*

CREDIT: NIKE



More than anything, though, he loves this shoe because of "the context". Michael Jordan had retired from basketball when Mr Hatfield was working on its design. "I was told point blank by various people higher up than me to stop," he recalls. "I just said, 'no, I'm not going to stop'. I knew Michael well enough to figure he was going to come back. I knew he had such a strong legacy of quality and excellence that his personality and mark, the Jumpman, would live on for ever. I had faith in his power. I worked especially hard on the Jordan XI, and that's one reason why there was so much new stuff in it. I wanted to prove to people that we were just skimming the surface."

He is still interested in new materials, and hopes his technical colleagues can find ways of allowing nanotechnology and microfibre materials to pass his company's strict physical testing programmes. "They are super-lightweight, and they have an interesting ability to stretch and come back into the right shape," he says. "But sometimes those materials don't pass our abrasion tests. It's a tricky combination to get a material to do several things well. We have some nanotechnology-type fibres that I would love to use." He names Swiss textile technology firm Schoeller as a supplier he greatly admires for making "some of the most amazing things you could ever imagine; they just live to engineer fantastic new materials".

Architect of his own destiny

Perhaps the revolution would have come about more quickly if Mr Hatfield had not spent his first four years at the company designing shop and office interiors instead of shoes, but he was hired as an architect, having found time to combine serious study with an impressive track career at the University of Oregon in the 1970s. He speaks freely about the benefits he feels his shoe designs have gained from his architecture background. He worked hard to build up his knowledge and expertise and is pleased to have found a rewarding way of using them.

"It was really difficult for me to do it," he says of the undergraduate course. "I don't think I was quite prepared coming out of high school. I was more of an athlete than I was a student, even though I did okay. Anyway, architecture forced me to open my eyes up and look around and pay attention to all things, thinking about what is really important to people. That's something I learned very early on in my architecture education." Perhaps the most famous example is that the Centre Georges Pompidou in Paris formed part of his inspiration for the Air Max shoe.

"Design, for a lot of people, is a mysterious process," he says. "I always start off with athletes: I'm a problem-solver and I want to make sure that whatever I design will help [athletes] perform better." Winner of 17 tennis Grand Slam singles titles, Roger Federer, represents a good example of this, the Nike vice-president for design explains. "He has very specific needs as a tennis player," he says of the Swiss athlete, "especially as he's always been known for his footwork. His feet are really important because how he moves around the court has probably separated him from most other tennis players over the long haul: his feet are always in the right place." Conversations around shoes have centred on how Roger Federer moves, how he starts, how he stops and what his best move is. Tinker Hatfield has tried to contour the shape of the bottom of the tennis star's shoes to tie in with this, while still



Life on the streets. Inspiration for the 1992 Air Raid shoe came from watching young people play basketball on inner-city courts.

CREDIT: NIKE

making them comfortable enough to wear in the longest of matches, which can sometimes mean four or five hours. Other prominent athletes that he says engage well with the design process include Real Madrid and Portugal national team footballer Cristiano Ronaldo.

Urban phenomenon

Curiosity is an important quality for any shoe designer to have, he insists, and he uses the 1992 Air Raid shoe as an example. He spent time in New York City and on the West Coast of the US watching young people play basketball on caged-off city courts (very much an urban phenomenon, and a strange one for someone who grew up in Halsey, Oregon, which has a population of under 1,000), talking to them about what they liked and didn't like and what they needed. He recognises now that this exercise could have put him "a little bit on the dangerous side" at times, but he says it helped inform him about the best direction in which to take the product, which was a response to Reebok's Blacktop, the first outdoor basketball shoe. The time he spent around these street athletes and observing at the same time what was going on around the courts in terms of music and "going deeply into that culture" contributed greatly to that response. Later, this included a collaboration with film director Spike Lee. "Sometimes you're first with an idea," he says looking back. "Sometimes you're not first, but you just do a better job."

Corporate animal

Even at his level, though, it's necessary to do the job within a corporate structure. After 33 years at Nike, Tinker Hatfield has learned a lot about how big corporations work. When he completed the design of the Nike Flight Huarache in the early 1990s, he was very excited, but the corporate sales team was only able to secure advance orders for 5,000 pairs. "It looked as though the project was dead," he says now, "because the sales didn't meet our minimums." He explains that the company probably would have been looking for advance orders of closer to 100,000 pairs before putting the shoe into full production. The original design looked unusual: it had no heel counter, no 'swoosh' on the upper, it was one-piece, there was exposed foam on the bottom, a neoprene inner bootie and an exoskeleton showing on the outside. "No one had ever done that before," he says, "and I thought it was going to be a great shoe." Wear-testing was positive: testers

said it looked good and felt good when they put it on. But when samples went out to the sales team, the early results were poor and the shoe's chances of success appeared to be over. However, a marketing executive, who Mr Hatfield says believed in the Nike Flight Huarache, "stuck his neck out" and ordered the 5,000 pairs from manufacturing partners. He took them to New York City at the time of the marathon, set up a booth there and sold every pair within two days. From there, it "sailed into the marketplace" and attracted a big following among sneakerheads. "When you design for Nike, you have three different customers," he explains. "Your first customer is yourself. Your second customer is your internal organisation. You have to satisfy yourself first, then you have to satisfy the internal organisation. Then the final customer is the person who will decide that your design is worth putting down cash for."

Citizen of the world

To continue to find inspiration, Tinker Hatfield still travels a lot. He says he loves living in Portland, Oregon, referring to it as a beautiful city, while acknowledging that "it's not the centre of the universe". So he travels far and wide, attending events, going to concerts and plays, just walking in the streets, keeping his eyes open, looking at scenery and talking to people. He's attracted to the "honesty" he can build into his designs from doing this, even if this means appearing to "the suits" as a troublemaker sometimes. He says that if "the suits" like a new design, he feels he has failed. "They are smart and great people, but they are risk-averse," he says, "and if they like a shoe, it probably isn't forward enough or going to change the way shoes are perceived enough. You need to shake up the country club a bit."

Returning to the Air Jordan XI example, he relates that Michael Jordan had spoken to him years before about making a shiny basketball shoe. Tinker Hatfield's initial reaction was that there would have to be a good reason for going down that road. He found the reason much later while watching baseball in Japan, where some players had begun wearing shoes with

a special patent leather in the upper. "It's culturally important there to keep everything really clean and fresh," he explains. "These professional baseball players wanted high-quality patent leather in their shoes to make it easier to keep them clean. And I got my hands on that stuff. And when Michael Jordan saw the first samples of the Jordan XI, he said, 'You wait. People will be wearing these with tuxedos'. And he was right. Before the public release of the shoes, [R&B vocal group] Boyz II Men appeared at the American Music Awards wearing the shoes with tuxedos."

Eye on the future

He thinks there are lots of talented young footwear designers around, but feels the disconnect between their ideas, in many instances, and the commercial world is that, amid the "artistic promise and passion" their designs seem to seek to solve no specific problems for wearers. It is responding to this challenge, as well as having a good story to back up the design, that will generate jobs for next-generation shoe designers, he insists.

He realises, of course, that the time must come for him to step aside, but he is on the record as being committed to "going out with a bang". He knows things now that he didn't know in the 1980s and 1990s, he confirms, meaning that extra knowledge and insight can go into his swan-song shoes, when the time comes. "I want to go out having been a positive influence on young people," is how Tinker Hatfield sums it up. "And I want to go out having contributed to the wellbeing of a very large company that provides a lot of jobs and a lot of wealth back to the community, as well as a lot of joy and interest." He has suggested that when he finally hangs up his pencil, he may devote more energy and more time to helping young designers make their own way in the world of footwear. "Maybe that would be the 'bang'," he says. "It might be some new thing that I can come up with, and maybe I'll never be done, but it might be going out as a designer and coming back as even more of a teacher." 🌀



Nike Air 90
CREDIT: NIKE

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Two brothers, who lost their parents in the 2004 tsunami, have launched a flip flop brand to support other orphans around the world.

‘We just want to create something positive’

Rob and Paul Forkan were only 17 and 15 when they hitchhiked, frightened and barefoot, 200km across Sri Lanka to the airport with their younger brother and sister after tragically losing their parents in the 2004 tsunami. The family had travelled across India and the sub-continent for years – parents Sandra and Kevin wishing an alternative education for their children built on experiencing different cultures – before deciding to spend Christmas in a small fishing village. The following morning the wave struck, claiming an estimated 230,000 lives around the world in a number of countries. Rob and Paul survived by clinging to the roof of a hut. Their parents managed to get Mattie, then 12, and Rosie, eight, to safety before being swept away.

“That day changed our lives forever,” says Rob Forkan, but he and Paul were determined to find a positive in the tragedy.

Supported by relatives and friends, they finished their education, got jobs in London and went travelling again. They were looking for ways they could ‘give back’, and struck on the idea of a footwear brand that would donate 10% of profits to children in developing countries through a charitable arm, Orphans for Orphans. “We spent years travelling in flip flops, whether it was backpacking around the world or at festivals – it suited who we are, it seemed to be a good match,” explains Rob.

After waking up at a festival and exclaiming he had a mouth like ‘Gandhi’s flip flop’ (a humorous term meaning a dry mouth), the boys had their brand name – albeit with a spelling change to avoid causing offence. “Some people understand the humour in the name, some don’t, but even if they don’t, the name gets worldwide recognition and has a good ring to it.”



Registered charity Gandys Foundation runs Orphans for Orphans. It has already paid for a teacher, healthworker and classroom supplies in India. CREDIT: GANDYS

But setting up a brand from scratch is not easy. The original plan was to make the shoes from jute, handcrafted in India. "We wanted something a bit different, which is where we came up with the idea for the rope strap. We were trying to put something on the market that nobody else had."

However, they hit stumbling blocks: the materials, the manufacturing, the quality and the lead times were not up to the desired standard. "Everything that you wouldn't want to happen was happening, so we went back to the drawing board. I think a lot of people might have just given up then, after we'd had a lot of headaches, but we said 'no, let's carry on' and kept pushing it from there."

The drawing board entailed trawling alibaba, the global supplier website, where they discovered lead times, the technology and designs could be vastly improved on by switching to a rubber product and to China. The alibaba move would prove more valuable than they could realise: a designer friend was looking for a company to feature on an alibaba advert and they were selected as a case study. The advert showed worldwide – including Canada, Australia, and the US, and enabled a power shift.

"We began to have manufacturers knocking on our door, rather than us trying to convince them," explains Rob. "Rather than them saying 'you need to order a minimum of 10,000', for example, it gave us some bargaining power to say, 'if you want to work with us we need to try it out.'" After some due diligence, a supplier from Fuzhou was selected due to its ability to scale-up production as the brand grows.

Retail growth

The next step was getting the product into retailers. They were turned down by the larger stores at first, but switching to a 'woven' strap and building momentum for Orphans for Orphans through social media is beginning to pay off. Gandys won the Footwear and Accessories Design category at the recent WSGN Awards, a prestigious London-based fashion event, and has secured House of Fraser, ASOS, Topman and Selfridges among stockists. Virgin owner Richard Branson liked the idea so much that his staff and guests now wear Necker Red Gandys flip flops on his private island. Famous fans include US film star Jessica Alba and singer Niall Horan from One Direction.

In November, Peter Simon, the founder of retailers Monsoon and Accessorize, who was born in Sri Lanka, travelled with the brothers to the country – the first time in its 30-year history that Accessorize has collaborated with another brand, as well as the first time the brothers had been back there since the tragedy. Although it was extremely difficult, particularly as it was straight after a major typhoon in the Philippines, "we just want to try and create something positive out of a bad situation", says Rob.

Mr Simon introduced the brothers to SOS Children's Village in Piliyandala and Pahamune House in Narammala, both of which support children in Sri Lanka who lost parents in the tsunami, and which will benefit from a percentage of the profits of Gandys sold in 18 countries through Accessorize.

The brothers encountered a boy who had also lost both of his parents in the tsunami and who had initially been taken into care by relatives. "The locals explained our story to him and even though there was a bit of a language barrier, we saw his face drop once he heard our experience, and saw tears well up in his eyes. We only knew his pain too well."



The design includes a woven strap and logos to remind the boys of their parents: A kingfisher for their father and a footprint for their mother. CREDIT: GANDYS

After the tsunami, with his relatives unable to look after him, he had ended up in a home, where he had been abused. "Hearing that after a horrific tragedy things didn't really get much better was incredibly upsetting for us. This really highlighted for us why Gandys exists – so that any child will be cared for properly after experiencing such an event."

Children's home

Only a year and a half in, the project has funded a teacher and a nurse in India and bought school supplies for 100 children. The goal, however, is to fund a children's home in Goa by the end of this year – the 10th year anniversary of the tsunami. They have recently received a £250,000 investment from Dominic List, who appeared on the UK TV programme Secret Millionaire and who made his money in technology solutions.

"We work around the clock, and to do what we've done in such a short space of time has taken a lot of hard work," adds Rob. The boys have said they know their parents would be proud of what they've achieved. There is a footprint in the logo to represent their mother's favourite poem, Footprints in the Sand, and a Kingfisher, their father's favourite beer. "If you meet anyone in retail or footwear they can't believe what we've achieved in a year and a half, and it's because we've got that driving force behind us."

They are on target to meet their goal, with sales rising from 70,000 in 2011 to 250,000 in 2013. And while projections "keep changing because so much is happening", this year sales are expected to reach between 400,000 and 500,000 pairs.

"Nine years ago when we were travelling home from Sri Lanka, we didn't have any shoes on our feet," adds Rob. "Now, we are returning not only with shoes on our own feet, but with a flip flop brand and a global partnership that will help thousands of children have a brighter future." 🌀

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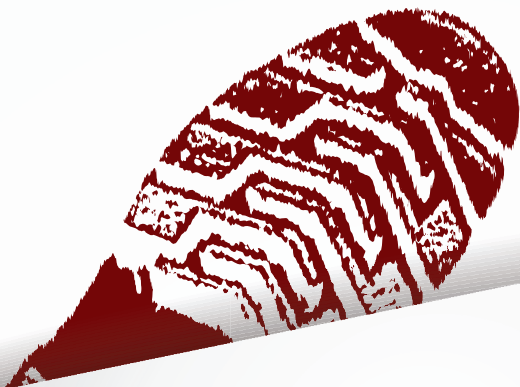
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