

WORLD FOOTWEAR

MAY/JUNE 2013 • VOLUME 27 NUMBER 5

THE MAGAZINE FOR THE GLOBAL SHOE INDUSTRY



**Lean, green, clean
footwear industry**

**Unusual shoe shapes
with 3D printing**

**Autumn-winter
13-14 trends**

**EU label turnaround
explained**



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Head Office

36 Crosby Road North, Liverpool L22 4QQ, UK
 Telephone: +44 151-928 9288
 Facsimile: +44 151-928 4190
 E-mail: wl@worldtrades.co.uk

Editor

Deputy Editor
 Consultant Editor
 Technical Editor
 Contributors

Stephen Tierney

Clare Grainger

David Buirski

Philip Lattaway

Penny Leese

Sergio Dulio

Steve Lee

Shari Shallard

Tim Button

Vicky Owens

Sue Cassidy

Heather Maher

Pauline Kelly

Karen Brown

Simon Yarwood

Design Team

Accounts

Administration

Subscriptions

Publisher & CEO

Front Cover

Cover: In this issue our cover features an innovative, colourful sole from new footwear brand Anthony Miles.

Image: Anthony Miles

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News

GERMANY Adidas has posted a record profit margin for the first quarter 2013, boosted by sales of higher priced products. Despite a 2% fall in first-quarter sales, operating profit at the world's second largest sportswear maker rose 8% to \$578 million. Chief executive, Herbert Hainer, said it was a tough quarter compared with the same time last year when sales were boosted by the European football championships and the London 2012 Olympics.

SPAIN Local authorities on the island of Menorca have offered a support budget of €110,000 to its footwear manufacturers for the next 12 months. This is new money and will be added to support already available from the local government for the island's 27 footwear firms, whose combined turnover is €84 million per year. Specifically, the authorities have earmarked the money to allow Menorcan footwear brands to take part in industry events between now and April 2014.

TUNISIA The country's footwear and leather industry has reported an increase of 11.5% in the value of its exports in the first quarter of 2013, compared to the same period in 2012. In the first three months of this year, footwear and leather manufacturing companies brought into the North African country export revenues of \$171.7 million. Almost 60% of this total came from exports of shoes.

SWEDEN Casual fashion footwear brand Ten Points is preparing to build on its international growth later in 2013 with a breakthrough distribution deal with retail chain Office in the UK. Ten Points has already reported strong international growth in Norway and Germany, but sales and marketing manager, Magnus Palmér, said that the deal with Office was confirmation that the brand is "on the right path".

PERU Footwear manufacturers and tanners in Trujillo, have been warned about a scam involving false representatives of a new industrial site in the district of El Porvenir. Companies have been asked by agents claiming to represent the authorities to pay a cash deposit to secure a place at the new industrial site. Luis Yzquierdo, an official from the local authority in El Porvenir, has warned shoe companies through local media that they should not be fooled by these requests. "The only way to sign up for a place at the new sight is in person and under the supervision of the local authority," Mr Yzquierdo said.

SOUTH AFRICA A trade event highlighting export and manufacturing opportunities for the footwear industry, as well as textiles and apparel, took place in Cape Town in April. More than 125 African manufacturers attended, with country pavilions from Lesotho, Mauritius, Madagascar, Swaziland, Botswana, Malawi, Mozambique, Zambia, and Zimbabwe and host country South Africa. The American Apparel & Footwear Association (AAFA) hosted a series of seminars, explaining what buyers expect from Africa and highlighting investment opportunities in the region.

ETHIOPIA A Chinese footwear company has committed to spending \$2 billion over the next decade in setting up a 'shoe city' on the outskirts of Addis Ababa. Huajian wants to transfer its skills to locals in Ethiopia, so they can become the managers of the enormous facility. The 300-hectare site will provide accommodation for up to 200,000 workers with space for other footwear and leathers goods companies. Construction is due to begin later this year.

RUSSIA The president of the Turkish Footwear Industry Association, Iskan Seker, said Turkey was now the biggest exporter of shoes to Russia after China, Italy and Vietnam. He said that in the course of the next two or three years, Turkey will be able to increase the value of its footwear exports to Russia to a level above \$200 million per year.

CHINA The China Leather Industry Association (CLIA) has reported that almost 5,000 "enterprise scale" footwear manufacturers in different parts of China achieved industrial output in the first two months of 2013 with a value equivalent to \$13.7 billion. According to the association, this represents an increase of 12.6% compared to the same two months in 2012.

- Chinese footwear manufacturers exported 10 billion pairs of shoes in 2012, according to the CLIA, with 840 million of these made with leather uppers - an 8.3% increase in volume. Overall, shoe exports brought in revenues of \$44.4 billion. Shoes with leather uppers contributed \$10.9 billion to this total.

INDIA Exports of leather and leathersgoods, including shoes, from India in the first nine months of the financial year (April-December 2012) had a value of just over \$3.6 billion, a decrease of 1.3% in dollar terms compared to the same period a year earlier. The value of leather shoe exports was \$1.2 billion, a decline of 7.5%. Footwear component exports fell by 18.9% to \$180.6 million.

THAILAND The chairman of the Association of Thai Footwear Industrial Promotion has requested the industry be allowed to employ more migrant workers, after a rise in minimum wage left companies short of staff. The 300 baht increase meant 10,000 workers did not return to work after recent holidays, but instead sought employment in their home towns.

BANGLADESH Bangladesh's Export Promotion Bureau has reported that the country's leather sector increased the value of its exports over the first three quarters of the current financial year by 23.5%. Over the nine-month period (July 2012 to March 2013), leather-sector exports had a value of \$688.1 million. Footwear exports accounted for \$311.5 million of this total, an increase of 19.4%.

JAPAN At least five Japanese footwear companies have announced they will move production to Vietnam after a delegation visited the country at the end of last year. Statistics from the General Department of Vietnam Customs show revenue from footwear exports hit \$1.73 billion by the end of March, 16% more than the same period in 2012.

UNITED STATES The footwear manufacturing industry in the US has declined at a rate of 1.4% per year over the past five years, according to consultancy IBISWorld. It said the number of footwear manufacturing companies has fallen from 890 in 2008 to 798 in 2013.

- The parent company of footwear brands Kurt Geiger, Stuart Weitzman and Brian Atwood has announced a plan to improve profitability, which involves closing 170 under-performing stores as well as streamlining wholesale divisions and supply chain. The Jones Group will consolidate certain production, design and selling divisions, as well as distribution and supply chain facilities.

- New figures from the US Department of Commerce show that in the course of 2012, retailers and traders brought imported footwear with a value of \$19.1 billion. This figure represents an increase of 4.2% compared to the value of shoe imports in 2011.

Footprints

REVAMP FOR K-SWISS LEADERSHIP TEAM

US-based sportswear brand K Swiss has appointed a new executive team following its merger with South Korean retail conglomerate E.Land. K Swiss, which also owns Palladium brand, will be led by CEO Larry Remington, formerly the CEO of Palladium, with Truman Kim as chairman.

Mr Remington succeeds Steven Nichols, who has been the chief executive of K Swiss CEO since 1987, and David Nichols, president since 2012.

ANCI ANNOUNCES NAME-CHANGE

Italian footwear manufacturers' association ANCI has announced that it will change its name to Assocalzaturifici Italiani.

The decision came at an extraordinary shareholders meeting in Bologna in mid-April.

"The new name and articles of association are part of an underlying renewal strategy," said the organisation's president, Cleto Sagripanti. "This is an important moment of transition for the association, which intends to remain faithful to its history and tradition, but which also wishes to – and must – rise to the new challenges ahead. To this end, it has brought its articles of association up to date, with a view to becoming an increasingly important point of reference for businesses in this sector."

FORMER FOOTWEAR EXEC TAKES TOP JOB AT PUMA

German sportswear brand Puma has appointed Björn Gulden as its new CEO, effective July 1, 2013.

In December the group embarked on a senior management shake-up described as a "new chapter". CEO Franz Koch stepped down, following in the footsteps of former chairman Jochen Zeitz, who resigned in October.

Mr Gulden has been CEO of Danish jewellery brand Pandora since the beginning of last year. From 2000 to 2011, the Norwegian was managing director of footwear retailer



SATRA SHOWS OFF EVEREST BOOT

Sixty years after the start of the first successful assault on the summit of Mount Everest, research and testing institute SATRA showed off one of the boots used on the expedition, which it helped develop.

SATRA worked with local footwear

manufacturers in and around Northampton to make boots that would be light enough and comfortable enough for the 16-strong party to wear below and above the snow-line and the organisation is justifiably proud of the fact that, for the first time ever on an Everest expedition, none of the mountaineers suffered from frost-bite during the climb.

Known as the 1953 British Expedition, the climbers who were the first in history to reach the summit were Nepalese guide Sherpa Tenzing Norgay and New Zealand mountaineer Sir Edmund Hillary.

During the first days of May 1953, expedition leader, Colonel John Hunt, and two companions completed an important reconnaissance of the Lhotse Face on the mountain, which allowed them to plan a steady progression of camps, higher and higher up, eventually permitting Sherpa Tenzing and Sir Edmund Hillary to reach the summit on May 29.

It is one of Sir John Hunt's boots that SATRA keeps at its laboratory in Kettering.

The boot looks bulky by today's standards but is surprisingly light to lift. SATRA's head of research, Tom Bayes, told a group of journalists attending a presentation at the laboratory on OutDry water-resistance technology and a new SATRA water-resistance test, that the manufacturers of the 1953 boot had used only natural materials, including a leather toe-puff and leather insole board. The climbers attached canvas overshoe material for walking through snow and took the overshoe off above the snow-line to allow the boots to breathe better, Mr Bayes explained.

Deichmann, where he also headed the US subsidiaries Rack Room Shoes and Off Broadway Shoes.

SERGIO ROSSI CREATIVE DIRECTOR TO MOVE ON

Creative director of luxury footwear brand Sergio Rossi, Francesco Russo, has decided to leave. Mr Russo, who has held the position since October 2008, said at the end of February that the autumn-winter 2013-2014 collection, unveiled at the most recent Milan Fashion Week, would be his last for Sergio Rossi.

Chief executive of the PPR-owned brand, Christophe Melard, said: "We all thank Francesco Russo for his commitment and passion during our collaboration. He has greatly contributed to the development of the

brand."

Sergio Rossi began making shoes in the 1950s in San Mauro Pascoli in Italy, and created his brand in 1968. The brand has long been synonymous with glamour and many Italian and international stars have worn Sergio Rossi on the red carpet over the years.

NEW POST FOR ABICALÇADOS DIRECTOR

Brazilian footwear industry association Abicalçados has created a new position of executive chairman. Current executive director, Heitor Klein, will fulfil the role for an initial two-year period.

His official inauguration took place on April 8 during festivities to celebrate the thirtieth anniversary of Abicalçados in Novo Hamburgo.

Milton Cardoso, who has been Abicalçados president for the last six years, has now stepped down.

AUBURN LEATHER WINS EXPORT AWARD

The Export-Import Bank of the United States (Ex-Im Bank), which provides funding and insurance to help export-focused private enterprises in the US, has named Kentucky-based Auburn Leather as its Small Business Exporter of the Year for 2013.

Auburn Leather, a specialist manufacturer of leather laces for footwear and sports equipment, received the award at a special ceremony at Ex-Im Bank's annual conference in Washington DC at the start of April.

At the ceremony, bank president, Fred Hochberg, said: "Auburn Leather is a true American success story. This family-owned small business has increased sales and created jobs by selling products to customers around the world. I am pleased that the bank's insurance policy has enabled this company to expand to new markets, hire new workers, and ensure that more stores will have Made in Kentucky products."

Auburn Leather has experienced an increase in overseas demand for its laces, leading to an upswing in sales. It says this sales increase is, in part, because of a small-business insurance policy the company received from Ex-Im Bank. These funds have supported the growth of the firm, which has added over 20 jobs in the last two years. Exports now account for more than 45% of the company's sales.

Company president, Lisa Howlett, said at the Washington DC event that demand for her company's leather laces is being driven by recognition among finished product manufacturers and consumers of the value of genuine, US-made rawhide laces. She said: "I am proud for our company to receive this award and look forward to additional growth in the coming years."

CHANGES AT DANISH INDUSTRY BODY

Denmark's footwear industry association has voted to change its name. The organisation previously went under the name Skoleverandør Forening (footwear suppliers'

association), but will now be called Skobranchen (footwear industry association) instead.

At its annual general meeting at the start of May, the organisation also elected a new president, with Peter Jørgensen of Esbjerg-based Sports Connection taking over. Mr Jørgensen is a former Hi Tec Sports executive.

IMELDA SHOW SHOCKINGLY SHORT ON SHOE SCENES

Musician David Byrne's obsession with the former first lady of the Philippines, Imelda Marcos, which spawned a concept album in 2010, has now inspired a stage musical, *Here Lies Love*, that opened on Broadway in New York this spring.

According to critics, the nightclub-based set and bright, floral costumes are "refreshing", but there is little narrative and what story there is omits to mention one of the most famous things about Imelda Marcos: that her passion for shoes was so great she owned a reputed 2,700 pairs.

TOD'S HIRES FORMER GUCCI DESIGNER AS CREATIVE DIRECTOR

Luxury leathergoods and footwear company Tod's has hired former Gucci and Valentino designer Alessandra Facchinetti as creative director.

Tod's has been expanding its international footprint after suffering from lower sales in its home market during the recession.

"Alessandra Facchinetti is a very talented woman," said Diego Della Valle, CEO of the Italian company. "Her passion for detail and her dedication to the research of materials and manufacturing make her perfect for our brand, which has always been very attentive to quality and Made in Italy."

Tod's reported 2012 sales of EUR 63 million in 2012, up 7.8%, helped by a good performance in China.

ANDERS ODÉN CONFIRMED AS VAGABOND CEO

Anders Odén, who first joined Vagabond ten years ago as financial manager, has been confirmed as the Swedish footwear brand's new chief executive.

Mr Odén left the shoe company at the end of 2004 and spent three-and-a-half years as chief executive of a company

that makes timber-frame houses. But he returned to Vagabond in 2008, first to manage the retail division and then to be vice-president of the company.

He took up his new position at the start of April.

Vagabond currently makes around two million pairs of shoes for men and women each year and has customers in 25 countries.

STUDENTS TAKE PART IN CHURCHILL COMPETITION

Footwear design students at the University of Northampton are applying the finishing touches to their entries to a special competition to commemorate Winston Churchill.

Sponsored by the Pentland Group, the company behind footwear brands KangaROOS, Ted Baker, Lacoste and Umbro, the Winston Churchill Design Competition 2013 is open until May 31.

Design students from across the UK were given the brief of coming up with a work in 2D form to articulate why the life of Winston Churchill (UK prime minister during World War II) is still relevant to people today. Entrants had to explore the story of Churchill's life and his impact on the twentieth century; they were encouraged to "think on a big scale from the outset". The Northampton students, naturally, have concentrated on shoe designs to meet the brief.

There are three prizes, of £1,000, £750 and £500. All three prize-winners will be considered for work experience at Pentland's headquarters in London and their designs will go on public display.

To help students come up with design ideas, the organisers said in the guidelines for the competition that "few figures are as instantly recognisable as Sir Winston Churchill", and highlighted a series of iconic Churchillian objects to emphasise the point.

One of the Northampton students, Sianne Smart, picked one of these objects, a pocket watch, as a central element of her shoe design. In keeping with an ongoing current footwear trend, Ms Smart has used pocket watch parts as metallic decorative elements on her shoe upper. And in a particularly eye-catching touch, she placed many-toothed cogs from the inner workings of a pocket watch as decorative reinforcements around the eyelets. 

Products & Services



BASF BEHIND NEW ADIDAS 'ENERGY' SHOE

Adidas' latest running shoe is described by the German sportswear company as providing "the highest energy return in the running industry".

The 'Boost' is a cushioning technology based on a process created by chemical group BASF, where solid granular material (TPU) is turned into thousands of energy capsules which make up the footwear's midsole. Adidas claims that with their unique cell structure, these capsules store and release energy. Tests conducted by Adidas showed that when taken from 40°C to -20°C, Boost foam is three times more temperature-resistant than standard EVA material, providing a more consistent run.

A&E SUCCESS IN NIKE SUSTAINABILITY AWARDS

Textile and specialist thread manufacturer American & Efrid has announced that its dye house in Dongmei, China, has received recognition as the leading sewing thread manufacturer on the Nike Materials Sustainability Index (MSI).

This is A&E's second consecutive award in a competition that Nike runs every quarter. A&E won for the third and fourth quarters of 2012. Third parties must certify all data submitted.

Nike runs the competition because it believes a focus on materials management along the supply chain is a good way for it to control its overall environmental impact. So, for 10 years it has been working on its MSI to help its design teams make informed decisions about the potential environmental impact of their material choices. The index calculates scores for

more than 80,000 materials from 1,400 suppliers around the world.

"Nike MSI is one of the most prestigious sustainability programmes and we are incredibly honoured to receive this award," said John Eapen, A&E vice-president for environmental, health and sustainability.

A&E received perfect scores for its water programme at the Dongmei plant and for water conservation.

EC HONOURS INESCOP LEATHER PROJECT

The efforts of Inescop, Spain's technology institute for footwear and related industries, to encourage tanners to try alternatives to chrome tanning have won recognition from the European Commission.

Inescop first published the findings of its work on leather tanned with titanium and oxazolidine instead of chrome in 2011. A Spanish tannery, Incusa, went ahead with a project to use titanium and won the support of a footwear brand from La Rioja, Fluchos.

However, the Oxatan project, examining the quality and the environmental impact of leather tanned using oxazolidine, was selected as one of the best European projects at the most recent European Commission LIFE-Environment Programme Awards.

Tests carried out in the laboratories at Inescop on oxazolidine-tanned leather demonstrate that the material complies with the requirements set out by the European Eco-label for footwear, and also conform to the recommended values for the manufacture of footwear.

BASF CHANGES PLASTIC ADDITIVES BUSINESS

As part of a wider restructuring exercise, chemical firm BASF has announced changes to its plastic additives business.

The company says it will introduce a more market-oriented approach to its plastic additives business, focusing on key topics and customer industries.

It will be organised more efficiently through a network of global competence centres. In addition,

supporting functions, such as technology and strategy management, will be consolidated at corporate headquarters in Germany.

MAIN GROUP HAS ENERGY SAVINGS IN ITS SIGHTS

Injection moulding machines manufacturer Main Group has said energy saving has become a key factor in its product design.

The Venice-based company said it was now choosing the most up-to-date electronic and hydraulic components it could to make sure its machines offer "real and significant energy saving" to footwear manufacturers, as well as an increase in productivity and a reduction in finished product costs.

It said that the reduction in energy consumption with some of its newest machines can be as high as 50%.

COATS LAUNCHES THREAD PRODUCTS FOR FOOTWEAR

Industrial thread business Coats is rolling out new products targeted at the sportswear industry including a thread suitable for athletic footwear.

Eloflex thread is high in elasticity and tenacity, making it suitable for seams with high points of strain. The thread's high-stretch properties, strength and durability reduce the risk of seams splitting and tearing.

The company has also launched a range of zips with an auto-lock clip-down slider and puller, eliminating the problem of dangling zip pullers that can cause irritation during exercise.

VIBRAM PROVIDES SOLE FOR ASOLO PROJECT

Specialist sole manufacturer Vibram has teamed up with hiking footwear brand Asolo to create a new footwear technology called Natural Shape.

Natural Shape is designed to offer high levels of comfort and features an exclusive new Vibram sole. Its structure is divided into four areas: stabilising pads, first propulsive area, second propulsive area and area of impact. A midsole in thermoformed EVA enhances balance and support.

CAMBRELLE DOUBLES CAPACITY IN CHINA

Due to increased demand, the maker of shoe lining Cambrelle has expanded its facilities in China, doubling its capacity from a year ago and opening a new production facility near Shanghai.

UK-based Camtex Fabrics expanded production from the UK into China five years ago, principally to be closer to the footwear companies it supplies and help shorten 'time-to-market'. The group's extra factory means it can focus more production on its new developments.

"Normally, Cambrelle is a nylon product," explains Camtex Fabrics chief executive Kieran O'Hare, "but part of the reason we're moving a second production line to China is that we can now produce a polyester version there, which is popular among sports shoe brands, particularly adidas."

Around 60% of Cambrelle is manufactured in the north of England, with 40% now made in China.

BANANA FABRIC USED FOR BREATHABLE SHOE

Textile entrepreneurs in India's Man-Made Textile Research Association (Mantra) have created a breathable shoe made with banana fabric.

The researchers in Surat prepared the fibre on a powerloom, dyed and printed it, and are now ready to go into manufacture, according to reports.

The fabric is made from the stem of the banana tree, which the researchers suggest can boost farmers' profitability by generating extra income.

UNDER ARMOUR CHOOSES LINE-X COATINGS

US-based sportswear brand Under Armour has developed a "water shoe" in collaboration with Line-X Protective Coatings, designed for ventilation and water expulsion through a tough, coated mesh.

Line-X engineered a special aliphatic coating exclusively for the shoe which is waterproof, colour stable and durable. The Under Armour Water Spider is designed for an active outdoor lifestyle, with lightweight cushioning and support, a full drainage polyurethane footbed and high traction, non-slip outsoles.

BAYER MATERIALSCIENCE PUSHES PUDS

Plastics manufacturer Bayer MaterialScience has said it believes polyurethane dispersions (PUDs) "present some distinct advantages" to manufacturers of coatings and adhesives. It added adhesives formulated with PUDs are well suited to footwear manufacture.

Dr Jeffrey Dormish, senior principal scientist at Bayer MaterialScience, said PUDs provide performance advantages over other formulations. PUDs have, for example, shown good adhesion to difficult-to-bond substrates, high

initial bond strength, and resistance to moisture and plasticisers.

REVISED GUIDE TO CHEMICALS IN FOOTWEAR

The Footwear Distributors and Retailers of America and BLC Leather Technology Centre have worked on a revised version of their guide to managing chemicals in footwear.

The aim is to help footwear companies understand the chemicals that are widely used in shoe production and develop a strategy to manage their use in the context of what BLC has called "the changing landscape of global product safety regulations".



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One step ahead in the footwear warehouse

Footwear fashion is fickle. Remember when everyone from TV chef Mario Batali to the kid next door was wearing Crocs? Now, it seems like the masses, at least those between the ages of 13 and 18, are wearing TOMS Shoes instead. There was a time when people wore one pair of shoes for walking and switched to another at work. Now with dressy-looking, comfortable walking shoes, you can get your miles in and be office-compliant. Seasons and cycles are constantly changing.

For manufacturers, looking into the crystal ball to see the next hit is a costly and risky challenge. Guess wrong and you're stuck with a warehouse full of inventory. With constantly expanding product lines and at least three different distribution channels (wholesale, retail and e-commerce) successful shoe folks realise that speed to the consumer is critical in this fashion-driven industry. But while you can't control what the fashionistas are preaching, you can gain control over chaos and confusion that comes with a proliferation of stock keep units (SKUs) in your ever-expanding warehouse.

Good warehouse management can help footwear companies build success by driving down the cost of distribution while increasing customer service. In this article Jack Rubinger and Don Benson explain how warehouse management technology can play an important role.

Simple signs

A variety of visualisation tools can help. A simple, cost-effective technology that is useful in any warehouse is highly visible retro-reflective barcodes and way-finding signs and labels. Aisle signs can help anyone in the warehouse easily know where they are and which direction to take as they search for specific locations. Storage location labels are commonly used as addresses like home or business addresses outside the warehouse. Signs and labels



With expanding product lines and wholesale, retail and e-commerce channels, footwear companies now need to manage distribution more carefully than ever.

CREDIT: SHUTTERSTOCK/CHAMPIOFOTO

shorten the orientation time for people new to the warehouse and increase the productivity for those who work there.

In smaller warehouses, the ordered SKUs are often listed on a picking document in the same sequence as the order was entered. With smarter business systems, the SKUs are listed in a logical picking sequence to reduce the walk time. The visual cue of a well-run warehouse is that there is a place for everything and everything is in its place.

"I consider it a necessity to use barcode labels throughout the distribution centre on the various storage media locations for inventory management purposes," says Chris Slover, an account executive at Fortna, an outsource supply chain solutions provider in Nashville that works with footwear companies such as ASICS, Brown Shoe, Genesco, and TOMS.

David Schneider, who runs his own supply chain solutions company in Virginia, says a lack of organised signage or location ID labels is one of the signs of an inefficient warehouse, along with merchandise in aisles and merchandise mixed in the locations.

Simple steps

For his part, Roger Lamb, director of supply and operations at Sole Technology, the California-based company that owns a number of footwear brands, including skateboard-inspired Etnies, has five concrete suggestions on how to make footwear warehouses function well.

First, you have to set up your building for a good work flow: receiving, storage, picking, then shipping. Second, you should avoid mixing SKUs in locations. Next, you should aim at finalising all transactions within 24 hours. This ensures the work gets done and you save a lot of time answering questions from customer service, production, and customers. It will also help keep inventory in the warehouse in sync with your book inventory. Next, according to Mr Lamb, you must analyse every step in your process to find ways to improve speed and cost. And lastly, you must instil accountability for all in your operations.

One-stop shop

Before you fall in love with the all-encompassing, one-stop-shop technology solution, be sure your systems are financially sound and operating smoothly. Applying systems technology to a bad process, or worse, in an environment of poor discipline, is only asking for trouble. Warehouse technology assumes that good basic warehouse practices are in place.

Consider four steps before taking the tech plunge. First, establish a clear vision for your company leading to a balance between economic value and building capabilities. Second, understand how to deliver measurable desired outcomes for the company and the warehouse. Next, educate decision-makers and task-performers. Lastly, conduct re-engineering processes.

Real-world solution

Ruben Trifilio was hired by Grendha, a Brazilian company that markets and distributes trendy moulded-plastic women's and children's shoes. On the surface, it looked like the warehouse was operating smoothly with the aid of enterprise resource planning (ERP) systems, a logistics consultant and a distribution specialist who were working together to optimise space, effort, workflow and accuracy. Also, a radio frequency (RF) system had been recently implemented.

Unfortunately, there was really no one in the warehouse at Grendha who knew how to coordinate these modules. Inventory was out of control. Items were misplaced. When certain styles, colours or sizes were not where they were supposed to be, people would just find and pick the shoes from somewhere else and move on, without really understanding why these problems were happening.

Questions needed to be answered. Was the shoe in the bin right next to where it was supposed to be? Did it get scanned into the wrong location on put-away? A period of retraining and self-examination helped everyone work toward a clear understanding of the importance of inventory accuracy and determining who controls what throughout the system.

When his team was ready to implement a technology solution to automate many of these tasks, the work was better organised. "The new system forces everybody to follow the rules, keeping everything straight and making it virtually impossible to pick the wrong shoes," Mr Trifilio says now.

Technology can help

At some point in the growth of sales, inventory or SKUs, a warehouse can justify purchasing a warehouse management system (WMS) to improve inventory accuracy, picking productivity and space utilisation. A lot depends on the type of operation. What works for a large e-commerce retailer may be a poor fit for a specialty fashion supplier.

Popular technologies enabled by a WMS include automatic identification (such as by barcode label or RFID tag). This should be done at the factory.

There is also useful communication technology, allowing operatives to use voice or light technology to pick and pack. Communication is the key to keeping everyone on the same page about the task in hand.

Storage (static or automated) should be organised at all times for inventory accuracy, speed of locating and housekeeping safety. The need for handling and transport technology (with lift-trucks, robots or conveyors) depends on order-processing timing. For pick-and-pack orders, conveyors are important.



DuraLabel retro-reflective barcode labels on shelves and aisles enable pickers to scan for product information from eight metres away. Technology such as automatic identification can help a warehouse work well, but you need to have good workflows in place first. CREDIT: DURALABEL

WMS software has been around for 35-plus years. Well-known footwear industry and fashion WMS providers include Epicor, Simparel and Apparel Business Systems.

Fortna's Chris Slover says: "WMS is the main tool to manage inventory throughout the distribution centre from receipt, storage, and shipping. WMS will interface with a host system or ERP that manages order management processes and then also with a warehouse control system that can manage the physical flow of inventory through the distribution centre."

Not all users are satisfied with their investments in these systems. Critics say they never saw anything close to the expected return. Fans say it dramatically transformed operations. Like ERP, customer relationship management and other enterprise software applications, to get business and operations results from the investment, the goal should not be quick and cheap. Depending on the operation, implementation can run anywhere from 16 to 40 weeks from installation to go-live. Map out and determine how a WMS can automate processes to eliminate human error and have visibility of moving inventory. You should also be able to use the WMS for accountability purposes.

As companies solidify their position in a supply chain, managing relationships with vendors and customers to maintain proactive, strong and creative two-way movement of information and materials is mission-critical. The reality is that a successful company and warehouse can be sustained only when management works to maintain a creative tension and balance between the priorities that the company needs for itself and what the company must do for others in its chain.

Driving down the cost of distribution while increasing customer service will drive success in the footwear industry. The Amazons and Zappos of the world are highly aware that business competition will naturally grow, bringing the need for the company and the warehouse to attend to financial performance in the short term and build capabilities for the long term. Together they build a resilience that can sustain the business. 

Don Benson is a specialist consultant who has designed warehouses for Nike, K-Swiss, Columbia Sportswear, Puma, Famous Footwear, and L.A. Gear. Jack Rubinger is a Portland, Oregon-based industrial copywriter for Graphic Products.

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Who says consumers don't care where and how products are made? Giorgio Cugini's factory in Falerone, in Italy's most famous footwear manufacturing region, Le Marche, is one of many in Europe that strive to stay true to traditional values.

CREDIT: GDS/CONSTANCE TILLMANN/HANDMADE GIORGIO 1958



An unexpected turn of events in Brussels at the start of 2013 has meant the European Commission might have to backtrack on a decision to allow importers of shoes and other goods to hide the country of origin from consumers.

The fall and rise of labels of origin in the EU

Having said at the end of 2012 that it would not press ahead with an earlier commitment to oblige retailers in the European Union to show the country of origin of consumer products sold there (see *World Footwear*, January/February 2013), the European Commission has changed its mind again and now shoppers may well see the country of origin on shoes and other products sold in the 27 EU member states.

Citing consumer safety, the commission said in a statement on February 13: "We are convinced that consumers, businesses and national authorities will greatly benefit from clear and consistent rules across the single market, more effective market surveillance and improved traceability of products.

"Manufacturers and importers shall ensure that products bear an indication of the country of origin of the product or, where the size or nature of the product does not allow it, that indication is to be provided on the packaging or in a document accompanying the product. For products manufactured in the European Union, the indication shall refer to the EU or to a particular member state."

Italy's footwear manufacturers association Assocalzaturifici Italiani (Assocal) has welcomed the change of heart in Brussels. Assocal president, Cleto Sagripanti, said: "Assocal has been battling to bring the issue to light at a European and national level for quite some time; it's one that is vital to our production system, excellence in manufacturing as well as consumer protection. This significant result is proof that the tireless efforts over the years helped move things in the right direction, and that Assocal never gave up."

Volte-face explained

It was only during a discussion at the Micam exhibition in Milan in March that the reason for the change became apparent. Assocal and its counterparts in countries such as Spain (FICE) and Portugal (Apiccaps) have long argued that compulsory labelling to show where shoes are produced would give them an advantage over importers who source product in lower-cost manufacturing locations. They would have continued to apply labels of origin regardless of the disappointment of last autumn. There was even speculation that discerning consumers would quickly have figured out that if a shoe bore no label of origin, it was probably because the brand or retailer preferred not to say where the shoe came from, which would have told its own story.

In Milan, Assocal explained that the politician responsible for the earlier decision to remove the labelling proposal from the

work programme for this year, trade commissioner Karel de Gucht, had failed to inform the European Parliament of his reasons for doing so. Because of that, labels of origin are back on the agenda in Brussels, now as part of the wider proposals covering consumer product safety.

Assocal's general manager, Fabio Aromatici, who has followed all these developments as closely as anyone in Europe, says without hesitation that the discussion turned on a technicality: Mr de Gucht overlooked the requirement to explain his reasons to the parliament and some members of parliament called him to account. Mr Aromatici says that these members of parliament came from various EU member states, but admits that Italy was "well represented" among them.



Made in Italy. Big importers often like to give Italian sounding names to their lower-cost brands, but would rather not reveal where their footwear is made.

CREDIT: MICAM



Assocal president, Cleto Sagripanti (right), and general manager, Fabio Aromatici, are pleased that they refused to give up the fight on product labelling.

CREDIT: MICAM



European commissioner for industry and entrepreneurship, Antonio Tajani. CREDIT: EUROPEAN COMMISSION



European commissioner for trade, Karel de Gucht, failed to explain to the European parliament why he had chosen to ditch compulsory labels of origin from his 2013 work programme. Thanks to this technicality, 'labels of origin' have a new lease of life in the EU. CREDIT: EUROPEAN COMMISSION

Fair competition at stake

As a result, the Commission (the executive of the European parliament) has had to agree to resume its commitment to labels of origin. And in a further twist of fate, Karel de Gucht's trade directorate is no longer the branch of the executive carrying out the work; the matter is now one part of a much greater proposal, the one on consumer product safety, which comes under the European commissioner for industry and entrepreneurship, Antonio Tajani, who happens to be from Italy.

Another vote will take place on the issue at the European Parliament in the course of the spring. If it passes, the heads of government of the 27 EU member states will be asked to approve its inclusion in legislation. Assocal has said it expects no problems with the vote in the spring, but it knows the heads of some governments are likely to face intense lobbying, urging them not to go ahead at the last.

"This is a major change," Fabio Aromatici continues. "There was an argument before that it was unfair, under World Trade Organisation rules, to oblige producers from outside the European Union to put labels of origins on their shoes or other products because EU producers didn't have to do this. Now everyone will have to do it. The rules are equal for everybody."

He is in no doubt that what is at stake is fair competition. The argument of Assocal and its sister organisations in Spain, Portugal and elsewhere is that keeping production on home soil matters most from an economic point of view: footwear production remains labour intensive and, therefore, continues to support thousands of jobs in the EU. And because many footwear factories place strict controls on their suppliers (in

terms of quality, restricted substance management and responsiveness) footwear production in the EU supports the production of leather and other materials in the EU and on its doorstep.

According to Assocal, EU member states that have opposed moves to make labels of origin compulsory are unconcerned about this supply structure and about those jobs. Instead, the organisation insists, their interest is in protecting importers (brands or retailers) who want easier access to the EU market for shoes made in Asia or other parts of the world where labour costs are lower, regardless of what that might mean for more manufacturing-based EU economies. "But now they are going to have to admit this," Fabio Aromatici says. "They are going to have to say why they favour importers. Until now they have been hiding behind World Trade Organization rules and now they can no longer do that. The game has changed." 



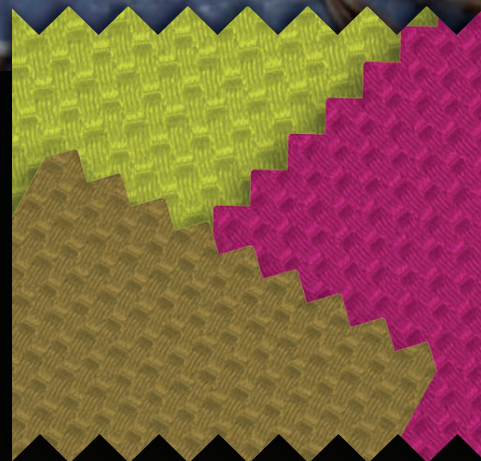
Quality counts. Footwear manufacturers in many countries wear a label of origin as a badge of honour. CREDIT: MICAM

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The best materials and fine craftsmanship, but not all consumers understand why quality shoes cost more.

CREDIT: GDS/CONSTANCE TILLMANN

Quality manufacturing using, preserving and passing on traditional skills and craftsmanship is an important focus for small, serious footwear firms in Europe and elsewhere. But it looks as though this commitment to making a quality product may not be enough for companies to succeed in today's market.

Why good shoes cost more

Consumers in most parts of the world are content to buy shoes if the look and the price are right, paying little or no attention to the quality of the materials the shoes are made from or the levels of skill or craftsmanship that have gone into their manufacture. This is the argument retail groups use for filling their shelves with shoes from China, Vietnam, Bangladesh, India, Pakistan, Myanmar, Cambodia, Indonesia and other countries where the cost of manufacturing is comparatively low.

Brands stand to gain

Whether it's true or not, there is a clear challenge here of how best to explain to shoppers why some shoes cost more, often only a little more, than those sourced in large volumes from the lowest-cost origins. Whose responsibility is it to tell this story, to explain why, sometimes, it's worth paying a little extra? Whoever else is involved in communicating why some shoes are worth more, the manufacturers and brands themselves clearly have the greatest responsibility as it is they who will gain the most from standing out from the crowd.

The director of the GDS exhibition, Kirstin Deutmoser, has said that traditional manufacturing companies are often completely focused on making high quality shoes and, in her opinion, spend too little time and effort on communicating to

retailers and consumers about why their products are worth something extra. "There are people in Europe who could afford to spend more on shoes and to buy high quality footwear from these traditional manufacturers," she says, "but do not do so because they cannot see the difference between these shoes and cheaper ones imported from lower-cost countries."

She argues that for too long, higher-end manufacturers and their suppliers have assumed that the quality of their collections would speak for itself and that there was no need for them to explain why a shoe made in Italy, Spain or Portugal from superior materials offers better value for money.

"I love the shoes these companies make," Ms Deutmoser says, "and I don't like the term 'brand-building', but you do need to do that. So we are working hard to help these companies build up their public relations, improve their communications efforts so that more consumers will understand why higher quality shoes cost more."

China appeal

More widely, this debate is part of a battle to keep footwear manufacture alive in developed economies such as those in many parts of western Europe and North America. For traditional manufacturers engaging in this battle, the main



No easy answer. Pentland Group creative director, Katie Greenyer (centre), with footwear design students from the University of Northampton.

CREDIT: WTP



Footwear brands have a responsibility to counter the message of large retail groups, that consumers only care about looks and price. CREDIT: GDS/CONSTANZE TILLMANN



GDS director, Kirstin Deutmoser, speaking at the March 2013 edition of the event. She says smaller footwear brands need to make a case for their more expensive shoes. CREDIT: GDS/CONSTANZE TILLMANN

tactic is their focus on producing high quality shoes with high design content, using the finest materials available. This is perfectly commendable and, in important consumer markets, especially China, the right shoes from the right brand are fetching eye-watering prices at retail, often hundreds of dollars per pair more than they would sell for in the country of origin.

Some brands, including small ones, are working hard to secure a slice of this appetising cake, but others, as Ms Deutmoser suggests, seem to prefer to hold back, perhaps believing they are too small to launch themselves onto the global market, or perhaps not knowing how to go about it.

In spite of what they say, retail groups must know perfectly well the difference in quality between shoes they source in, say, Spain or Italy, and those they buy in bulk from low-cost mass-manufacturing countries in Asia. If they remain quiet about these differences, it could be because, at retail in the European Union or North America, the mark-up on the cheaper shoes from lower-cost origins can reach 1000% or more. What the large retail groups are doing, in effect, is to take advantage of most consumers knowing little better than to care only about the look and the price of the shoes. And if the consumers lack understanding of why quality materials and traditional manufacturing values make a difference, it is for shoe manufacturers rather than large retailers to explain that they can offer better value for consumers' money. They need to keep their commitment to quality, but also to speak up more about how they do what they do.

Small company conundrum

The creative director of Pentland Group, parent company of footwear brands including Berghaus, Brasher, Ted Baker, Hunter, Kickers, Lacoste and KangaROOS, says she does not know how small, serious, product-focused footwear companies can solve the dichotomy of raising their profile in the market without compromising on their values.

Katie Greenyer, who was a designer at Christian Lacroix and at Red or Dead before its acquisition by Pentland in the mid-1990s, explained at a conference called The World at Your Feet in Northampton, held in March, that it was only after she began working across the whole portfolio of Pentland that she "started to understand branding and what brands are about".

She says she understands the importance of the point Kirstin Deutmoser makes about the need for smaller footwear firms to communicate better about their products instead of relying on the quality of their shoes to make the link. However, Ms Greenyer says she can suggest no magic formula for achieving that.

Lucky break

"I completely understand the question, but I'm afraid I do not know the answer," she says. "Half of it is luck, having the right design at the right time and getting the right pair of feet wearing your shoes. It's certainly not just about the product, unfortunately. You can come up with what you think is the best thing you've ever designed and it can still be a flop."

She describes as "a horrid Catch 22" the problem of being unable to attract enough attention in the market because you cannot achieve sales, and being unable to achieve sales because the market does not know you. She adds that she is proud of a policy at Pentland, which began life as the Liverpool Shoe Company in 1932, to invest in small companies and help them get off the ground.

"It's so difficult," she explains. "I have a lot of very good friends who are footwear designers and I know some who have had to give up running their own brands and go back to being freelance. And it's such a shame. People put their life savings into starting their own company, and they make lovely products only to find that buyers from retail chains will not take a risk on them. It's so hard and so frustrating." 🗣️

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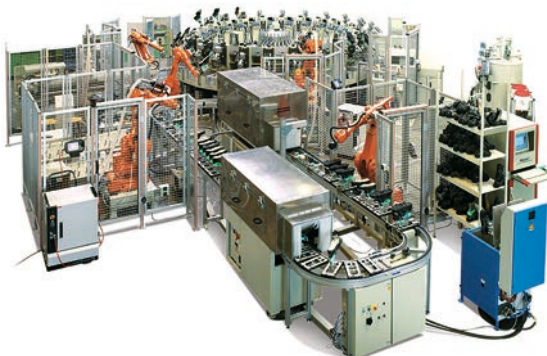


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No one seems to know whether 3D printing (or additive manufacturing) is the future of technology or an overhyped exercise in gimmickry, but footwear designers are seizing the opportunity to create unusual shapes, faster prototypes and customised components.



Victoria Spruce's 3D-printed designs. CREDIT: COURTESY OF VICTORIA SPRUCE

Breaking the mould

Getting a call from Selfridges, the famous London retailer, out of the blue to display one of your first collections would be pleasing for any up-and-coming designer, but for Victoria Spruce it produced a problem: one of the shoes had been broken during a recent fashion shoot. Made from resin, it would not merely be a question of fixing – the whole shoe would have to be made from scratch in a tight time frame. Luckily, she had designed the collection with 3D printing in mind, which meant a scan could be taken, scratches removed from the computer-aided design file (CAD), and then the entire thing printed again in a short space of time.

"If I had chosen a more conventional route, I wouldn't have been able to solve the problems so easily," she says. "We were able to mirror the data to create both a left hand and right hand shoe and could scale the shoes to the exact size."

Ms Spruce is one of a number of footwear designers looking seriously at the benefits of 3D printing and what it can offer in terms of freedom of shapes and time to manufacture. "It allows designers to create sculptural shapes that aren't possible with other techniques," she explains. "It's perfect for designers who want to create something new and forward thinking."

She uses the technique to create her unusual shapes and designs, and hand-finishes them, fitting leather to the 'printed' shoe base. Her latest collection went on show at the London department store in January, alongside a video showing how

they were made. "Shoe designs are getting crazier and more experimental thanks to new ways of working with materials and form which is why shoe designers are among the first to adopt new technologies," she adds.

Mountain or molehill?

3D printing is nothing new; engineers and scientists have been using it for more than a decade, but the process is still very much in its infancy and elicits polarised views on its relevance. On one side are those who think it will revolutionise how we live: we will be able to make our own dishwasher parts, chairs and cutlery after downloading a pattern. Scientists in the US have been developing ways of creating intricate cell structures using sugar to create new organs – potentially groundbreaking for transplants. On the other side are those who say the industry is in its infancy; it can only make simple, flimsy objects at a high cost, over a long time frame and its significance has been blown out of proportion.

In essence, the tools are similar to ink-jet printers in that they deposit layers of material until a three-dimensional object is built – an additive process, rather than the traditional 'subtractive' manufacturing. There are a number of different ways to do this: SLS (selective laser sintering) and SLA (stereolithography) are two that are favoured by the footwear industry. The design is created on CAD software, or the printer can take a 3D scan of an existing object and translate it into a

'map' to make another one.

"Media exposure has made a lot more people aware of the process, and more importantly the capabilities, and the result has been that it's no longer just engineering companies that are involved," explains Barry Assheton, sales director at CRDM, a UK-based provider of rapid prototyping and tooling services. "Artists, young inventors, small businesses and clothing and shoe designers are taking a much larger slice of the market that was previously dominated by engineers in manufacturing."

One of the benefits is the ability to manufacture in small quantities. "3D printing is fantastic for footwear designers as it gives them far more freedom of design for low-volume production and removes the manufacturing barriers," adds Mr Assheton. "In addition, it allows a prototype of a shoe to be made very quickly 'to prove the design concept' prior to normal manufacturing starting."

Heavy metal

US designer Bryan Oknyansky is further down the line with 3D printing. Unlike Ms Spruce's designs, the former architect's creations are sturdy enough to walk in – customers buying his inaugural Heavy Metal designs have their feet 'mapped' and then a pair 3D printed in metal to their exact measurements. "Architecture and footwear share the same brief: It must be beautiful, and it can't kill you," he says. "Besides, if you can't stand up straight, what's it all for?"

His Spider Heels and Caged Heels are made from titanium alloy using direct metal laser sintering (DMLS), and were prototyped in time to launch at what became a very successful showing at Berlin Fashion Week. The Spinneret Heels and Canti Heels were sampled using the SLS process and 5-Axis CNC Milling, a subtractive, sculptural machined process. This design was prototyped from a solid cube of automotive-grade aluminium by a British luxury concept car manufacturer and the designs translated into instructions for a robotic drill bit to sculpt.

His latest line was featured in the spring-summer London Fashion Week Fashion Fringe and helped Chinese designer HaiZhen Wang to win first prize. Split Heels feature a 3D printed platform and are the first that customers could, in effect, print at home. "The day the 3D Touch 3D printer arrived at the studio I powered it up and immediately started printing prototypes of Split Heels," says Mr Oknyansky. "This is my first design that I could make completely from my studio without outsourcing production. One month later I had 13 cutting-edge high heels ready for the catwalk at a fraction of the cost."



Bryan Oknyansky's Split Heels complemented HaiZhen Wang's collection. CREDIT: COURTESY OF BRYAN OKNYANSKY

The need for speed

Sportswear groups have also been experimenting. Both Nike and New Balance have recently created custom footwear with 3D printed elements. In February, Nike launched what it claims is the world's first 3D printed plate for an American football boot – although a similar custom soccer boot appeared as early as 2006.

The plate is crafted using SLS, a process that allows Nike's designers to make updates within hours instead of months. They prototyped a plate and traction system within a fraction of the traditional time frame and at a fraction of the weight. "SLS technology has revolutionised the way we design cleat plates—even beyond football—and gives Nike the ability to create solutions that were not possible within the constraints of traditional manufacturing processes," says Shane Kohatsu, director of Nike Footwear Innovation. The Nike Vapor Laser Talon weighs a mere 5.6oz and is designed for optimal traction on football turf by helping athletes maintain their "drive stance" longer.

Similarly, New Balance has developed a process to customise its high-performance spiked shoes for athletes. Its research and design teams used race-simulation biomechanical data collected using a force plate, in-shoe sensors and a motion-capture system. Advanced algorithms and software translated the data into 3D printed spike designs, which were then created using a SLS process and fused to a standard upper.

"Using our Team New Balance athletes to develop the customisation process was extremely helpful," explains Sean



Nike's Vapor Laser Talon is designed to improve acceleration

CREDIT: NIKE



New Balance's spikes are customised to each athlete.

CREDIT: NEW BALANCE

PRECISION ENGINEERING: SLS VERSUS SLA

There are a number of ways designers are making use of additive manufacturing, choosing from a range of 'inks' including thermoplastics, polylactic acid or polycarbonate, or metallic powders or clays. All additive processes use the same basic principle of melting and fusing fine powder layers, which are cooled and set, sometimes using chemicals, and then finished.

The Nike designers use SLS, a process that cures powder in very fine layers, directed by a computer-guided mirror. For CRDM's nylon offering, "the inert nitrogen environment stops the nylon oxydising when heated by the laser beam. The temperature inside the chamber is maintained at 170°C, just below the melting point of the polymer powder, so that as soon as the laser makes contact with the surface particles they are instantly fused by the 12°C rise in temperature."

For SLA, the method Victoria Spruce uses, the model is built using a liquid ultraviolet curable photopolymer resin and an ultraviolet laser. The laser traces a cross-section of the pattern on the surface of the liquid resin. Exposure to the ultraviolet laser light cures and solidifies the pattern and joins it to the layer below. After the pattern has been traced, a resin-filled blade sweeps across the cross section, recoating it with fresh material. The parts are cured under UV light.



Machine detail of a 3D printer.

CREDIT: SHUTTERSTOCK/BABICH ALEXANDER

Murphy, New Balance's senior manager of innovation and engineering. Jack Bolas, a 1,500 metre runner, in January became the first track athlete to compete in customised 3D printed plates, according to the company. By tailoring the spikes to each athlete it says it can offer a more refined experience.

In addition to printing semi-rigid parts, the company is working on softer SLS printed components that mimic the cushioning properties of foam midsoles, which it says will bring the customisation process to a wider customer base. CEO Robert DeMartini says: "We believe this is the future of performance footwear and we are excited to bring this to consumers. Developing our printing capabilities could ultimately help us by adding highly technical positions to our already skilled labour force in Massachusetts and Maine."

Drawbacks

One of the problems companies envisage with the increasing use of 3D printers is that of intellectual property infringements. If CAD drawings are available, the fear is that people will illegally share them and print their own products. It has been suggested it could go the way of the music and film industry, where piracy and file sharing has meant increasing lawsuits as well as writs that force site providers to remove material. Experts warn that policymakers need to consider the implications that 3D printing presents sooner rather than later.

The current limitations also mean that the shoes are, in the main, not strong enough to be worn. Mr Assheton says it is a matter of time before this is resolved. "The strength and quality has improved and will continue to do so. The process of additive manufacturing doesn't only apply to plastics, but also to metal. These parts have even been used on Formula 1 race cars – the ultimate test of their performance."

"I'm in discussion with CRDM to create a shoe that would be robust enough to last," adds Ms Spruce. "To get the necessary strength I am developing a new collection

using injection moulding instead. Once the materials are strong enough to withstand the pressure that a shoe takes then I think 3D printing can be applied to all areas of footwear design."

A third factor is cost. A printer can only make one object at a time, so would be of no value for high-volume manufacturing, and the materials are relatively expensive, which would need to be factored into the cost to the customer. "The costs have largely fallen over the past 10 years and, as the volume of parts required grows, the prices will continue to fall," says Mr Assheton. "This is because the material costs will reduce and the machines will become faster in production."

A global movement

It is not just Western companies that are plugging into 3D possibilities. There are factories in China making everything from toys to jewellery; the time it takes to produce a mould for a car has been reduced from months to a couple of weeks. One of the country's largest printers is housed at Beijing University where it is being employed to make large and complex parts for China's commercial aircraft programme.

"People once said mobile phones were too big and heavy and had limited capability, but now they are commonplace in many people's lives," says Mr Assheton. "Eventually, 3D printing will undergo the same transformation as the machines become cheaper, the quality improves and the knowledge of their capabilities continues to spread."

With the UN's World Intellectual Property Organization forecasting the 3D printing business to be worth \$3.7 billion by 2015 and \$6.5 billion by 2019, the implications for the footwear industry are as far reaching as any other. Mr Oknyansky is currently looking for opportunities to develop new products for scaled manufacture in markets all over the world. "It's a real game-changer and it will soon change how shoes are made and sold," he concludes. 

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Lean, green and clean

SERGIO DULIO

Shoemaking in common with many other manufacturing activities is all about transforming raw materials into components and then assembling those components in order to create a final product. Those familiar with the complex world of footwear manufacture will be well aware of the enormous variety of different materials—both natural and synthetic—that are used to make a shoe, their varied natures and characteristics, as well as the difficulty in utilising them all with the lowest possible level of waste.

Moreover, the shoemaking process is itself highly complicated and involves a

large number of operations. It also still requires a high degree of labour content and a vast array of different machines. These all need power to be operated, use different chemical substances to perform their tasks, create noise and generate pollution. While any of these aspects might in themselves have had little relevance in the past, in our present climate of environmental awareness, sustainability, and green consciousness, companies in all sectors are now under pressure to find proper strategies with which to address them.

If in the past companies were compelled to stick to environmental and safety regulations in order to sell their

products in specific markets and according to the laws that each country enforced, we can now detect a change in their mind-set stemming from a different perception on the part of consumers towards these issues. Regulations that used to be regarded as a cost burden that impacted on competitiveness compared to producers in other countries, less attentive to such environmental issues, are increasingly seen as a way to provide footwear with a 'green label' that more and more consumers seem to be prepared not only to accept but also to actively prefer.

In other words, whether something is green or not is becoming an important



selling point and a key factor in defining a product or brand. And this, in turn, necessitates a clear understanding and consideration of which product and process paradigms a company should seek to adopt in order to meet this important challenge. So, what exactly is meant by the three words: lean, green and clean?

LEAN

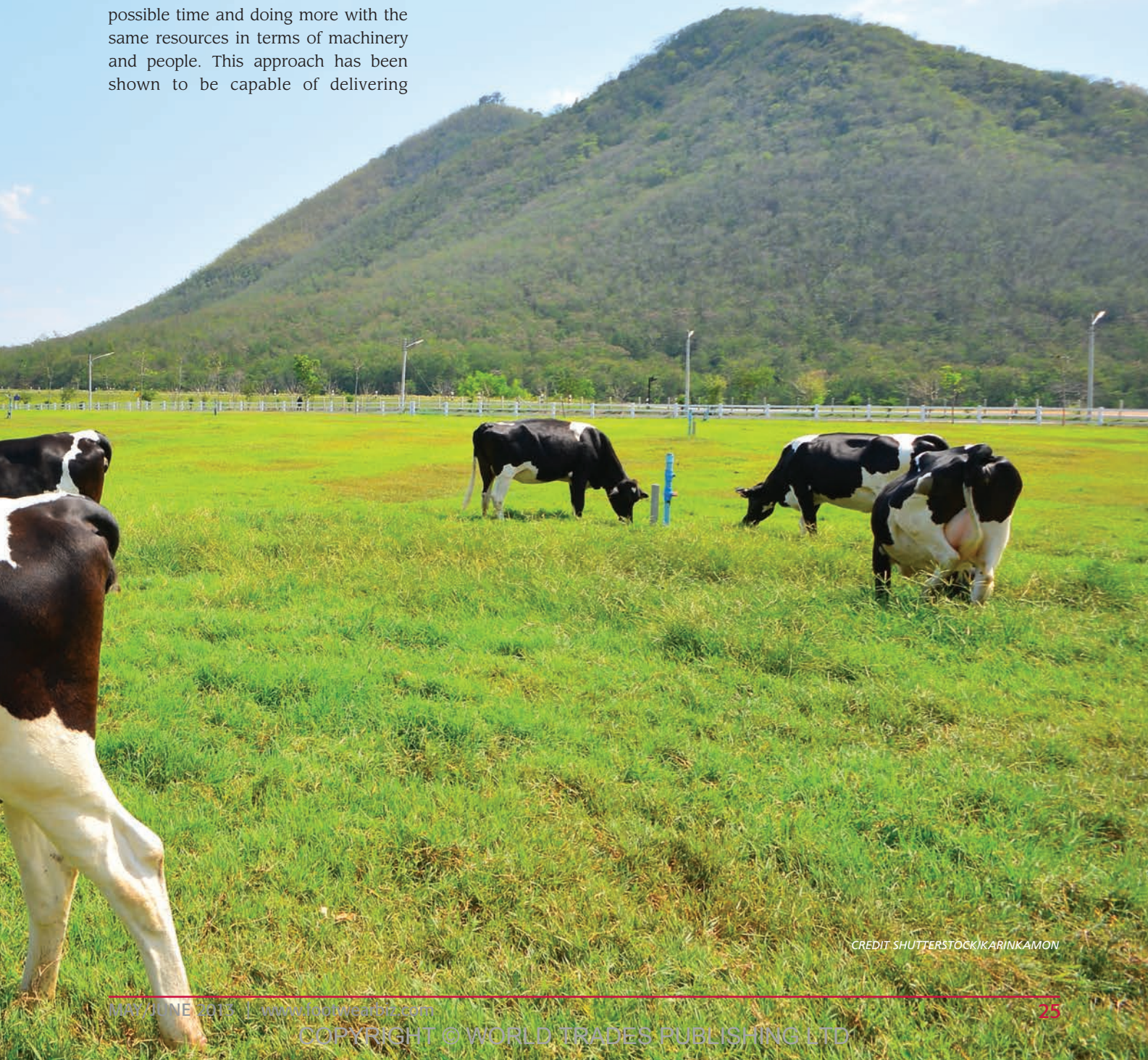
Lean has become a very popular manufacturing approach in many different industrial sectors and is now also gaining ground in shoemaking. Lean is about producing a business output (a product or a set of products that the market wants) as fast as possible, of being capable of responding to a market demand in the shortest possible time and doing more with the same resources in terms of machinery and people. This approach has been shown to be capable of delivering

improved efficiency and productivity. Indeed, in some instances, a 15% increase in output has been achieved with the same resources, accompanied by enhanced quality, better time delivery performance and, last but not least, improved morale and employee engagement.

It stems from the application of a set of management practices based on the so-called Toyota Production System. As with many other similar Japanese management systems, this has two goals: first eliminate waste and non-added value activities through continuous improvement and, second, practise respect for people.

Waste, as far as lean terminology is concerned, has a meaning directly

opposite to added value whose definition is in fact very enlightening. Any activity in a process is considered an 'added value activity' if customers are willing to pay for it, if it changes the end product to make it closer to one customers want and will pay for or, finally, if it is done right first time. These are very strong funding principles of the lean approach that must be set as clear targets in any reorganisation aimed at the introduction of lean manufacturing. Their application also requires leadership in a form lean defines as enabling and empowering people, helping them to grow, allowing them to take pride in their work and so helping both themselves and the business to continuously improve. Process



CREDIT SHUTTERSTOCK/KARINKAMON



Setting and conditioning machines from Barrera now use different components and heat sources to reduce energy consumption.

CREDIT: BARRERA SRL

reorganisation and leadership are therefore key factors.

But what are the economic benefits in lean manufacturing? These come primarily from the drastic reduction of work in progress (once again all the resources needed to fulfil customer orders) and in its costs though minimising the time between a customer order and its final delivery. The shortest production time in fact often costs the least which in turn means less cash is needed to sustain production. When we come to implementing the lean thinking in manufacturing, it is useful to look at it as a search for the 'hidden waste' that is typically present in traditional manufacturing scenarios. This can involve waiting for a new design to be ready, a machine to be free, a tool to be available, parts and materials to be delivered or simply for previous jobs to be finished. Time wasted is money wasted and must be avoided at all levels.

Defects and rejects are another critical source of waste because they cost money, burn resources and create delays. Inventory, if badly planned and administered, can be another relevant waste particularly in relation to the inefficient use of materials in production. Only what is needed must be used, where it is needed and at the right point in time. Overproduction caused by inadequate planning methods or weak sales forecasting is another typical hidden waste as, also, are over or extra processing involving excessive movements in the manufacturing process, excessive machine set-up or down-time delays and production line bottlenecks.

Less obvious but no less relevant sources of waste are motion and transportation. The first issue relates to all unnecessary personnel movements to fetch specific tools, move from one station to another and visit other areas of the factory to retrieve documents or other kinds of paperwork. While it might not be readily apparent, taken as a whole, these can account for a big waste of time and resources.

Something similar is also true with transportation in terms of unnecessary movements or handling of parts, handling equipment moving with no parts at all, raw material batch sizes not matching actual production batches or simply materials stored a long way from where they are needed in production. All these aspects may lead to a profound revision of the factory layout and a reorganisation of its work-flows.

Being aware of these potential sources of waste, identifying them and devising solutions is the correct path for the implementation of the lean manufacturing paradigm.

GREEN

The second of the three terms, green, has several meanings and can be associated with several concepts, all of them related in general to the environment. There are two immediate implications we can consider that are closely related to the concept of sustainability. The first is the efficient use of available resources (something we could also consider as a natural extension of the previous lean philosophy) and the second is environmental respect and protection that we will discuss in the final section about 'cleanness' in manufacturing. We will focus here on the resource issue where a process can be called green if it makes minimum demands on resources and uses them to their best advantage. The most obvious resource a manufacturing process can use is energy, the electrical power needed to operate the various machines that are present on the production line.

A key area concerns weak crosslinking or networking of machines in a shoe factory. In addition, the complexity of the assembled components also plays an important role in the rather poor energy efficiency level in the footwear industry in general. Furthermore, many shoemaking operations have a substantial manual content and this brings the human factor into play. Each person is different, so their manner of working will be different. This, however, is something that can be controlled, improved and optimised. Given the complexity of the shoemaking process, the different types of machines and their various technologies, a thorough understanding of all that is involved is indispensable if one is seeking to make changes. In a shoe factory there are big power consumers that are a factor in high-energy costs. Some of these can be improved to minimise the cost of production which, in turn, would have a positive effect on buyers.

A crucial role in energy efficiency as many studies in the auto and textile industries have shown is played by the behaviour of the employees themselves. Personnel management can be a key influence in increasing energy efficiency in a factory by making employees more sensitive in regard to energy efficiency and more aware of wasting power. An example from the auto industry shows how important the conscious behaviour of employees can be in achieving the green star.

A Ford plant in the Netherlands introduced a programme to increase energy efficiency. Many of the offices in this plant had central heating systems and the simple fact of employees being told to report to the central heating control unit that the temperature in their offices was too high instead of opening the windows, brought a decrease in heating costs of about 5%. This is a good example of how a simple remedy can have a large scale positive effect.

Another issue is the identification of hot spots in the shoe production process. Due to lack of information on how much power individual steps really consume, detailed power consumption surveys are needed. Concepts such as 'Internet of things' or 'Smart Factory' (machines that talk to each other, communicating their state and conditions like computers in the world wide web and so make the whole factory smarter in terms of managing process data), might be considered when

applying down-stream energy efficiency increasing strategies. The new, emerging concept of RCM (resource conscious machines) could however represent the right solution.

This concept is a mixture of energy efficiency, automation (applied technical development), raw materials scarcity, product design and human resources specialisation. The concept has its roots in information technology where the development of resource conscious processors is still one of the highest priorities. In big lines, an RCM machine can be described as one which consumes a minimum of energy in order to fulfil its function with a minimum usage of materials and by a minimum input of additional human resources capital. Going a stage further, the same can be said about a resource conscious process, RCP.

An RCM-design is strongly interconnected with applied automation and sensory and self-learning software. In the special case of the footwear industry, product design is very important in developing a RCM because a material(s) conscious machine can only be so when the product is designed according to the concept of minimum usage of resources. In the cutting and lasting departments of any footwear factory there is huge potential in applying the concept of resource conscious machines and processes. The increase in energy efficiency of automated operations can be a very important factor in decreasing production costs. Investment in research and development of RCM and RCP for the footwear industry should therefore be a priority for shoe producers interested in long-term development.

Shoe machinery suppliers also need to be involved and some are in fact already developing a high level of awareness on this topic. A good example is the new Main Group E266 Evaluation EVA injection moulding machine that incorporates a technology very similar to the one that we are getting to know in our cars as 'start and stop', where all main power sources are cut off when not needed and then reactivated on demand. A further one is the new generation of thermal setting and conditioning units produced by Barrera—also from Italy—that use different components and heat sources to dramatically reduce the energy

consumption of these otherwise power hungry devices.

A second useful reference framework along the green path is the Energy Management for Increasing Energy Efficiency in the Footwear Industry concept, founded on basic rules of management theory and other energy management guide lines. The first phase in this management process would be to collect technical information starting with production layouts, electrical properties of machines on production lines and power consumption per shift, day, week, month and so forth, with close attention paid to stand-by modes on the lines. This data collection phase should be carried out in as many factories as possible in order to have an overview on how, where, when and why electrical power is used.

Having this information, a strategy can then be created to localise weak points and big power consumers in an individual factory by measuring or using the available data from all those in the survey. The energy efficiency potential can be analysed for each department, division, machine and any other entity. The potential for both technical and cost-effective improvements can be identified and global and local solutions developed. These solutions will be concentrated on process integration and increasing machine networking.

Examples of possible actions are improving production layout, increasing machine networking (especially the lasting department), replacing old motors, investing in new energy efficient

machines, modernising building insulation and heating/cooling systems and employee training on energy efficiency. A special part of the concept would in fact be personal management. In order to increase the awareness of employees on energy efficiency, the factory must have internal guidelines, internal procedures and even special clauses in work contracts. Concept implementation, as well as expansion, standardisation and process, plus operations automation would all help to drive forward the goal of a lean, green and clean production that led in turn to a reduction in production costs.

CLEAN

Footwear manufacture traditionally has used natural products such as leather, wood, etc. In contrast, modern shoe design and production processes consume a huge amount of non-renewable raw materials, so alternative material concepts should be considered. A fully recyclable production approach would give the shoe industry a significant push towards sustainability and 'green and clean' production. Even without venturing that far ahead with this ultimate dream, however, there certainly remains a potential for improvements to make shoemaking a cleaner process in several areas.

Upper and soling leathers tanned with non-toxic substances for maximum wearer safety are designed to be non-pollutant to the environment to which they will probably return. Synthetic materials for both uppers and outsoles



Main Group's E266 Evaluation EVA moulder is an example of the RCM concept.

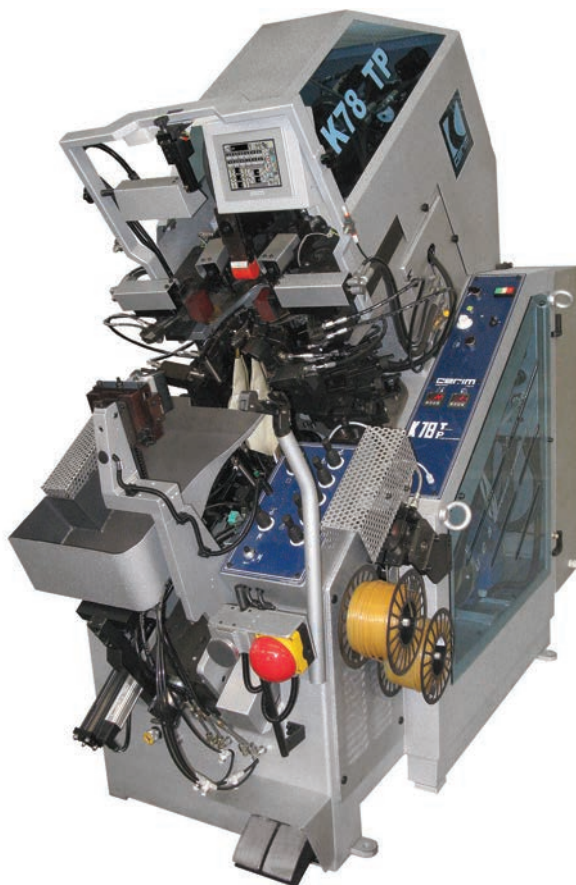
CREDIT: MAIN GROUP TECHNOLOGIES

produced in the same way and for the self-same reasons. The elimination of dangerous solvents and other noxious or toxic substances used in the various steps of manufacturing; water-based cements have progressed impressively but their usage is not yet as widespread as it might be. And, eventually, clear and applicable EOL (end of life) strategies that while not necessarily resulting in truly recyclable shoes, could at least lead to a reliable assessment of their residual impact on the environment.

Some machines are already complying with this clean part of the paradigm. A good example is lasting machines in which the traditional thermoplastic cement is replaced by a water-based fluid system that is more easily applied and also contributes to a reduction in the energy consumption of the machine as in the case of those produced by Cerim in Italy.

If factories can become leaner, their processes greener and the shoes they produce generally cleaner, the footwear industry will undoubtedly take an impressive step forward. It will make important returns not only in terms of better efficiency and higher margins for the companies involved but, also, gain a competitive advantage among a new generation of consumers more interested in and responsive to these arguments. Finally, our world will also be a better place to live in and that is surely a target worth supporting and fighting for. ♻️

The author wishes to acknowledge the assistance of by PFI (Prüf- und Forschungsinstitut Pirmasens e.V.), Pirmasens, Germany in writing this article, in particular, Peter Schulteis and Ciprian Duna.



The Cerim K78TP forepart laster uses water-based adhesive instead of hot-melt. CREDIT: CERIM SRL

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Sustainable footwear

JOHN HUBBARD, SATRA TECHNOLOGY

A product can be defined as sustainable if the production materials and processes used to make it do not adversely impact the potential for the same product to be manufactured in the future. In many cases the use of the term sustainable has been almost solely connected with environmental impacts and the use of material resources. However, it should be remembered that there are financial and social sustainability impacts as well.

In the footwear industry, a large part of the production is fashion footwear which is viewed as disposable. Therefore the impacts of sustainable production in the overall scheme of things are likely to be incremental only and, in many cases, closely linked to saving costs on materials, chemicals and energy. However, some niche markets, particularly those associated with outdoor activities, may find the development of sustainable lines

beneficial for marketing to a target purchasing group.

SUSTAINABILITY METRICS

In order for any organisation to set about reducing the impact of its products, it needs to determine a method of measuring them that is both credible yet simple enough to be fed into during production or pre-production.

In recent years some major sports footwear brands have taken steps to thoroughly examine their environmental credentials, particularly the sustainability of materials they use, and then ranking various materials by their environmental impact. These in-house tools were intended primarily to guide designers towards the use of more environmentally friendly materials in the design of their footwear. They are now being discussed and shared with other manufacturers in an attempt to draw up

a set of universal guidelines (in the form of an index) to help manufacturers rank a product's environmental impact.

These benchmarking tools are intended to enable brands to measure the environmental impacts of the product across the supply chain and throughout the products life cycle so that they can target improvement activity to negate the largest impacts. When field trials have shown these techniques to be robust, the possibility exists for the development of a customer-facing labelling scheme.

Schemes such as these are primarily intended to allow brands and footwear producers to measure the environmental impact of products, with the ultimate aim of seeking to improve or lessen that impact. They will also be of benefit to manufacturers who wish to evaluate or rank the performance of their factories and facilities, and to designers who will be able use guidelines to steer them in their choice

of more environmentally friendly materials, designs and processes when developing a new product. Sustainability indices take into account several criteria against which a product can be ranked; criteria and which can be used as a guide for manufacturers wishing to create products with better environmental credentials.

RESOURCE SUSTAINABILITY

Footwear uses a wide range of materials for the individual components needed to produce it and each material type will have its own sustainability characteristics. Two key constituents are leathers and textiles/plastics.

Leather from cattle, sheep, goats and pigs is considered a by-product of the meat industry and the raw material should be available as long as there is a market for meat products. The issue surrounding the rearing of animals which are then used for the production of meat and leather has centred on the land used for grazing these animals. Opposition to the use of cleared rainforest in South America has been part of an ongoing campaign which has led to the introduction of traceability standards within the leather supply chain. This became an issue for the leather and footwear industries as campaign groups identified them as more likely to be influenced by pressure from their customers rather than the meat industry which was the primary destination for the cattle produced in the region.

Once the raw skins reach the tannery the key sustainability issue is the use of water, a critical resource in many countries. This is especially true if the tannery is extracting or discharging water from a water course that is also a resource for other users, either for other processing, irrigation, drinking or even leisure. Extraction rates and discharge rates should be as close as possible and the discharged water should meet stringent levels in terms of pollutants, colour, pH and temperature. In addition to the pollutants that may be present in the water discharges from a tannery, solid waste must also be considered as this may be contaminated with a variety of possibly toxic chemicals and need to be disposed of responsibly to avoid the potential contamination of land and groundwaters.



A process of reverse osmosis and evaporation/condensation enables 95% of tannery effluent entering the Ranipet CETP plant in India to be returned for reuse. CREDIT: WTP



US company Faytex uses a variety of recycled or sustainable materials in its Drilex shoe linings including DuPont 'Sorona' which is made from fermented plant sugars. CREDIT: SHUTTERSTOCK/LILAC MOUNTAIN

The chemicals used for the tanning process should also be taken into account. Chromium salts are generated from chromium and chromium is extracted from ores found in the earth's surface. The state of the metal and its abundance in seams and specific minerals will determine how easy this is to mine and the cost and availability of chromium over time. Chrome is not however currently considered to be scarce.

Many of the same issues associated with the tanning process for leather apply to the processing of natural textiles, including the use of pesticides, fertilisers, process chemicals and the

extraction of water for processing. In addition, the amount of water used in the growing of cotton is also critical as the areas of the world where cotton is grown are those that can experience severe water shortages.

Synthetic textiles, like most synthetic polymeric materials, are derived from oils. Most of the oil used in this production comes from petroleum which is a non-renewable resource under pressure from transport, power generation and other industrial uses. The alternatives to petroleum-based oils are those that are derived from crops including rape seed oil, sunflower oil, palm oil and soya-based oils.

These are all renewable, as crops can be planted and harvested each season. They may not however always be considered sustainable as there is pressure on the land used to grow these oil generating crops which may also be required for growing food crops. Like petroleum, good arable land is a finite resource. The same argument applies to the use of crops for energy generation. This type of fuel is renewable but may not be the most efficient use of land in a specific region. The current high price of petroleum-based oil is an additional driver for organisations to move away from the polymers and fuels derived from this source.

MATERIAL EFFICIENCY

Products that claim to have sustainable credentials are often based on a simplified design and use components from an organic source (e.g. vegetable fibres, cork, unbleached cotton) or are made using recycled materials. A successful recycling process is the production of polyester textiles from waste plastic bottles and cups, as these items can easily be collected in a homogenous waste stream.

Recycled materials improve the sustainability profile of a product as the impacts associated with the production, extraction or growing of virgin materials need not be considered again. The key issue with any recycled material is to ensure the consistent supply of a quality feedstock. This can be difficult when relying on post-consumer waste, particularly for footwear materials which are difficult to recycle back into the same supply chain. The problem is less marked with production waste with many organisations already feeding their own waste back into the manufacturing process.

It is important to remember that even a material sourced in a sustainable manner can still be used wastefully and thereby unsustainably. This could be due to poor efficiency in cutting and material usage or a lack of quality control in the production line resulting in a significant number of rejects. The use of cutting programmes can help to reduce waste and the use of stitching protocols can improve the quality of shoe upper preparation thereby reducing the number of rejects.

Environmental quality systems can enhance existing quality management schemes by establishing policies and procedures for management of environmental impacts. The ISO14001 scheme includes elements of continuous improvements but just because an organisation is accredited to an environmental management scheme does not necessarily mean their products are inherently more sustainable.

MAKING A START

Improvements and quick ways to improve environmental impacts may include any or all of the following actions.

1) *Eliminate* the use of restricted substances in all stages of the product supply chain. This aspect of sustainability is one that is governed by legislation so, regardless of a company's stance on environmental issues, it is something that must be carefully managed. SATRA can assist companies with testing for the presence of restricted chemicals, advise them on practical alternatives and indicate the legislation to which they need to adhere. This includes ensuring that all suppliers and contractors supplying the company adhere to guidelines on the use of certain chemicals and carrying out routine check testing to confirm



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suppliers are actually following those guidelines. Also included in this would be measuring solvent usage (either the total volume used in a production facility or the amount used in an individual style of shoe) and introducing measures to reduce it.

2) *Select* and use environmentally friendly packaging and minimising the use of treatments such as wax coatings on cardboard that will reduce its recyclability.

3) *Design* footwear that is durable; footwear intended to have a long lifespan stays out of landfill longer than a less durable product. Many consider us to be living in an increasingly throw-away or disposable society. Long-lasting, well-made products ensure that fewer pieces of product per year need to be disposed of. SATRA can again advise on durability guidelines and how to improve the construction of footwear to maximise lifespan. However, this can only be seen as a positive sustainability attribute if the footwear makes use of its increased durability such as walking boots and industrial footwear. It's irrelevant for high fashion shoes as these will not be worn to the limit of their functional life.

4) *Reduce* the energy consumption of factories and facilities along the footwear supply chain. This includes ensuring that machines are optimised to perform their tasks appropriately and achieve maximum effectiveness with minimal energy usage. Examples include heat-setting machines which can be quite energy-hungry. There is also a range of other tools which can help companies optimise their in-factory processes. All reductions in energy usage equate to a cost saving, especially with increasing global energy prices. Reducing overall energy consumption is therefore beneficial on many levels.

5) *Introduce* or refine a practical end-of-life programme for a product. Consumers are now becoming accustomed to being able to return used electrical goods to the retailer or a dedicated recycling facility rather than disposing of them via a normal waste disposal system. Similar systems should evolve to handle other kinds of product. Some brands and retailers are introducing take-back schemes for the return of used products for either re-use or recycling. Designing shoes with



The environmental advantages to be gained by using recycled and sustainable materials can be reduced due to poor efficiency in cutting and material usage.

CREDIT: SATRA

ultimate recycling or re-use in mind is also becoming more feasible and lessens the potential environmental impact of a product. Although footwear is generally a complex multi-material, multi-component product, the fewer materials that can be used in its construction, the more likely it is to be recyclable. When it is not possible to make footwear recyclable, it should at least be designed to have less impact on mainstream waste disposal systems. This includes the use of biodegradable materials, compostable packaging and materials designed to break down rapidly in the anaerobic conditions of landfill. However, the inclusion of biodegradable materials in footwear must not be to the detriment of the functional life of the product.

6) *Avoid* the use of airfreight wherever and whenever possible. Air freight is considered by many to be one of the most environmentally unsound methods of transport and is certainly one of the most expensive. Many companies already keep a careful eye on the volume of goods that are air-freighted each year. Air freight is sometimes seen as a quick-fix solution to short deadlines and production problems that arise due to a planning shortfall. Better planning and more forward-thinking production strategies can all help to reduce the need for air freight.

END OF LIFE

Work is currently being carried out throughout the industry to tackle issues associated with the recycling of footwear such as the complexity of organising the collection and transportation of discarded footwear to treatment centres and how to effectively separate and isolate individual materials to produce a product that will have a commercial value, whether in footwear or any other application. Metal components in footwear (shanks, zips, eyelets and trims) pose a particular problem. Non-metallic materials may therefore have to be used in sustainable ranges of footwear to make end-of-life dismantling easier. While the recycling of materials alleviates pressure on waste products going to landfill sites, the economic case needs to be made before the volume of materials entering the recycling process can increase.

There are a number of initiatives within the footwear industry which lead towards the greater utilisation of sustainable materials and to footwear with eco-design features. However, until this becomes the normal behaviour of the main retailers and brands, it will remain a niche market appealing to a specific demographic customer base. 

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Colour through a transparent rubber sole: the second in what Anthony Miles says will be an ongoing series of revolutionary sole developments. CREDIT: ANTHONY MILES



Footwear entrepreneurs refuse to wait for economic woes to lift

Perhaps, in an environment in which comments from sour-faced bankers, politicians, economists and broadcasters tend to have such a depressing tone, it's no bad thing for the heart to rule the head every now and then. Footwear companies are never short of new concepts, but in the first half of 2013, so many interesting ideas seem to have come from footwear people in various countries that, even in this economy, there is no denying that the spirit of creativity and entrepreneurship that has always been part of the world of shoes is still alive and well.

Some shoe brands have decided that, in spite of the economic climate, now is the time to reach out into the wider

Even in this economy, new footwear business ideas keep coming to light. Then again, if you have the skill, the knowledge, the passion and the creativity, why hold back?

global market. Shlomi Bisa, for example, is the designer at a Tel Aviv-based brand called B.Unique. He seems too young to have done so, but insists he has been running, for ten years

now, the company his father founded. It's time to look outside, he says, because B.Unique cannot sell any more shoes in Israel. "It's a small country," he explains, "and we already work with ten boutique stores. They want some exclusivity, so we can't really sell to more stockists."

Some customers or agents are already in place in Belgium, Russia, France, Canada, Denmark, the US and Germany, mostly ordering small volumes, but he is optimistic he can build on this, in terms both of the size and the spread of the orders.

Bespoke manufacturer launches new fashion brand

B.Unique is an existing brand that wants to grow, but one completely new brand of luxury handmade men's shoes to have appeared in 2013 is Govan Originals, which made its debut at Pitti Uomo in Florence and Micam in Milan in the early part of the year. Co-founder Kevin Sefton wanted to call the brand Govan Originals partly because he wanted the quality of the craftsmanship, design and materials going into the shoes to reflect the ship-building traditions of Govan, an industrial district on Glasgow's southside. Selected styles in the debut collection feature a triangle stitching design to represent the bow of a ship, he explains, and some of the heel shapes he has chosen remind him of "a bow breaking a wave".

Govan is already home to one luxury shoe company, Buchanan Bespoke Footwear, and Buchanan managing director, Diana Currie, is Mr Sefton's co-founder for the new venture. She says diversification will be good for the company and good for footwear artisans who work there. "We have 30 people making shoes at the moment," she explains, "which is a lot for Scotland, and we are looking for more, including apprentices. Our apprentices have had to do private tuition with retired lecturers on aspects of production such as pattern-cutting. My feeling is that students today are learning a lot about shoe design, but not so much about how to transform an idea into something you can put on a last and, eventually, on a customer's foot, the hands-on aspects, so to speak. The workforce has loved making the first Govan Originals collection. We've always done bespoke shoes, but we have enjoyed seeing some fashion shoes come through too."

She explains that Govan Originals will be Buchanan's own fashion brand. Both strands of the company will operate entirely separately; Buchanan will continue to offer its bespoke service to customers, while Govan Originals, still



Pedro Monge's first own-brand store opened in Palma de Mallorca in April.

CREDIT: MONGE

handmade, just not made to measure, will bring Diana Currie's and Kevin Sefton's own fashion ideas to a wider market. "We wanted to offer something different from what we have made before," Ms Currie explains, "something different, something from Scotland, but with quirkiness and individuality. Our lasts are well shaped and fashionable, but not too extreme and we want to use as much local material as we can, blending the calf leather we use in the uppers with Scottish deerskin, cashmere and tweed. The opportunity was there and we have the skills, the knowledge and the passion, so we decided to go for it."

Island life

A similar spirit seems to have moved Mallorca-based Pedro Monge, who opened his own showroom in Palma in April. Mr Monge was an executive at one of Mallorca's most famous footwear brands, Camper, for seven years until 2010, developing a high level of knowledge of, and deep love for, leather and footwear. He left to do a business management course at university in Madrid and returned to Mallorca immediately afterwards to launch a brand of his own, Monge.

Concentrating almost exclusively on men's shoes, he comes up with his own designs and commissions traditional artisan footwear makers in other parts of the island to make the products to his specification. It's a very local form of outsourcing.

His styles are "classic with a twist", most obviously in the colours he uses, leading to shoes such as traditionally shaped Oxford dress shoes in pale pink or quince yellow leather. Monge shoes have been available online for some time, but the designer waited until April 2013 before opening his own showroom, picking a somewhat down-at-heel address in Mallorca's capital, the Plaça del Banc de l'Oli, so-named because in medieval times it was where olive-growers came to measure out and sell their oil.



The Lyle Oxford, one of the first Govan Originals shoes. The triangle stitching design on the toe represents the bow of a ship.

CREDIT: GOVAN ORIGINALS

"I've always liked this square," Mr Monge recently told local media. "I know it has a bit of a bad reputation but I have a feeling it will soon become very fashionable. I've liked it since I first set eyes on it, when I first came to Mallorca all those years ago." Pedro Monge is originally from Castile, but insists Mallorca is the only place for him to work because of the high level of artisan footwear manufacturing skills available to him on the island, in places such as Inca. "My task is to find these skilled artisans and give them new life," he says. "Mallorca has amazing artisans, and a lot of them are still going strong. It's a set-up that allows me to offer an original product with real craftsmanship built in."

Cry freedom

Another new brand to have come out of an established European centre of footwear production is Clandestino, which Porto-based designer Filipe Matos launched last year, placing some of his first products in stores run by Eureka Shoes, and launching formally at the end of March 2013.

Like Mr Monge, Clandestino founder Filipe Matos had been working for other companies since about 2003, but is now very ambitious about launching out on his own. The centrepieces of his collections so far are, for men, a range of low-cut baseball-boot styles called Plim, so called because they have plimsoll-type soles. There is a black canvas version and leather versions in blue, cognac and white, with additional green and cognac variations that have four on-trend monk-strap fastenings instead of laces and a zip. A leather-soled boot, the Clan, is also available in green, blue and cognac. For women, Clandestino shoes are in

a classic mary-jane style and are available in the same three colours so far—blue, cognac and green.

Mr Matos did part of his training in Milan, but remains committed to Portugal. His manufacturing partners are there and he will continue to have all his products made there. But that's not to say he will spend all his time there himself. "I want to produce the shoes in Portugal but would like some of the creativity to come from different places," he says. "So I have decided to spend time in Dubai later in 2013, then in Japan in 2014, then in Mexico in 2015. I want to be influenced by the lifestyle in these different places and by the materials I can find there."

Interesting touches he is already incorporating into his designs include a diagonal line through the letter 'o' in Clandestino. Each of the Plim boots has a diagonal strip of leather stitched onto the outsole, near the toe, to replicate this line. It represents the end of the shaft of a feather, the brand's symbol. The whole of the feather appears on the leather soles of the Clan and mary-jane styles, with, distinctively, some of the barbs from the tip flying loose as though blown by the wind. "It symbolises freedom," Filipe Matos says. "I want to feel that freedom."

A blast from the past

Cologne-based Markus Stolla is living proof that this desire for freedom and individuality is even alive and well in the world of football boots, so carefully controlled these days by massive sports brands that pay prominent players huge sums to wear the new models their design teams dream up. Recent

Free as the wind. A wind-blown feather is the symbol for new Portuguese brand Clandestino. CREDIT: CLANDESTINO





Markus Stolla (right) launches his RetroStar brand of traditional-style football boots at GDS in March.

CREDIT: GDS/CONSTANCE TILLMANN



Black boots with black trims. RetroStar's reworking of the classic adidas Copa Mundial boot from 1979 is a far cry from the multi-coloured boots many football stars wear today.

CREDIT: RETROSTAR

results include the prototype evoSPEED 1.2 boots from Puma, designed to enhance a player's speed, but with "a bold camo print that gets you noticed on the pitch" too. In the case of this particular dreamy design, the "bold camo" print involves different-sized dots in three shades of pink (sachet pink, virtual pink and hot coral) on a white upper. For Markus Stolla, such ostentation is more a nightmare than a dream.

Tellingly, he has called his company RetroStar and, through an outsource partner in northern Italy, is expressing his taste and individuality by making a single style of retro boot in black, brown and cream. "My manufacturing partner in Italy is a very experienced maker of football boots," Mr Stolla says. "He's made millions of boots. In fact, when I showed him my designs, he told me that he remembered making this style of boot the first time around." That was in the late 1970s and early 1980s because the RetroStar style is based on the original Copa Mundial, the boot adidas brought out for the 1982 FIFA World Cup in Spain.

Take away the trademark adidas stripes, and the look is even more retro, although sleek and handsome, as handmade calfskin Italian footwear should be. A former television executive and semi-professional footballer himself, Markus Stolla says he firmly believes he will attract some high-profile professional players as customers in the near future. "Look, I don't want to be completely commercial about this," he insists. "It's for people who have style, who love understatement. Clearly, there are professional footballers who come into that category. Stefan Reisinger, a striker at Fortuna Düsseldorf, is one of them, and he is an admirer of RetroStar, although he is tied into a commercial contract at the moment."

Joy in the sole

Unlike RetroStar, but like Govan Originals, a new Leicester-based brand, Anthony Miles, has come out of an existing footwear manufacturing company although in this case it's a company, Kirby Footwear, that makes its collections offshore as own-brand shoes for big retail brand customers. Anthony Miles will be a brand in its own right.

Brand manager, Rob Wood, explains that the idea behind Anthony Miles is to take classic patterns and try to reinvent

them. For example, a line of classic-looking wing-tip Oxford lace-ups, the Fosse style, use interesting angled lines for the decorative perforations on the main body of the shoe.

Most obviously of all, the shoes in the initial Anthony Miles collections come with brightly coloured soles, so that a classic black moccasin has slices of black and pink on the sole, and lots of combinations are possible. These pop-colour soles are made in three sections using slices of different coloured rubber, milled into just the right shape. "We are keeping the identity of the designer behind these ideas a secret for now," Mr Wood says. He goes on to say that the brand's debut collection for autumn-winter 2012-2013 had a strong start at Selfridge's in London. Spring-summer 2013 and autumn-winter 2013-2014 are, or will be, available at the London department store again, as well as at El Corte Inglés in Spain, Top Shop and online through Zalando and Asos.

"The work we have been doing for years at Kirby Footwear has been a big help," Rob Wood continues. "We have a wholly owned factory in China, with highly skilled technicians, including some from Brazil, working in it. We also had good experience and good contacts with buyers, which meant we knew the people to contact in the industry to get the shoes into the right stores. We're going to keep doing that and have already been in touch with some good contacts in Japan and Canada. We're also hoping for a breakthrough in the US market and we'd like to have a couple more high-end stores in the UK too."

Reaction to the three-piece sole in the inaugural collection was positive, leading to a determination at Anthony Miles to have something revolutionary in its soles in all subsequent collections. So as a follow-up, it has developed the idea of having pop colours show through a transparent rubber sole with, as a result, a shoe such as a classic-looking brown Fosse with a sole that looks translucent pink.

The flow of fresh ideas in the footwear industry is unending. 🌀

FOOTNOTE: Most of the information in this article came from interviews carried out by World Footwear at the Micam and GDS exhibitions in March 2013.



Multi-coloured brogue patent Dr Martens.

PHOTO CREDIT: DR MARTENS

Trends for autumn-winter 2013-14

Bright coloured shoes appeared in all categories at GDS, the German fair that consolidates mainstream trends for Europe. An unending winter, with snow still causing havoc in March, had depleted stocks and winter boots, with a difference, were what many buyers were looking for. Wine-red shades predominated, followed by blues, with cognac, tans and yellows.

Rubber boots

Rubber boots keep feet dry and warm in winter. There are two main trends here: soft plain rubber or colourful prints. The soft and flexible rollable boots have a high natural rubber content, like the ones from Jade Luck of the Philippines. Bright prints and decorations are still popular with rubber-boot wearers, fun and cheerful in the rain. Desigual, the Spanish brightly decorated clothing brand, makes a big line of printed shoes and boots – with its prints perfect on rubber boots.

Decorations and prints

Bright colours, decorations and prints appear on shoes and boots for summer 2013 and also continue through to winter

Brands and designers are preparing for a bright winter. **Penny Leese** reports on some of the most eye-catching styles on show at GDS in Düsseldorf in March.

2013. There are prints, weaves and embroideries, often with an Arabic, eastern, Kilim-inspired look. Cheerful decorations make the wearer happy. Geometric and floral prints, too, are a recurring trend from mainstream brands like Dr Martens.

Warm and furry

Ugg boots may gradually be losing their sales gloss, but warm winter boots appeal to all types of consumers, men, women and kids, especially when there is snow outside the exhibition grounds, as there was during the three days of GDS in March. Warm sheepskin-looking boa or fur-top collars appear on men's and women's boots for a warm winter cosy look.

Warm and woolly felt makes feet cosy – a recurring look after



Metal wedge by New Rock.

PHOTO CREDIT: WTP

the endless winter that many Europeans have suffered this year. No longer is it enough to have some winter boots, but even the UK fashion hordes need warm footwear when it is still snowing in March.

Punky and studs

Rivets, buckles and studs are not going away. They are spiky and sharp, like on Dr Martens boots, or slim and subtle as on many more elegant flat ballerinas. Studs get brightly coloured too, and come in different shapes. Nat-2 has a collection of night-clubbing shoes with aggressive and coloured studs; made for a Munich night club called P1.

Metallic looks for winter cover all types of materials, from metallic textile shafts on winter boots, to sky-high anodised metal heels and wedges. More popular are the simple plain Chanel-type toecap in metal or metallic leather on simple ballerinas. Antique buckles, zips and D-rings act not just as function on winter boots, but also as decoration.

Sneakers

European-made sneakers are very different from those made in the Far East. The Italians, says Nicoline Van Enter, trends researcher and owner of the SLEM design school in the Netherlands, explains that the "Asians can't 'do' and 'finish'". European sneakers are becoming more and more complicated, in soft leathers with painted soles and hand-polished leathers.

Waterproof

Waterproof membranes keep feet dry, for kids and adults too. The trend for waterproof membrane footwear for adults is for it to look more normal.

Men's hand polished

Men's boots, too, are hand polished; classic styles are updated with an antique patina. Polido leather is making a

comeback, especially in the 1980's Bordeaux shades. Even simple, traditional-looking brogues have darkened, hand-polished toes.

Kids

There is a big kids' shoes hall in GDS, with many brands, not just from Spain, Portugal and Italy, but also from Scandinavia (mostly made in Portugal). Styles are colourful, leather and functional. For winter, TEX membranes are a must for kid's boots for the German-speaking market (Germany, Austria, and Switzerland). But that doesn't mean boring: the boots can be colourful, feminine and glitzy too (Silver metallic from S Oliver), or in all-over real leather with wool lining, like Bundgaard, made in Portugal.

Gimmicks

There are often fun accessories and gimmicks to be seen at GDS. Kool Laces are elastic laces that are fixed in place, in bright colours. They are made from stretch rubber elastic, so there is no need to tie a bow.

Something that attracted a great deal of interest at the fair was the offering of shoe photography systems. A "Pack Shot Booth" can take photographs of a rotating shoe on a white table at all angles using stop-motion photography. Since the unit is closed, the photography can be done in-house, with no longer any need to call in a professional photographer for catalogue or e-shop photos. The photos can be used directly, so there is no need to send them away to Bangladesh in the evening for the backgrounds to be cleaned up, ready for use in Europe the next morning. Some systems also photograph in the round, taking photos of the top and bottom of the shoes – an ideal system for web selling.

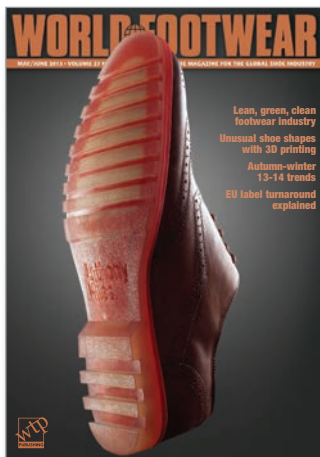
The next GDS is September 11-13. 



S Oliver for big girls.

PHOTO CREDIT: S OLIVER

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WORLD FOOTWEAR

Head Office

36 Crosby Road North, Liverpool L22 4QQ, UK
Telephone: +44 151-928 9288 Facsimile: +44 151-928 4190
E-mail: wl@worldtrades.co.uk

Editor	Stephen Tierney
Deputy Editor	Clare Grainger
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Iran: Roobik Khodabakhshian World Future Trade Co. Ltd,
No. 41 (Ex. 85) Karimkhan Zand Ave., Tehran 15858 Iran P.O. Box 15855-189
Tel: +98-21-88835389/88839860 Fax: +98-21-88827892
E-mail: wftco@yahoo.com
Iran Mobile: +98-912 1011834 Italy Mobile: +39 333 6854685

Korea: Jo Jong-kook

Korea Leather Industry Information Centre, PO Box Yoido 968, Seoul, Korea
Tel: +82 2783 1598 Fax: +82 2782 1494
Mobile: +82 19 379 3915 E-mail: koleather@netsgo.com

Mexico: Mr. Gennaro de la Garza

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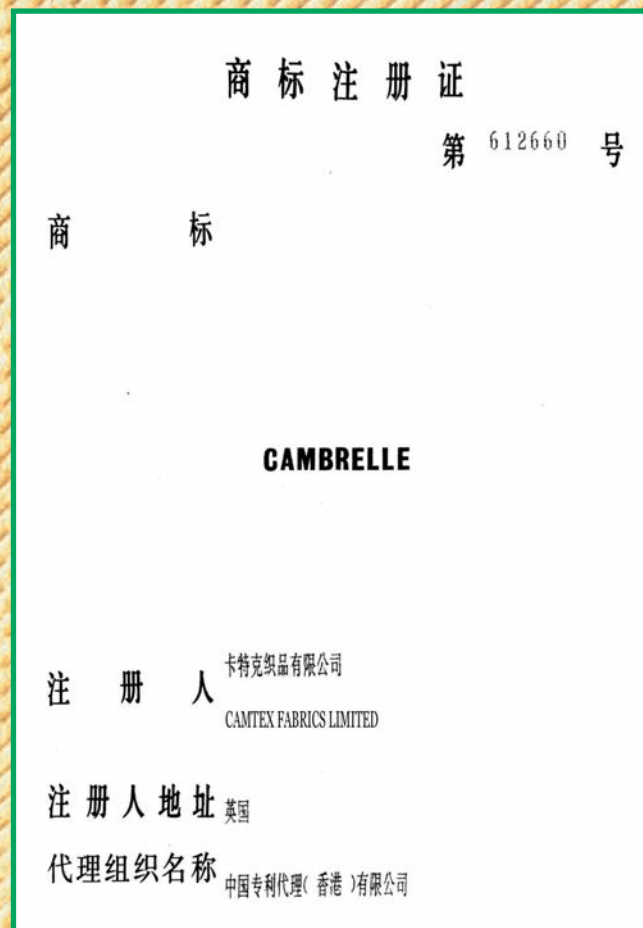
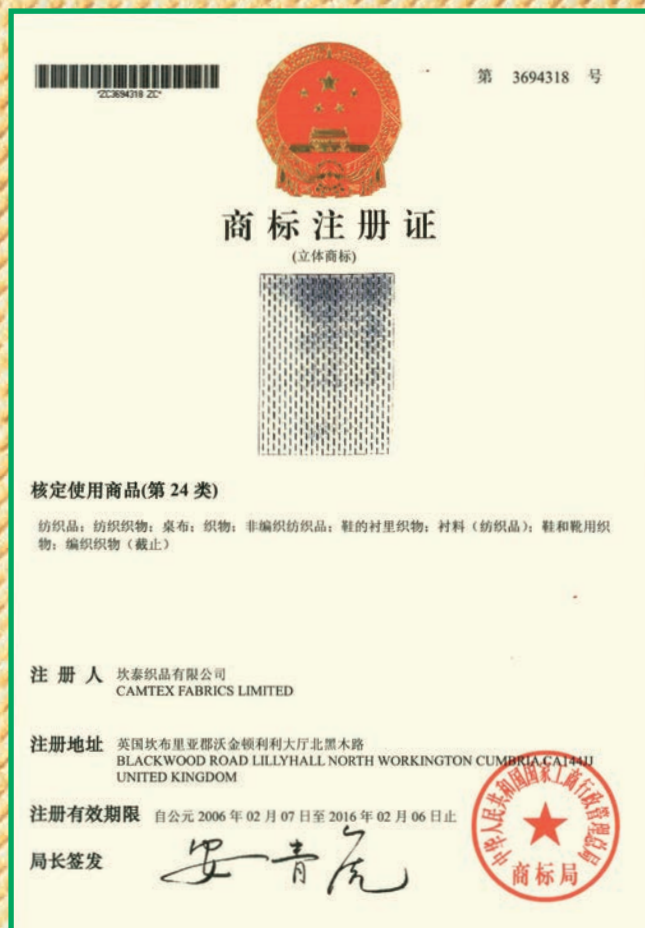
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