

insider **MADE**  
**IN THE UK**

MAGAZINE 2015/2016





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# WELCOME



Welcome to this special Made in the UK magazine. It's part of Insider's Made in the UK programme, aimed at highlighting and promoting the best of manufacturing across the country. In this publication we look forward, and we look back. Our preview of the Made in the UK conference 2016 (p13) highlights some of the great speakers who will be providing insights on topics as diverse as advanced textiles, driverless cars, big data and

life sciences. Our Manufacturing Bites event (p23) looked ahead to some of the challenges and changes faced by companies in UK industry.

We also look back at the amazing winners of the Made in the UK Awards 2015, and look in more depth at why some of them won and what they did next. It's a celebration of a vital part of the UK economy, which punches above its weight by providing great jobs, winning export earnings and developing useful products.

**Douglas Friedli** Editor

# insider

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## TICKETS

For tickets to the Made in the UK 2016 please contact: Lianne Sunderland on 0161 907 9741 or email [lianne.sunderland@newsco.com](mailto:lianne.sunderland@newsco.com)

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# WELL-PLACED FOR A MANUFACTURING RENAISSANCE



Manufacturing is the lifeblood of the wealth creating economy, and the country's exporting performance is massively dependent upon the skill and expertise of the sector. Although manufacturing only represents around 10 per cent of the UK's GDP, it accounts for around two thirds of its exports.

And we need to remember that manufacturing is still hugely important to the UK. We are, after all, the 11th biggest manufacturing nation on earth, the sector employs 2.6 million

people and is worth a hefty £6.7trn to the economy. So the message is clear that if we want to grow our exports we need to have a vibrant and growing manufacturing sector.

With the decline in manufacturing since the 1970s, it is tempting to think that the future is difficult and uncertain but, in many ways, the prospects for manufacturing have never been higher. The majority of the decline in manufacturing was in lower value, less productive areas and we have consolidated into what is today a highly competitive, high-value and very productive sector with leading technology and world-class skills underpinning its performance.

Our automotive sector builds 5 million cars per year and exports of £34bn account for 11 per cent of all our exports. Our aerospace sector has a combined turnover of nearly £30bn, 90 per cent of which goes to exports and it has a global market share of 17 per cent. The chemicals and pharmaceutical sector employs nearly 200,000 people and is the UK's largest sector with £45bn, and it adds around £60m every day positively to the balance of trade.

We are beginning to see manufacturing being reshored to the UK as higher productivity and investments in research and

development, and hence new innovations and technology, start to reap rewards. New innovations promise a great future for manufacturing.

Additive manufacturing and subtractive manufacturing offer new areas for us, and with developments in digital manufacturing leading to quite different business models from the old drive for simple economies of scale and/or the hunt for cheaper labour costs. We are world leaders in the development of advanced materials which will require highly skilled individuals and leading technology to drive to success.

The UK is extremely well placed for a real renaissance in our manufacturing sector. In achieving that renaissance we will see a significant boost to our exporting performance and that in turn will lead to benefits to our balance of trade. There is little more exciting than creating a design for a product, making it and selling it for a profit into global markets. The more we can do that, the better it will be for the nation as a whole.

**CLIVE DRINKWATER**

**North West regional director,  
UK Trade & Investment**



# insider **MADE** IN THE UK

## IT'S ALL ABOUT YOU

Made in the UK helps to create competitive advantage for manufacturers



Made in the UK came to life on a gloriously sunny morning in July 2014, when Insider opened its first UK-wide conference and exhibition at Liverpool's BT Convention Centre. It brought together thought leaders and industry chiefs to exchange ideas on topics as diverse as advanced materials, shale gas and medical technology.

And it was combined with an awards dinner bringing together the winners from Insider's Made in... events from across the UK, revealing who was the best of the best. Simultaneously international in outlook, national in scope and with strong regional roots, it celebrated manufacturing, while providing ideas and opportunities to get together.

Fast forward to 2016 and we're almost ready for the third Made in the UK Awards, and the latest conference, as part of the International Festival for Business.

So what is Made in the UK for? Put simply, it's about giving you a competitive advantage. The conference sessions we're running are

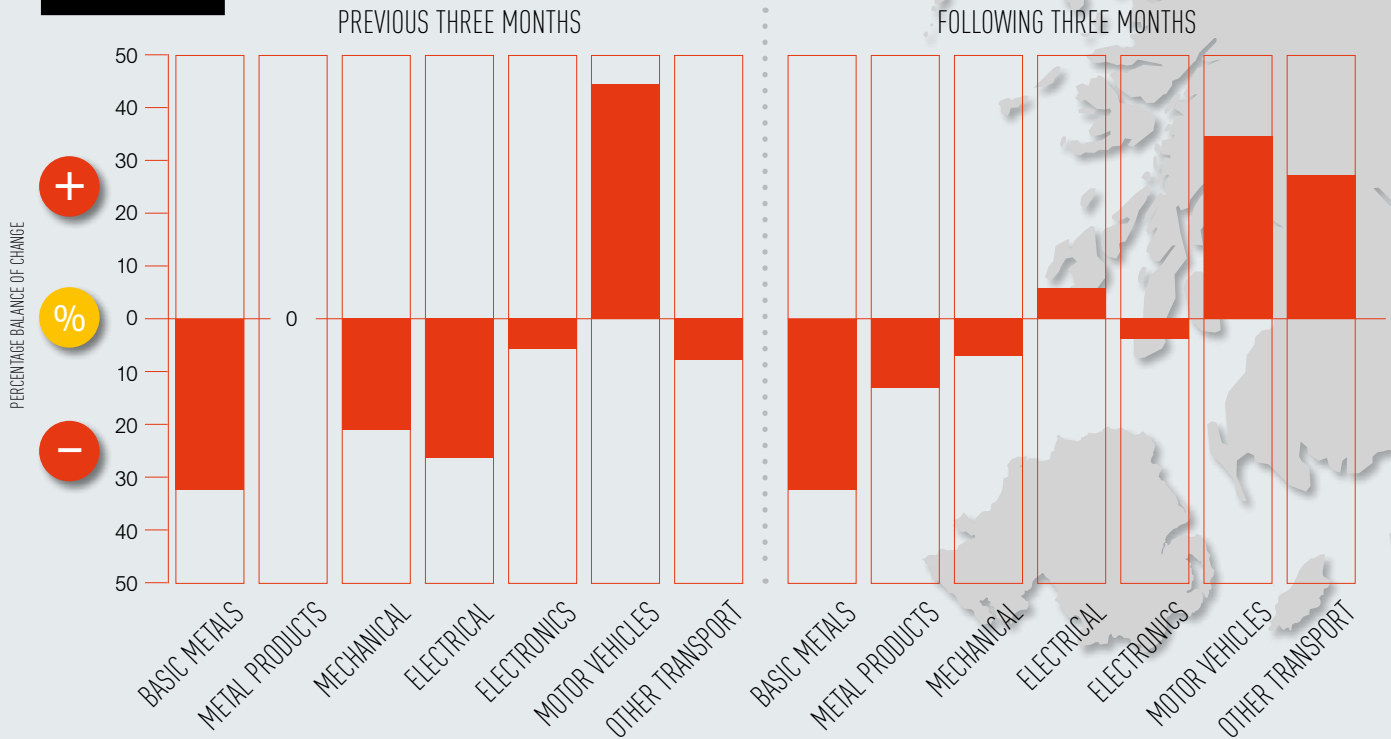
on topics which we see as offering great opportunities for manufacturers, suppliers, designers and product developers. Through insights from leading thinkers, we hope you'll get some ideas for winning orders. Then there are the "between" moments – perhaps walking in or out of discussions, or bumping into someone you need to speak to over coffee. If you learn something useful to your business there's another advantage.

It all culminates in the awards dinner, and that's the result of competitive advantage. All of the Made in the UK winners have won because they have developed ways of beating the competition. Perhaps ideas from one industry could be used to create an advantage in an unrelated field. Again, the Made in the UK awards dinner will provide an opportunity for meeting and exchanging ideas to mutual advantage. So whether you're looking to make connections, pick up the latest thinking or gain the kudos of winning on a UK stage, good luck, and stay competitive.

# MIXED OUTLOOK

Prospects for manufacturing in the UK have got tougher over the past year, according to the EEF's Manufacturing Outlook. The metal industry faces challenges, although other sectors, including vehicle manufacturers, are expected to grow

## OUTPUT



"Chinese steel dumping has aggravated issues in the basic metals sector, which has been suffering from an uncompetitive exchange rate and slower global demand."

"Sectors embedded in the oil and gas supply chain continue to struggle. We expect the sector to bottom out in the first quarter of 2016 and grow thereafter."

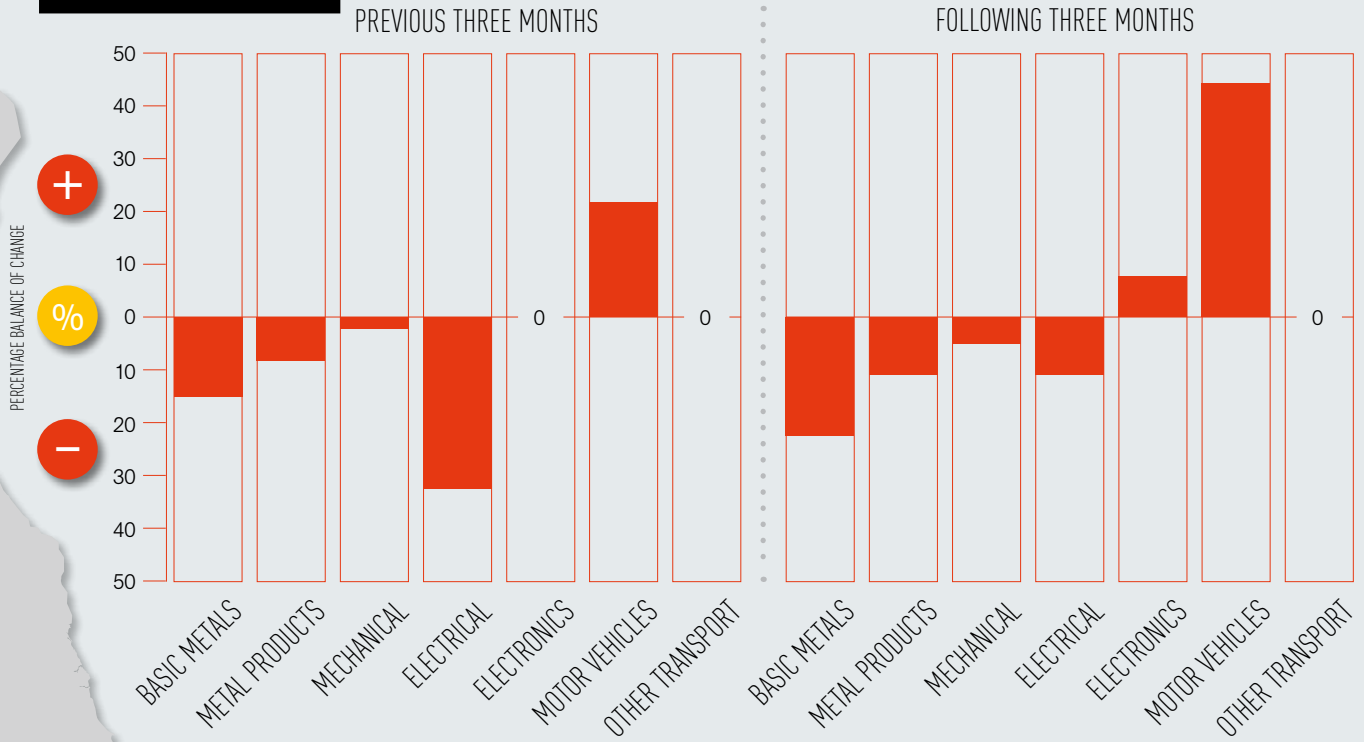
"Prospects for food and drink are brighter, with evidence that manufacturers are rationalising their supply chains."

## FORECAST

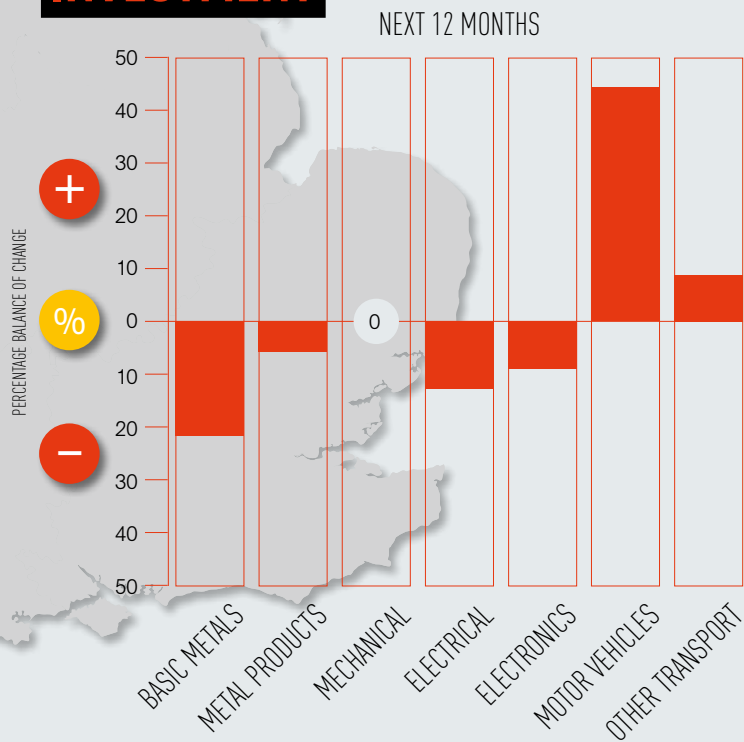
OUTPUT PERCENTAGE CHANGE  
FORECAST TO 2016



# EMPLOYMENT



# INVESTMENT



“Fundamentals are now looking strong for the pharmaceuticals industry, with ongoing acquisitions and pipelines for new products coming on stream.”

“Motor vehicles remain on their strong growth trajectory, capitalising on the introduction of new models and strong consumer demand.”

# AROUND THE COUNTRY

Data from the EEF shows how manufacturing's structure varies and is changing across the UK's nations and regions

## EAST MIDLANDS

### 16.3 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The East Midlands is the UK region with the highest proportion of its output from manufacturing. The largest sectors are food and drink, transport equipment and rubber and plastic products. Some 301,700 people are employed in manufacturing, accounting for 15 per cent of the region's total workforce, the UK's highest proportion. But while employment has grown since the recession in the UK as a whole, the number of manufacturing jobs in the East Midlands fell 1 per cent between 2010 and 2014. The automotive sector has experienced sustained expansion "and is set to continue to drive growth", the EEF said.

## EAST OF ENGLAND

### 11.8 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The East of England ranks third for total manufacturing output. The largest sectors are food and drink, pharmaceuticals and transport equipment. Some 295,200 people are employed in manufacturing, 11 per cent of the region's total workforce. Productivity is 98.5 per cent of the UK average, making this the UK's second-most productive region. Two of the highest productivity sectors in the UK – pharmaceuticals and transport – make up a quarter of the region's output. Companies were optimistic about orders for the second half of 2015, but "recruitment and investment intentions look to be coming off the boil".

## NORTH EAST

### 14 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The North East's biggest sectors are metals, transport and machinery, with 125,200 people employed in manufacturing in the North East, or 11 per cent of the region's total workforce. The region exports a disproportionate amount (69 per cent) to Europe – a key market for metals and automobiles. Domestic orders have been the most negative out of

all UK regions, according to the EEF, due to "strong links between manufacturers in the North East and the oil and gas industry in the North Sea". But companies in the region are recruiting staff faster than the UK average.

## NORTH WEST

### 13 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The second-biggest region in terms of manufacturing output. The largest sectors are pharmaceuticals, food and drink and metals, with 338,200 people employed in manufacturing, or 11 per cent of the region's workforce. The North West has seen the largest reduction in manufacturing employment since 2010, linked to pharmaceuticals. But it has one of the highest levels of output per hour for any sector. The North West was one of the worst-hit by reduced demand from the oil and gas sector. But the weaker oil price has supported growth in chemicals and pharmaceuticals.

## SOUTH EAST & LONDON

### 4.8 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The UK's biggest region in manufacturing output, but manufacturing has the smallest presence here as a proportion of total regional output. Sixty-two per cent of manufacturers are small and medium-sized. The largest sectors are food and drink, electronics and pharmaceuticals, with 522,600 people employed in manufacturing, or 6 per cent of the region's total workforce. Productivity is 121 per cent of the UK average, making it the most productive part of the UK. Manufacturing employment in the South East and London has risen between 2010 and 2014, by 5 per cent and 6 per cent respectively. Investment prospects were the strongest too.

## SOUTH WEST

### 11.7 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The South West's manufacturing sector is dominated by smaller companies, accounting

for 62 per cent of all manufacturing businesses, the second-highest share in the UK. The region's largest sectors are transport, food and drink and computing/electronics, with 267,000 people employed in manufacturing in the South West, or 10 per cent of the region's total workforce. The number of manufacturing jobs in the region dropped by 3 per cent between 2010 and 2014. The EU receives 59 per cent of its exports, which is the highest proportion for anywhere in the UK. The key sectors were all forecast to grow in 2015, with the "other transport" sector as the star performer.

## WEST MIDLANDS

### 13.9 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

The West Midlands' largest manufacturing sectors are transport, metal and machinery equipment. Some 335,700 people are employed in manufacturing, accounting for 13 per cent of the region's total workforce. Since the recession, employment growth is up, with the number of jobs in the sector rising 7 per cent between 2010 and 2014. In 2014, the West Midlands accounted for 12.1 per cent of the UK's exports, the most of any region excluding the South East and London. Only 40 per cent of exports go to the EU, which is the lowest proportion for any region. The region sends 27 per cent of its exports to Asia, compared with just 16 per cent for the UK as a whole. The EEF said: "The region's manufacturers are well placed to take advantage of growth in the automotive sector."

## YORKSHIRE & HUMBER

### 13.9 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

This region's largest manufacturing sectors are food and drink, metals and rubber and plastics. Some 315,000 people are employed in manufacturing in Yorkshire and Humber, 13 per cent of the region's total workforce. The number of jobs in the sector rose 12 per cent between 2010 and 2014, the fastest employment growth of any region. Twenty-two per cent of exports go to North America, the



highest for any region in England. The region also has a higher proportion of exports than the UK average to Latin America and the Caribbean and Sub-Saharan Africa.

## SCOTLAND

### 10.8 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

Scotland's largest manufacturing sectors are food and drink, metals and pharmaceuticals. Some 212,400 people are employed in manufacturing in Scotland, accounting for 8 per cent of the country's total workforce. The country's productivity is broadly equal to the UK average, making Scotland the third most productive part of the UK. Scotland benefits from the concentration of two high productivity sectors: transport and electronics. In 2014, Scotland accounted for 5.2 per cent of the UK's manufactured exports, the least of any nation or region. Scotland has a high concentration of the oil and gas industry, and the slump in the oil price since June 2014 has slowed output. Orders for manufacturing sectors supplying to the North Sea dried up as investment plans were postponed. But the EEF said: "Capital expenditure in the North Sea will resume with a time lag once the oil price has stabilised."

## WALES

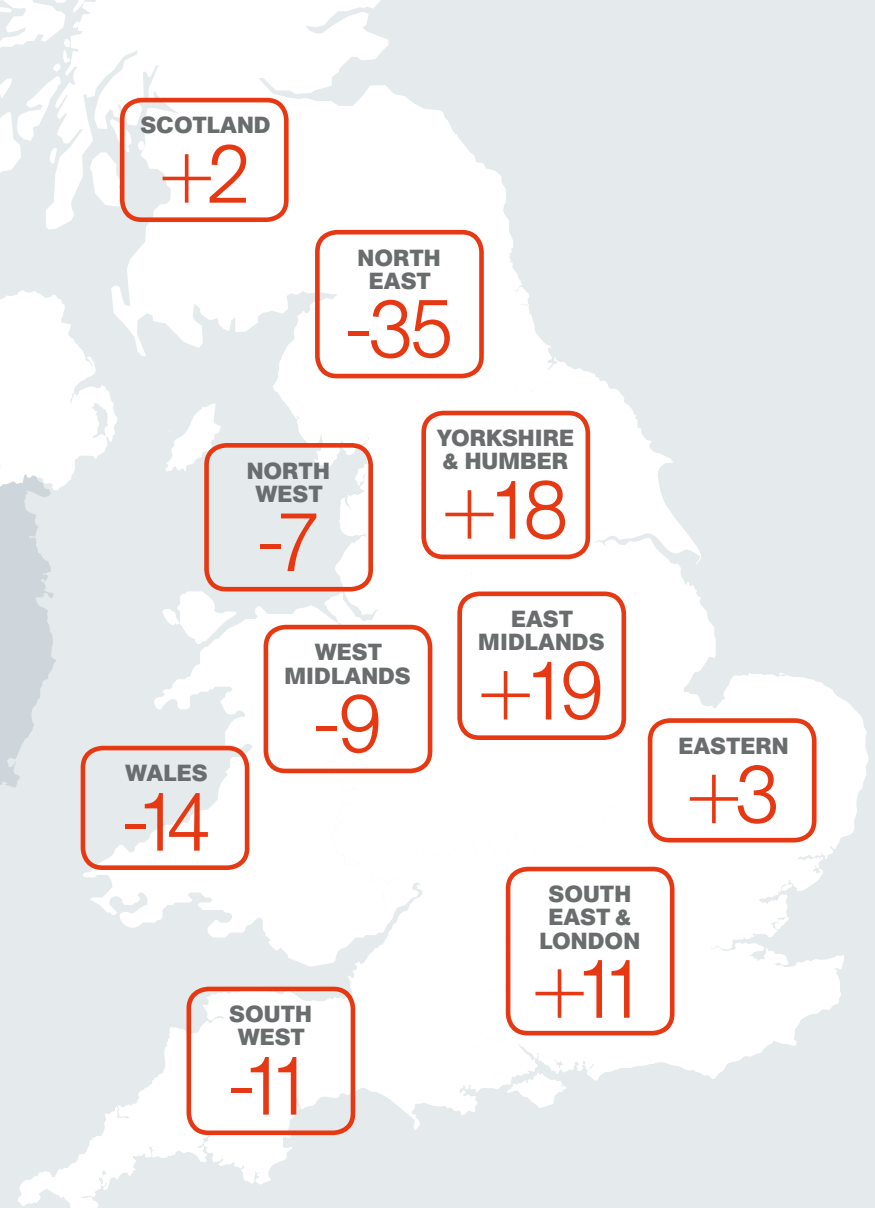
### 15.8 PER CENT OF REGIONAL OUTPUT IN MANUFACTURING

Manufacturing in Wales as a proportion of total output is well above the UK average. The proportion of small and medium-sized businesses is also above average at 60 per cent. The country's largest manufacturing sectors are food and drink, transport and metals. Some 157,100 people are employed in manufacturing in Wales, accounting for 12 per cent of the country's total workforce. Since the recession, Wales has reported stronger manufacturing employment growth than anywhere else in the UK. The number of jobs in the sector increased by 15 per cent between 2010 and 2014. The EEF said prospects for growth in Wales were positive in transport and food and drink, but added: "Weaker prospects for the basic metals sector remain a risk for Wales, though a reversal in the falling price of oil, and growing output across the broader manufacturing sector, should boost demand."

Sources: EEF Manufacturing Outlook, 2015 Q4; EEF Regional Manufacturing Outlook, July 2015; ONS

## THE REGIONAL PICTURE

### ORDERS FORECAST CHANGE Q4 2015



Source: EEF. Higher numbers are more positive. Number = percentage average balance of change. Time period: 2014 Q3 to 2015 Q2.

# FESTIVAL HEADLINERS

**IFB  
2016**  
INTERNATIONAL  
FESTIVAL FOR  
BUSINESS



Ian McCarthy,  
director of IFB 2016

## IFB 2016 SPEAKERS ARE SCHEDULED TO INCLUDE:

There's plenty happening at the International Festival for Business this year, with the focus on helping companies win overseas trade

Made in the UK 2016 is part of the second International Festival for Business, which is being held over three weeks in Liverpool in June. This gathering of businesses from across the globe will link with successful UK companies to network and create business opportunities, which should lead to increased profits and jobs for UK companies.

The purpose is clear, says Ian McCarthy, director of IFB 2016: "To help businesses increase their international sales and to establish the UK's position as the home of international trade.

"IFB 2016 provides a practical business experience and you get that through learning from experienced leaders, obtaining specialist advice, meeting with investment services, and by interacting with your peers."

Potential highlights among dozens of events at IFB 2016 include the Automotive Leaders Summit, the International Banking and Finance Forum, and the International Maritime Trade Conference.

■ **Jim O'Neill**, who chaired the Cities Growth Commission in the UK until October 2014 when it provided its final recommendations, and is now chairing a formal review into AMR (anti-microbial resistance), which will make recommendations in spring 2016.

■ **Liv Garfield**, who took up the reins as chief executive of water and waste group Severn Trent in April 2014. She worked for British Telecom, most recently as chief executive of Openreach, the engineering division of BT, overseeing one of the fastest and most ambitious deployments of fibre broadband in the world.

■ **FW De Klerk**, former president of South Africa (1989–94) credited with bringing the apartheid system of racial segregation to an end and negotiating a transition to majority rule in his country. He and Nelson Mandela received the 1993 Nobel Prize for Peace for their collaboration in efforts to establish non-racial democracy.

■ **Carla Cico**, who is guiding Brasil Telecom into new markets like Voice-over-Internet Protocol. Cico is also trying to resolve issues with a big shareholder, Telecom Italia.

■ **Bo Inge Andersson**, the first non-Russian chief executive at Avtovaz, the Russian carmaker formerly known as VAZ: Volzhsky Avtomobilny Zavod, and better

known to the world under the trade name Lada. The company was established in the late 1960s in collaboration with Fiat.

■ **Frank Klaas**, managing director of the Deutsche Börse Group which runs the German stock market. His business covers the entire process chain from securities and derivatives trading, clearing, settlement and custody to market data and the development of electronic trading systems.

■ **Vaira Vike-Freiberga**, former president of Latvia (1999 to 2007), who was instrumental in achieving membership in the European Union and NATO for her country. She was named Special Envoy to the Secretary General on United Nations reform and was an official candidate for UN Secretary General in 2006.

■ **Ronnie Chan Chi-Chung**, chairman of Hang Lung Group and Hang Lung Properties, one of the largest real estate developers in Hong Kong. He is also the vice-president of the Real Estate Developers Association of Hong Kong, a co-chairman of the Asia Society and chairman of its Hong Kong Center, and an adviser to the China Development Research Foundation of the State Council of the People's Republic of China. He was a director of Enron Corporation and a member of its audit committee when it filed for bankruptcy.

# WHAT'S NEXT?

Made in the UK 2016 will feature a series of in-depth conference sessions looking at the future of key industry sectors and opportunities for suppliers and collaborators

Where are the business opportunities in the driverless car industry? How can you play a part in the next generation of robots, or textiles that can generate power? Find out at Made in the UK 2016, which will feature conference sessions on these topics and more.

Businesses, top academics and industry leaders will come together to map out a future for these promising industries. And they will seek to identify opportunities for suppliers and collaborators to help these advanced technologies become reality.

An important theme will be breaking down boundaries between traditionally separate sectors. Using technology from other sectors could help life sciences or railway businesses, for example, advance more quickly than if they stayed with their usual supply chains. You can read more details of each session, and the speakers lined up so far, in the following pages.

Made in the UK 2016 is part of the second International Festival for Business.

**Who's in the running for Made in the UK Awards 2016: page 47**

## CONFERENCE SESSIONS

ADVANCED MANUFACTURING  
ADVANCED TEXTILES  
ROBOTICS  
RAILWAYS  
DRIVERLESS CARS  
BIG DATA  
CATAPULT  
LIFE SCIENCES



## DIARY DATE

MADE IN THE UK  
CONFERENCE & AWARDS  
EXHIBITION CENTRE LIVERPOOL  
17 JUNE 2016

insider **MADE IN THE UK**

Speakers confirmed so far are listed on the following pages. Further speakers will be added before the event. To check the latest speaker details and register your interest in attending Made in the UK, please click on:

[www.insidermedia.com/event/made-in-the-uk](http://www.insidermedia.com/event/made-in-the-uk)



# FUTURE THINKING

## ADVANCED MANUFACTURING

**Graphene and additive manufacturing have moved from potential to reality in recent years, redefining the capacity for industry to create products previously deemed impossible. So what advances are set to shape the industry? We'll hear about the strides being taken to create the products and systems of tomorrow.**

### BEN PEACE SUSTAINABILITY LEAD, KNOWLEDGE TRANSFER NETWORK

Ben Peace's aim is to foster the commercialisation of exciting products and services that will make for a better, more prosperous future. He worked in industry, developing zero emission vehicles, combined heat and power units and solar panels.

He then spent two years in consultancy, before joining the Knowledge Transfer Network (KTN) in 2011. He leads cross-sector initiatives at KTN to stimulate innovation. This is done by moving knowledge across sectors, setting up collaborative partnerships, providing access to funding and informing policy. He has also informed Policy Connect initiatives including the Manufacturing Commission's Industrial Evolution strand.



ALAN NORBURY

### JAMES BAKER BUSINESS DIRECTOR, NATIONAL GRAPHENE INSTITUTE

Graphene could change the world with apparently endless applications and capabilities. James Baker joined the University of Manchester after 25 years in industry, where most recently he was vice president of technology collaboration programmes and managing director of the Advanced Technology Centres for BAE Systems in the UK. As the university's graphene business director, he has responsibilities for the National Graphene Institute and Graphene Engineering Innovation Centre. He is looking to develop industrial partnerships and collaborations to accelerate the commercialisation opportunities for graphene, building on the knowledge base of the University of Manchester, where professors Geim and Novoselov first isolated graphene.

### DR DAN JONES DIRECTOR, FUSION IMPLANTS

Dan Jones co-founded Fusion Implants, a spin-off from the University of Liverpool, with the aim of designing, manufacturing and distributing veterinary orthopaedic devices. Before that he studied at the University of Limerick and University of Liverpool.



BEN PEACE

©The University of Manchester



Researcher preparing graphene sample

At the latter, he worked on a project related to porous titanium structures for bone in-growth applications, which was sponsored by Stryker Orthopaedics. He then took a position at the university's School of Engineering, where an opportunity arose to commercialise research, particularly in the veterinary sector.

### ALAN NORBURY CENTRAL TECHNOLOGY OFFICER, SIEMENS

Alan Norbury works in Siemens' industrial activities, supplying industrial plant and software, manufacturing automation and drive technologies across the UK and Ireland. He started his career as an apprentice at Siemens in Congleton in 1978, became the UK product specialist for some advanced technologies, developing into the role of applications specialist. He set up a team of application specialists in 1997, providing advice to customers on the best use of Siemens industrial technologies. He has spent the past four years working closely with High Value Manufacturing Catapult Centres, particularly the Manufacturing Technology Centre in Coventry and the AMRC in Sheffield. He sits on the IET design and production sector executive board and the Northern Robotics Network advisory board.

# MATERIAL PROGRESS



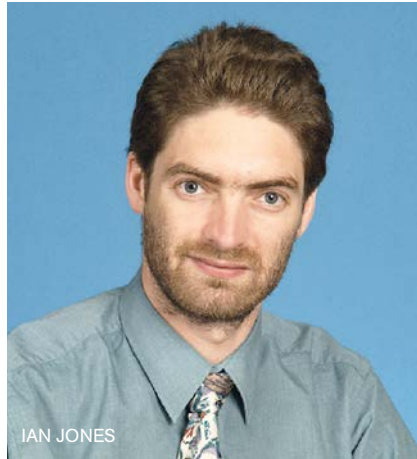
STEVE KAY

## ADVANCED TEXTILES

**Advances in textiles technology are revolutionising the manufacturing of consumer goods. Embedding electronics and creating flexible solutions from existing and new materials such as graphene will enable a new generation of goods and components to shape the future of retail and manufacturing.**

**STEVE KAY**  
MANAGING DIRECTOR, NW TEXNET

NW TexNet is a textiles research, development and training business. Managing director Steve Kay is a textile technologist who joined the medical textiles division of Smith + Nephew as a management trainee after leaving school. He is an expert panel member for Euratex, the European apparel and textile confederation.



IAN JONES

**ALAIN DILWORTH**  
PROGRAMME MANAGER, TEXTILES  
GROWTH PROGRAMME

The Textiles Growth Programme is focused on creating and safeguarding jobs through a grant funded scheme, supporting capital projects, skills training and research and development in the textile industry.

**ADAM MANSELL**  
CHIEF EXECUTIVE,  
UK FASHION & TEXTILE ASSOCIATION

Having worked in the accountancy and publishing sectors, Adam Mansell entered the textile and clothing industry 20 years ago. Beginning as an executive at the British Clothing Industry Association, he went on to work for the British Interior Textile Association, Silk Association of Great Britain, Home Laundering Consultative Council and British Apparel



ADAM MANSELL

& Textile Confederation. As well as leading the UK Fashion & Textile Association (UKFT), Mansell is a director of Wulff Consultancy, which works with companies in fashion and textiles. He's also president of Ginetex, the organisation that owns the trademarked care labelling symbols.

**IAN JONES**  
PROJECT COORDINATOR, POWERWEAVE

Powerweave aims to develop textiles for electrical energy generation and storage projects. Its objective is to develop a fabric to generate and store energy within a totally fibrous matrix through photovoltaic fibres based on the dye sensitized solar cell; rechargeable energy storage fibres based on thin film battery or supercapacitor; textile design to ensure reliability and most efficient operation; reliable interface and interconnection methods to integrate the generation and storage fibres; and demonstration in technical large area applications. Fibres will be combined by weaving or knitting into a textile. The project's partners include TWI, the research and technology organisation with expertise in materials joining and engineering processes for industry. It is backed by the European Commission through the seventh framework programme for research and technological development of advanced textiles for the energy and environmental protection markets.



# Law is our business

Weightmans recognises the vital importance of manufacturing to the UK economy and is proud to be among the sponsors of the Insider Made in the UK Awards, a key event within the International Festival for Business 2016.

**W**e are familiar not only with the many opportunities, but also the numerous major challenges that manufacturers face when operating in today's highly competitive and fast moving global market place.

#### THESE CHALLENGES INCLUDE:

- keeping pace with rapid advances in technology and innovation
- ensuring the secure and effective management of information
- the need to build and manage resilient supply chains
- finding, training and retaining a skilled workforce
- making full and effective use of property assets
- managing issues associated with trading in overseas markets
- complying with the ever changing regulatory framework
- finding ways to operate ever more sustainably and efficiently year on year
- securing access to finance when needed

In this environment, whatever the nature of your manufacturing business, the range of areas where relevant, practical and timely legal support is needed is considerable.

Working from our national network of offices, our specialist lawyers provide commercial legal advice to a diverse and growing manufacturing client base spread across a number of industry sub-sectors and ranging from large household names to family businesses and SMEs.

#### OUR SERVICES TO MANUFACTURERS INCLUDE:

- **Corporate and Commercial** – Assistance with the drafting and review of commercial contracts, advice on mergers and other strategic acquisitions and help in relation to the provision of debt and equity finance.
- **Intellectual property** – Advice on the steps that can be taken to protect and licence intellectual

property rights (IPR) both in the UK and in overseas markets and specialist help with the effective enforcement of IPR.

- **Employment law and Pensions** – Advice and support on the drafting of terms and conditions of employment and other service contracts, restructuring and redundancy, grievances, disciplinary proceedings and dismissals (including representation before the Employment Tribunal), as well as specialist advice on pensions and auto enrolment.
- **Dispute resolution and Debt recovery** – Specialist support to help achieve the early resolution of disputes (making use of alternative dispute resolution, including mediation where appropriate), so as to avoid litigation wherever possible. We also have a dedicated team dealing with the cost effective recovery of commercial debts.
- **Product liability** – Advice and practical assistance with product liability issues, product recalls and consumer rights claims.
- **Real estate** – Advice on the acquisition of new premises and the disposal or reconfiguration of existing premises, as well as the drafting of heads of terms, development agreements, commercial leases, property finance, planning, construction and environmental matters.
- **Regulatory issues** – Help and assistance on key areas of regulation including health and safety, environmental, competition, Bribery Act compliance and data protection.



For a no obligation discussion about how Weightmans can support your manufacturing business, please contact:

Andrew Roberts, Head of Manufacturing  
 T: +44 (0)345 073 9900 E: [andrew.roberts@weightmans.com](mailto:andrew.roberts@weightmans.com)  
[www.weightmans.com](http://www.weightmans.com)

# Manufacturing a strong future.

Today's manufacturing businesses have to face an ever expanding range of legal and regulatory issues and it can often be difficult to keep up with the pace of change.

Weightmans is able to provide specialist legal support to manufacturers both large and small across the UK.

Our experienced and sector focussed team can offer practical, cost effective and commercial solutions for all of your legal requirements to help your business grow.

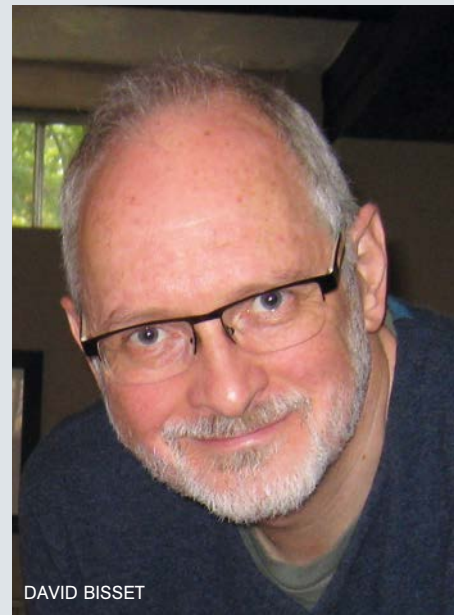
**For further information please contact:  
Andrew Roberts, Head of Manufacturing  
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# AUTOMATIC PROGRESS



ANDREW HODGSON



DAVID BISSET

## ROBOTICS

**A new generation of robots are on the way that are smarter, more mobile, more collaborative and more adaptable. They promise to bring great changes to the factory floor, as well as potential in the global competitive landscape.**

Unlike the large and sometimes dangerous robots which dominate manufacturing these days, the new breed can work alongside humans without endangering them and help assemble all sorts of objects, as large as aircraft engines and as small and delicate as smartphones.

### DAVID BISSET FOUNDER, ITECHNIC

David Bisset has worked in robotics for 24 years. An academic for ten years, he ran the mobile robotics research lab at the University of Kent. In 1998 he was recruited by James Dyson to start the robotics product group at Dyson, before setting up iTechnic. Since then he has acted as a consultant in robotics and embedded systems, and until 2009 chaired the domestic group of EUROP (the European Technology Platform for Robotics). He is responsible for coordinating the writing of

the strategic research agenda, the multi-annual roadmap and the work programme for robotics in Horizon 2020 for euRobotics aisbl, the private side of the Robotics Public Private Partnership, SPARC, within the RockEU coordination action. And he chairs the Robotics and Autonomous Systems Advisory Board under the KTN/Innovate UK.

### ANDREW HODGSON CHIEF EXECUTIVE OFFICER, SOIL MACHINE DYNAMICS

Andrew Hodgson runs SMD, a company that uses remotely operated vehicles for sub-sea exploration. He is vice chair of the North East local enterprise partnership, chairman of Sub-sea NE and Tyne and Wear Employment and Skills Board. Hodgson plans to speak about his company's investment in research and development, and on how his business is using robotics to go further and deeper than humans can go. He may also touch on skills.

### DR STEVE DAVIS LECTURER IN MANUFACTURING AUTOMATION AND ROBOTICS, UNIVERSITY OF SALFORD

Dr Steve Davis worked as a research fellow in the Centre for Robotics and Automation

at Salford for eight years during which time he gained his PhD. In 2008 he moved to become a team leader in the Advanced Robotics department at the Italian Institute of Technology. He returned to Salford in 2012 as a lecturer in manufacturing, automation and robotics. He has undertaken both academic and commercial research and his research interests include actuators, biomimetic systems, humanoid robots, end effectors and grippers, robot hands, soft robotics and automation for the food industry.

### ROBERT GODDARD DIRECTOR OF OPERATIONS, SURREY SATELLITE TECHNOLOGY LIMITED (SSTL)

Robert is director of operations for SSTL, a UK based company at the forefront of satellite design and manufacture. He initially worked within the flight simulation industry for ten years, latterly as product development manager with a key involvement in the Boeing 787 Flight Training Equipment. After joining SSTL in 2011, he project managed the delivery and launch of an earth observation satellite for Kazakhstan after which, he became a chief engineer, specialising in manufacturing. He is a chartered engineer through the Royal Aeronautical Society.



# THE SIGNAL SAYS GO

## RAILWAYS

**The UK government has promised an unprecedented investment in transport infrastructure, creating huge opportunities in the supply chain. Our speakers will talk about where this investment is heading and what it means for UK manufacturers and suppliers.**

**MIKE HULME**  
MANAGING DIRECTOR, TRAINS AND MODERNISATION, ALSTOM TRANSPORT UK

Mike Hulme is responsible for the delivery of the technical, industrial and project solutions for all new rolling stock and modernisation projects supporting train operators and leasing companies. Previously, he was transport UK service vice president, responsible for full service provision, rolling stock modernisation, and parts supply incorporating technical support. He chairs the North West Rail Industry Leaders Group, which is focused on promoting the region's rail industry, developing its skills base and campaigning for an improved interconnected travel experience across the region.

**SIMON IWNICKI**  
PROFESSOR OF RAILWAY ENGINEERING, UNIVERSITY OF HUDDERSFIELD & DIRECTOR OF THE INSTITUTE OF RAILWAY RESEARCH (IRR)

The IRR provides research and support to the industry in railway vehicle dynamics modelling, wheel-rail interface engineering and vehicle-track interaction. Iwnicki was the academic co-chair of RRUKA (Rail Research UK Association) from its founding until 2014, and was the chair of the railway division of the Institution of Mechanical Engineers from 2014 to 2015. Simon Iwnicki is editor-in-chief of Part F of the *Proceedings of the Institution of Mechanical Engineers* (the *Journal of Rail and Rapid Transit*) and editor – responsible for railway matters – of the *Vehicle System Dynamics* journal. He has worked on more than 100 publications, including the *Handbook of Railway Vehicle Dynamics*.

**JAKE RUDHAM**  
RAIL SPECIALIST,  
UK TRADE & INVESTMENT

Jake Rudham advises UKTI on international trade opportunities and inward investment in the rail sector. He has experience in the rail sector and in international marketing, strategy and business development. He works with companies across sectors including technology, engineering, manufacturing, construction and professional services. Before joining UKTI, Jake worked for Balfour Beatty's international and UK rail businesses in marketing and business development. At Balfour Beatty Rail, Rudham was responsible for developing international strategy, product marketing and partner development across construction, heavy manufacturing, technology and engineering services. He also represented Balfour Beatty within UNIFE, The Association of the European Rail Industry, and worked on the steering committee for UNIFE's World Rail Market Study.

**GORDON WAKEFORD**  
MANAGING DIRECTOR,  
SIEMENS MOBILITY DIVISION UK AND  
INDUSTRY CHAIR, RAIL SUPPLY GROUP

The Rail Supply Group is a joint initiative co-chaired by the secretaries of state for transport and for business, innovation and skills that aims to strengthen the capability and competitiveness of the UK rail supply chain. Gordon Wakeford is responsible for leading the Siemens Rail Systems, Traffic Solutions, Rail Automation and Rail Electrification businesses in the UK. He is the current Chairman of the Railway Industry Association (RIA) and Chairman of the Rail Supply Group (RSG).

**GILES THOMAS**  
ACTING TECHNICAL DIRECTOR, HS2

Giles has responsibility for the day to day leadership and running of the HS2 Technical Directorate while Professor Andrew McNaughton, technical director of High Speed, acts as principal witness for the hybrid bill over the coming years. He will talk about opportunities and challenges from the viewpoint of a key shaper of this future market, how



JAKE RUDHAM



SIMON IWNICKI



MIKE HULME

they are addressing both the opportunities and challenges for the future rail industry and what they will be looking for from their manufacturing suppliers.

The Technical Directorate comprises operational, technical and environmental specialists specifying and assuring the HS2 design process.

# DRIVE FOR CHANGE

## DRIVERLESS CARS

**Driverless vehicles have been a dream for decades. Now, fuelled by the impetus of global giants such as Google, they have taken a big step forward. Some US states have passed legislation allowing their use, and industry leaders predict that within years vehicles will be able to drive themselves from one end of the country to the other, autonomously stopping for fuel along the way. So what opportunities and challenges does this pose for UK manufacturers?**

**DR JOHN McCARTHY**  
TECHNICAL DIRECTOR,  
INTELLIGENT MOBILITY, ATKINS

John McCarthy is working to drive forward intelligent mobility, a new way of thinking about how to connect people, places and goods across all transport modes. It is all about behavioural change; how we use technology and data on the road, rail and public transport networks to inform decision-making and change behaviour. He is responsible for journey management – seamless and unified journey choices and ticketing – and roads of the future, focusing on connected and autonomous vehicles. McCarthy looks to combine capability across different elements including mobile technology, cyber security, big data and the internet of things. He worked at Transport for London for more than seven years where he was responsible for delivering



the Smart City agenda through technology programmes including the exploitation of data analytics, cloud-based platforms, bluetooth/wifi data integration and real time data capture.

**PAUL JENNINGS**  
PROFESSOR OF EXPERIENTIAL  
ENGINEERING, WARWICK  
MANUFACTURING GROUP

Paul Jennings has been involved in research with the automotive industry for more than 20 years and now leads work in experiential engineering, and on hybrid and electric vehicle technologies and the factors affecting their successful introduction. He has been principal investigator for more than 20 research grants and awards, worth more than £5.5m, and has written in excess of 70 research publications. He also leads Warwick Manufacturing Group's energy and electrical systems research group.

**DAVID WILLIAMS**  
TECHNICAL DIRECTOR,  
AXA INSURANCE UK

Chair of the recently formed Autonomous Driving Insurance Group and RISC Authority, David Williams was a director of Thatcham, the insurance industry's Motor Vehicle Research Institute, for four years. He worked as chief commercial underwriter at one of AXA's largest branches, reinsurance manager and casualty insurance manager, before moving to claims in 2003. After leading AXA's personal and commercial claims teams, David returned to underwriting as managing director and now has a broader role in AXA Insurance reporting to chief executive Amanda Blanc. He is also non-executive director of AXA Assistance UK, vice president of the Chartered Insurance Institute (CII) and chair of the CII Underwriting Faculty.



JOHN McCARTHY



PAUL JENNINGS



DAVID WILLIAMS

# WE'VE GOT YOUR NUMBERS

## BIG DATA

**Companies and governments often have lots of information. Using that information effectively could improve products, processes and profitability. From predicting consumer patterns to analysing the next world-threatening diseases, big data is big business.**

## INTRODUCTION

Everyone has heard the term big data, and it is widely said to be at the core of the widely cited Industry 4.0. But what does this really mean for UK manufacturers and for gaining competitive advantage?

This session – presented by **Michael Gleaves**, head of business development at the Hartree Centre – will provide an overview of how organisations can take advantage of the data revolution quickly and easily.

Gleaves worked for Unilever and Dionex UK before joining STFC (Science and Technology Facilities Council)'s e-science department in 2004, working on projects looking at the factors affecting the adoption of web services to the pharmaceutical industry. In 2010, he joined STFC Innovations, developing projects with industrial partners and using supercomputing, before moving into his current role.

## SESSION TWO

### BIG DATA ANALYTICS IN MANUFACTURING – UK BUSINESSES, GLOBAL COMPETITORS

Even within the best manufacturing operations, the use of advanced big data analytics may reveal further opportunities, whether this is through turning routinely collected data into an asset by looking for patterns, or using real-time information. The presenter will outline how they combined their data with access to big data analytics and high performance computing to improve their operations and product development.

Presented by **Massimo Noro**, science leader for high performance computing at Unilever. He works at Unilever R&D Port Sunlight (UK), the company's largest global research laboratory. His scientific background is theory and simulations of complex fluids



ADRIAN TOLAND

Credit: STFC



MICHAEL GLEAVES

Credit: STFC



JAMIE COLE



MASSIMO NORO

Credit: STFC

with a special interest in mesoscale tools to predict formulation structure and stability. He joined Unilever in 2000, has an advisory role on the EC H2020 initiative on European Material Modelling Council, serves as an advisory board member of the N8 initiative on high performance computing and is a visiting professor at the School of Physics and Astronomy University of Leeds.

## SESSION THREE

### ANALYTICS AND NEW INSIGHTS

Using real-life examples, how data analytics and machine learning technologies can bring new capabilities and insights to manufacturing. Presented by **Jamie Cole**, executive partner, EMEA (Europe, Middle East & Africa) industrial consultative sales leader, IBM. Cole manages complex system integration

projects with experience of implementing global enterprise resource planning and data warehouse systems. Many of these applications are in the finance functions and corporate headquarters of industrial clients.

## SESSION FOUR

### USING MODELLING AND VISUALISATION TO MAKE STRATEGIC DECISIONS

Often the volume, variety and velocity of data means there is simply too much of it for a person to interpret and analyse, let alone to make informed business or R&D decisions. This session will highlight how modelling and visualisation techniques can identify previously unseen patterns in data to improve decision-making. Presented by **Adrian Toland**, business development manager, life sciences, STFC Hartree Centre.

# The go-to place for manufacturing in the UK

## Introducing the High Value Manufacturing Catapult

The High Value Manufacturing (HVM) Catapult is the go-to place for manufacturing technology innovation in the UK. Supported by the UK Government, we are the catalyst for the growth and success of UK advanced manufacturing.

We work in collaboration with industry and academia to tackle some of the most pressing technical and commercial challenges of the sector, with the aim of generating business growth and value for the UK economy.

Our seven specialised centres help businesses turn great ideas into commercial reality by providing access to the latest industrial scale facilities and world-class expertise to investigate, de-risk and accelerate the commercial application of new technology solutions.

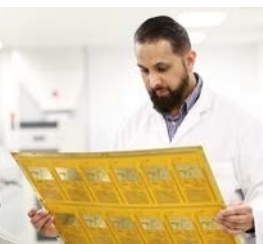
To find out more visit: [www.hvm.catapult.org.uk](http://www.hvm.catapult.org.uk)

## Who we work with

- We work with companies of all sizes, from small businesses to large multi-nationals.
- We work across all sectors and see tremendous benefit in facilitating the transfer of technology innovation between sectors.
- We work on technology innovation that is R&D intensive and has potential to generate economic added value to the UK.

## Our seven Centres

- Advanced Forming Research Centre
- Advanced Manufacturing Research Centre
- Nuclear Advanced Manufacturing Research Centre
- Centre for Process Innovation
- Manufacturing Technology Centre
- WMG Catapult
- National Composites Centre



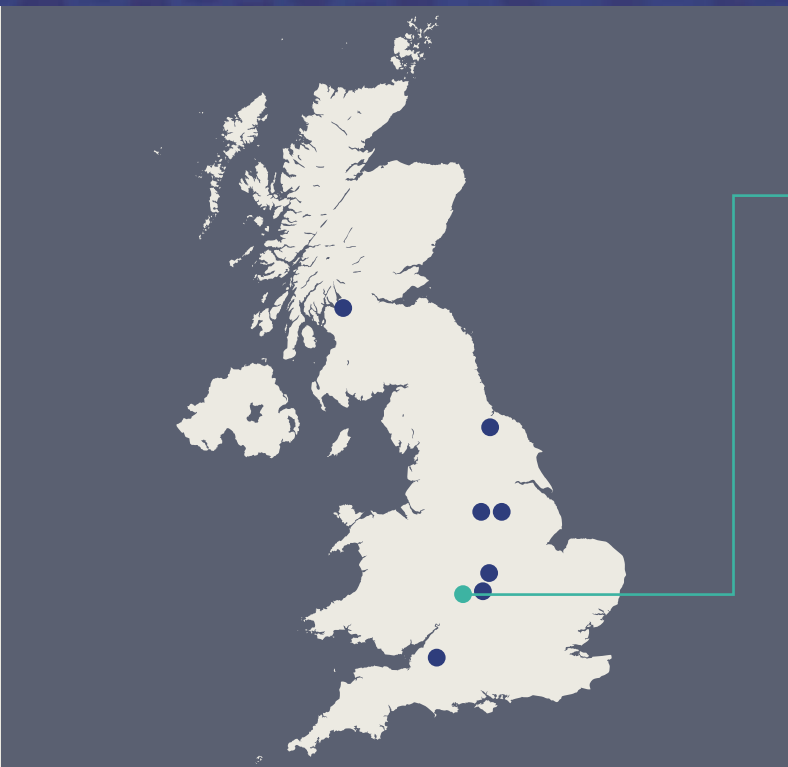
## Visit our Conference Session “ From Innovation to Commercialisation” Friday 17 June – 16:00-17:30 – Exhibition Centre Liverpool

Find out how the HVM Catapult can help you bridge the gap between a good idea and a commercially produced product. The UK delivers some of the most exciting technology innovations in the world, and has seen productivity rates rise significantly in sectors such as aerospace and automotive. At the same time, productivity in other parts of UK manufacturing and the wider economy is lagging. Technology solutions developed and tested in one sector, can often also benefit and transform sectors. Think of metal forming technologies applied in medical devices, composite applications in construction and key enabling technologies in the rail industry.

This conference – led by the High Value Manufacturing Catapult – focuses on inter sectoral technology transfer, the process of making it happen and the benefits it can bring to UK manufacturing. Speakers include:

- Bob Gilbert      Chair, HVM Catapult
- Ken Young      Chief Technology Officer, Manufacturing Technology Centre
- Richard Kirk      CEO, Polyphotonix
- Graham Herries      Director of Systems Integration, Laing O'Rourke

To register, visit: <http://www.insidemediacom/event/made-in-the-uk/conferences>



### Contact Us

#### HVM Catapult

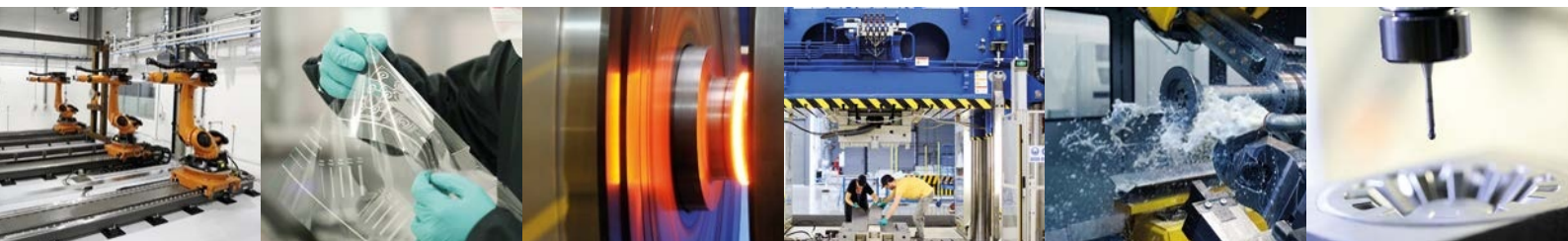
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# FAST FORWARD

SPONSORED BY

**CATAPULT**  
 High Value Manufacturing

## CATAPULT

**Catapult centres have the potential to aid innovation, improve product development and transfer ideas between sectors. Find out more in this session.**

A network of catapult centres has been designed to transform the UK's capability for innovation in seven specific areas and drive future economic growth. They are placing greater focus on small and medium enterprises. The UK delivers some of the most exciting technology innovations in the

world, and has seen productivity rates rise significantly in sectors such as aerospace and automotive. At the same time, productivity in other parts of UK manufacturing and the wider economy is lagging.

Technology solutions developed and tested in one sector can often also benefit and transform other sectors. Think of metal forming technologies applied in medical devices, composite applications in construction and key enabling technologies in the rail industry.

This session is designed to help companies learn how they can enable innovation and product development. The conference, which is being led by the High Value Manufacturing Catapult, focuses on inter-sectoral technology transfer, the process of making it happen and the benefits it can bring to UK manufacturing.

You will hear from industry speakers, and there will be an opportunity for discussion with our panel of experts.



BOB GILBERT

### BOB GILBERT CHAIR, HIGH VALUE MANUFACTURING CATAPULT

Bob Gilbert was a corporate lawyer, insolvency practitioner, and deputy senior partner of Wragge & Co, now the international law firm Wragge Lawrence Graham. Over his career he was invited to sit on the boards of many private and public companies. He has international experience of commercial and industrial enterprises, particularly in manufacturing. He has been chairman of the High Value Manufacturing Catapult since its inception in 2011 and is also chairman of the Paintbox Group and the government's UK Intellectual Property Office.

### RICHARD KIRK CHIEF EXECUTIVE, POLYPHOTONIX

With more than 15 years' experience in medical research and printed electronics, Richard Kirk is a pioneer in bio-photonics, material science and its applications. He is credited for many of the world's first applications using inorganic and organic light-emitting materials. Poly-Photonix develops treatments for macular eye disease and has won international and national awards for innovation, research and business. With an early life as an artist in France, he understands the creative process and has a unique view on the development of markets for innovative research.



RICHARD KIRK

### GORDON ATTENBOROUGH HEAD OF SECTORS, THE INSTITUTION OF ENGINEERING AND TECHNOLOGY

With a background in law and business, Gordon has been with the IET since 2012 and now leads the Sectors department at the Institution. Identifying key societal issues, technologies and engineering challenges, the sectors team work with industry, academia and government to create thought leadership, bring together disparate stakeholders and ultimately further engineering for the benefit of society.

### PROFESSOR KEN YOUNG TECHNOLOGY DIRECTOR, MANUFACTURING TECHNOLOGY CENTRE

As technology director of the MTC, Professor Ken Young oversees a programme of research delivering innovative technology from TRL (technology readiness level) 4 to TRL7. The aim of this is to mature research from laboratory demonstrator level, through to a proven process operating at volume. He sits on the automotive industry advisory panel and is the chairman of the National Measurement System Engineering and Flow working group. He has also been chairman of the British Automation and Robot Association for ten years.

### DR GRAHAM HERRIES DIRECTOR OF SYSTEMS INTEGRATION, LAING O'ROURKE

Graham Herries is director of systems integration in the engineering excellence group at Laing O'Rourke. He leads innovation through adoption of cross-sector technologies for manufacturing and construction sites. Herries is project coordinator of the EU H2020 Factory of the Future project, OPTIMISED. This €7m EU research grant will develop and deploy technologies and analytics to optimise scheduling and performance, while assessing energy demand response as a critical input to manufacturing planning.

# YOUR GOOD HEALTH

## LIFE SCIENCES

**Improving medical technology has the capacity to make a tangible difference to the lives of people around the world. Skills and technologies have become global, enabling the development of world-leading technologies in the UK. Techniques from video game development, metrology and the automotive sector are being adapted to improve processes and treatments in the medical sector and we will hear about the most cutting-edge systems being developed.**

### AMANDA PITCHER MANAGING DIRECTOR, POWDER SYSTEMS

Amanda Pitcher took over Powder Systems' marketing department in 2010. After rebranding and launching a new website, she created a "start-up" entity within the company to develop and make standard products. Taking responsibility for product development and manufacturing optimisation, Pitcher managed a million-pound activity. She was appointed managing director in 2015 and now runs an international business with more than 60 employees spread across the globe.



AMANDA PITCHER



She implemented a reorganisation of PSL and introduced an International Centre of Process Excellence for Pharmaceutical Process Trials, while managing a 103.5 per cent increase in work in progress.

### KEVIN WILSON LIFE SCIENCE SECTOR SPECIALIST, UKTI

Kevin Wilson will talk about global opportunities and support for exporters. He is a senior professional with over 35 years' experience in the medical technology and healthcare market, in private and public sector roles, primarily in sales, marketing and business development roles. In private sector roles he has worked at director and senior management roles with large multinationals such as Johnson & Johnson (Ethicon), Sherwood Medical and new start companies New



PAUL WATT

Medical Technology and AorTech Critical Care.

He spent two years in Germany as director of marketing for the Ethicon Endosurgery Centre in Hamburg and has worked extensively in international markets, especially China and the USA.

### ALISTAIR WILLIAMSON MANAGING DIRECTOR, LUCID

Lucid is a product development business that integrates usability and technology to help Universities, the NHS and businesses deliver better health and personal care products and services.

As a director of the British Industrial Design Association (BIDA), Alistair is part of a team of volunteers promoting creativity and best-practice for professionals and graduates working in product, interaction and service design.

### PAUL WATT EXECUTIVE, MEDILINK NORTH WEST

Medilink brings together the NHS, academia and industry to stimulate innovation and support the growth of the healthcare technologies sector. Paul Watt spent 22 years in research and development, and business development at Johnson & Johnson Medical, and Ethicon Surgery. He leads teams developing wound care devices. He has 20 issued patents in the medical device area. In his role as technology scout at Ethicon, he was involved in strategy, identification, assessment, license and acquisition of medical devices and biologics. After Johnson & Johnson, he spent two years as a consultant advising small and medium-sized businesses on strategy and technological development, before joining Medilink to support development of its North West business in May 2014.



# IN OR OUT?

As a survey shows manufacturers are in favour of the UK remaining in the EU, we look at some of the arguments for and against membership

The UK is about to vote in a referendum which could have a huge effect on manufacturing businesses. At the time of going to press, there was no way of telling which way people would vote. But manufacturers seem to have made up their minds.

Industry representative groups such as the EEF and CBI have come out in favour of the UK staying in Europe. So far, no equivalent body has backed a "Brexit".

A poll by the EEF (Engineering Employers' Federation) in February 2016 found just 5 per cent of members wanted the UK to leave the EU. Sixty-one per cent wanted the UK to remain in the union. A quarter of members were undecided, or declined to take a stance on the issue.

Most said that staying in the EU was either important (50 per cent), or more strongly, "mission critical" (20 per cent) for their business. The top advantage cited by companies was that remaining in the EU would make it easier for UK companies to start exporting. Eighty-two per cent said it did not make sense for the UK to cut itself off from Europe as a major market. But asked about disadvantages of staying in the EU, 72 per cent of EEF members cited excessive regulation.

Terry Scuoler, chief executive of the EEF, said: "Our findings reinforce the fact that companies, particularly those interested in exporting, do not see the point of the UK cutting itself off from its major market. More importantly, they reject the idea that the UK faces a straight choice between exporting to the EU or expanding its global reach.

"They understand that a dynamic and growing economy should and could be doing

both and that being part of the EU helps to underpin, rather than undermine, our global presence and trade ambitions.

"This is not to suggest the EU is perfect – our members are fully aware and frank about the EU's shortcomings. But they also value its benefits and strongly believe that the right way forward is to reform and improve the EU for the benefit of all member states, rather than simply walk away."

## OUT

### Vote Leave campaign view

After we vote 'leave', British businesses will trade freely with the EU. Many countries around the world trade with the EU without accepting the supremacy of EU law.

Only 6 per cent of UK companies export to the EU – a declining market for UK exporters over the past decade. The EU has become less important to UK exporters, with exports of goods and services to the EU falling from 54 per cent of the total in 2006 to 44 per cent currently.

The UK is the EU's largest export partner. It is overwhelmingly in the EU's – particularly Germany's – interests to agree a friendly UK-EU free trade deal.

EU membership means Brussels is in charge of UK trade and we have no independent voice in the World Trade Organization. If we vote to leave, we can negotiate for ourselves.

## IN

### Business for New Europe view

The EU is the biggest economy on earth. This means it is in a strong position to negotiate free trade deals with other countries, benefiting British businesses. If Britain left the EU, we would not be in such a strong negotiating position.

Britain can get better free trade deals because the EU is the largest economy in the world. The EU can negotiate with the US, China and India as an equal; Britain outside the EU could not. The EU has free trade agreements with South Korea, South Africa and Mexico. Britain now has a trade surplus with South Korea for the first time in 20 years, thanks to the EU trade agreement.

The EU is also negotiating new agreements. The TTIP deal with the US could be worth £10bn a year to the UK; the proposed EU-Japan deal £13bn. Britain's hand in these negotiations is much stronger because of EU membership.



# IDEAS TO CHEW ON

Skills, role models, technology and international competition were among the hot topics when Insider brought together UK business leaders for the Manufacturing Bites event

"By 2020, China expects to be at the forefront of innovation on the world stage. They realise they rely on the rest of the world around co-operative innovation and being able to develop the types of products and services they need to go forward."

## NICK BURD

Lancaster China  
Catalyst Programme

**ON THE OPPORTUNITY FOR  
UK MANUFACTURERS TO HELP  
CHINESE INNOVATION**



"Having demonstrated our manufacturing expertise to our Chinese partner, they have asked us to manufacture local Chinese products in Sheffield. That has led to a multimillion-pound contract to manufacture Chinese-designed implants, which will treat patients in China."

## KEITH JACKSON

JRI Orthopaedics

**ON HIS JOURNEY INTO  
THE CHINESE MARKET**



"Don't limit us with regulation and red tape; give us the freedom to grow. I am passionate about manufacture and believe in it. If our customers are successful, then we are successful, and anything the government can do to invest in and support businesses and technology should be part of the future."

## MARGARET WOOD

ICW

**ON WHAT THE SECTOR  
NEEDS TO FLOURISH**



Manufacturing is at a pivotal moment in the UK. On the one hand, a shortage of skills in the sector is the biggest challenge faced for a generation; on the other, the growing influence of digital technology will create an opportunity to engage a generation pivotal to its future success.

Insider's Manufacturing Bites conference was held in Liverpool on 9 July 2015 as part of the Made in the UK Awards. The event brought together eight speakers with important stories. From global manufacturing trends, to accessing the Chinese market and managing energy costs, the event took the audience on a journey through an industry going through big changes.

Perhaps the most compelling comment of the day came from Chris Marsland, technical director of engineering group ENER-G, who chose to address the skills challenge from a business perspective. "We need new role models," he said, showing a slide of some brilliant but

outdated figures from science and industry, plus TV's Brian Cox.

And that's the point. What Cox has done for the image of physics is change perceptions; of a subject that young people thought was too hard, too boring and not relevant to the media, finance or celebrity-fuelled future they saw for themselves.

Manufacturing needs to do the same thing, now. The sector is influenced by advanced production techniques, digital technology and ground-breaking processes. And how many young people do you know looking at a tablet, living through social media, playing apps?

Technology and the media offer a solution. The two can come together to help raise awareness of an industry competing globally on research and development. High-profile role models talking the language of technology, using the media as a platform, will win young hearts and minds and, importantly, change perceptions.

The generation at the centre of this perfect storm is living in between these two worlds, and they will be the places in which to engage. The language needs to be right, the inspiration needs to be right, and the passion needs to ignite fires. Without any of this, we'll just be left talking about skills as if it was an abstract term.

So the industry needs to open its doors and allow those role models to shine; the media also needs to get behind the good stories and leave alone the outdated stereotypes. "We need to educate the educators and help them to help us," said Marsland, "to kickstart the numbers and get them interested from an early age in a great career."

We all remember someone from our childhood, our education, or from the TV who inspired us. We need that now for a sector that still has so much to offer, but faces a tough future in a globally competitive market unless we get this right.



# MAKING THE FUTURE

Insider's Manufacturing Bites conference provided a glimpse of tomorrow for a sector with multiple challenges

IN ASSOCIATION WITH



**UK Trade  
& Investment**

In the future, manufacturing will take place in smaller, often local organisations; companies will require flexible workforces with higher and broader skills levels and they will need to exploit changes in technology rapidly and be highly networked to flex their capacity and responsiveness to demand.

Those were the views of Julie Madigan, chief executive of the Manufacturing Institute, who was speaking at Insider's Manufacturing Bites conference. Madigan said environmental issues would prompt manufacturers to get closer to their end consumers.

That chimed with Charles Jacobson, international trade adviser at UK Trade & Investment, who predicted that customers would want their suppliers to set up closer to

them. Manufacturing abroad, he said, could lead to problems, and India and China would not want to be seen as cheap manufacturing locations.

Madigan predicted an increase in requirements for re-manufacturing, new entrants from other sectors, and opportunities from the "internet of things."

One of the biggest challenges comes from its delivery of skills, highlighted by Madigan as one potential barrier to realising the future vision. Christian Warden, programme director for skills at the EEF, warned: "We will fail if we don't do something about our skills."

Warden said apprenticeships and vocational training would help in building up the UK's skills. And he said that companies

needed to take responsibility for improving skills: "You need to change culture and skills. We are trying to demonstrate there is a correlation between skills and productivity."

Manufacturers need freedom to grow, said Margaret Wood, chairman of ICW, the window maker, pleading not to be limited by regulation and red tape. But she added that government had a role in boosting business: "If our customers are successful, then we are successful, and anything the government can do to invest in and support business and technology should be part of the future."

The theme of support was picked up by Chris Meadows, corporate systems manager at IQE, the semiconductor technology company. He predicted the growth of a UK supply



JULIE MADIGAN



CHARLES JACOBSON

chain in the event of the UK government backing a centre of excellence in semiconductors. The Chancellor, George Osborne, subsequently announced funding for a £50m UK Catapult centre for semiconductors, to be led by IQE and Cardiff University.

**JULIE MADIGAN**  
CHIEF EXECUTIVE  
THE MANUFACTURING INSTITUTE

**WHAT DOES THE FUTURE OF MANUFACTURING LOOK LIKE?**

Manufacturing will take place in smaller, often local organisations. They will require flexible workforces with higher and broader skills,

often working in different contractual arrangements. They will need to exploit changes in technology rapidly and be highly networked to enable them to flex their capacity and responsiveness to demand.

There will be a need to be closer to end consumers, driven by increasing concerns about sustainability. There will be a huge increase in demand for re-manufacturing accordingly. We will also see new entrants to manufacturing coming from the creative and digital sectors and an exciting era of opportunities related to the internet of things. The convergence of technologies also provides huge opportunities for manufacturing.

**WHAT ROLE WILL THE UK PLAY IN THIS LANDSCAPE?**

The UK has the potential to be centre stage. It has huge assets in its innate creativity, innovative capacity and university base. The greatest concern should be our inability to connect this natural ability to commercialisation, the related technology and capacity base. We also lack a scale of vision, particularly compared with the US.

We need to expand on commercial skills

and technology skills together. We have analysed the “valley of death” in terms of taking innovations to market enough and now need actions to be taken at both national and local level. Doing the same things we have always done will not work – it hasn’t so far! We need a significant effort from government to ensure that policymaking is driven by the needs of smaller innovative firms and not just large ones with the capacity to engage.

**WHAT KIND OF COMPANY WILL BE SUCCESSFUL AND HOW WILL THEY HAVE TO ADAPT?**

Small and medium-sized manufacturers are well positioned providing they can access the resources – skills, technology, capacity and funding – needed at the right time to grow. Manufacturers need to be aware of the changes happening and how they could affect their business models. Those prepared to adapt their models will flourish.

Smaller manufacturers also need to ensure they are fit for the new era, by developing their digital and commercial capabilities, for example. There is a role for the government and our financial institutions in ensuring that supply side capacity is fit for purpose. A world of small, flexible and responsive local manufacturers that are highly networked and skilled needs a different regulatory framework.

**CHARLES JACOBSON**  
INTERNATIONAL TRADE ADVISER  
UK TRADE & INVESTMENT

We have seen many examples of companies reshoring, coming back to the UK. The inward investment agencies in the UK and US are trying to attract companies because it can





NICK BURD

be just as efficient financially as anywhere overseas, and they have a lot more control.

The next stage is 'next-shoring' – which represents the pressure from customers to set up close to them – and that happens a lot in the aerospace and automotive sectors. New technologies are also being brought in to bring down the cost of production and the speed to get to market.

There can be big problems when you manufacture abroad. The desires of the UK company are often very different from the desires of the host country. India and China don't want to be seen as low cost, they want to be seen as high-tech economies. They have aspirations to compete against you.

## NICK BURD

**DIRECTOR**  
LANCASTER CHINA CATALYST PROGRAMME

China realised 10 per cent growth year-on-year was not achievable. It had to do something and this is where the story of innovation comes into play. Its dependence on foreign economies meant it had to rebalance its own



KEITH JACKSON

economy towards something that was much more sustainable. GDP (growth) is expected to stabilise at 7 per cent and has been referred to by the leadership as the 'new normal'.

By 2020, the country expects to be at the forefront of driving innovation on the world stage. They realise they rely on the rest of the world in terms of co-operative innovation and being able to develop the types of products and services they need to go forward.

## KEITH JACKSON

**MANAGING DIRECTOR**  
JRI ORTHOPAEDICS

We have been exporting for more than 20 years, predominantly within the European Union, as well as Australia and more recently Brazil, Russia, India and China. We had to write off a debt from the Greek market, which redoubled our efforts to get into new markets.

There is strong demand for innovative western healthcare products and brands in China. We fully expect to get regulatory approval at the end of this year and launch



CHRISTIAN WARDEN

products in China. Having demonstrated our manufacturing expertise to our Chinese partner, they have asked us to manufacture local Chinese products in Sheffield.

That has led to a multimillion-pound contract to manufacture Chinese-designed implants in Sheffield, which will treat patients in China. When our products are ready, they will present them to the market as the premium brand.

## CHRISTIAN WARDEN

**PROGRAMME DIRECTOR FOR SKILLS**  
EEF

Skills is the biggest issue having an impact on our employers. Every survey we do, every time we have a discussion, it always comes up as the number one priority.

We need to be more competitive; we are not as competitive as we think we are. We need to have better people doing better things. We will fail if we don't do something about our skills. For every engineering graduate that we produced last year, India produced 100.





CHRIS MARSLAND

We are behind apprenticeships and they absolutely need to be part of the solution. But we need to look at higher apprenticeships and transfer that into vocational activity. Eighty per cent of the people who need upskilling are already in the workforce. That is a huge focus of our activity.

All the statistics point to needing more than 96,000 engineers in the next couple of years, but if we carried on replacing skills like for like, we could actually go backwards. We need to double the number of people coming into the market in the next five years with a focus on new technology.

The way for employers to make more profit is to become more competitive than your neighbour. Either locally, globally, regionally, or nationally. The way to do that is to become more productive – and that’s by changing the way people act. You need to change culture and skills. We are trying to demonstrate that there is a correlation between skills and productivity.

We also need a route progression from schools right through to retention of staff. If there isn’t a seamless link for employers and



MARGARET WOOD

provided by the government, we are going to have breaks and we aren’t going to have that progression. If you think skills is a cost and not an investment, you wait to see what happens when you don’t invest in skills.

**CHRIS MEADOWS**  
CORPORATE SYSTEMS MANAGER  
IQE

The announcement of government funding to set up a centre of excellence to make sure they have got the skills to deliver a high-tech cluster of semiconductors will hopefully build a supply chain in the UK and provide a fifth European semiconductor cluster.

**CHRIS MARSLAND**  
TECHNICAL DIRECTOR  
ENER-G

From personal experience, it is very difficult to recruit good quality engineers. In the worst case, one of my colleagues has been trying to recruit an electrical engineer since November last year.



CHRIS MEADOWS

Nearly half (46 per cent) of all co-educational secondary schools sent no girls on to do physics at A Level in 2011. That’s a terrible waste of talent. In my career, I have only worked with three female engineers; one in the 1990s and two more recently.

We need new role models but we also need to help ourselves and make engineering more accessible. We need to educate the educators and help them to help us. That will get more people interested at an early age in what is a great career.

**MARGARET WOOD**  
CHAIRMAN  
ICW

Don’t limit us with regulation and red tape, give us the freedom to grow. I am passionate about it and believe in it. If our customers are successful, then we are successful, and anything the government can do to invest in and support business, and technology should be part of the future. The UK government needs to recognise manufacturing and its place in the economy.





# BEST FOOT FORWARD

The maker of Hotter branded shoes was crowned Manufacturer of the Year at the Made in the UK Awards 2015, on a lively evening featuring some of the biggest names in UK manufacturing

There was inspiration aplenty as leaders from the likes of Rolls-Royce and Jaguar Land Rover came together for the second Made in the UK Awards at a packed St George's Hall in Liverpool. The most high-profile prize, Manufacturer of the Year, was picked up by Beaconsfield Footwear, which trades as Hotter Shoes.

The awards brought together the winners of Insider's regional Made in... Awards across nine categories, and honoured the best of the UK's manufacturers. It was compered by broadcaster Colin Murray, with keynote speeches from Bob Gilbert, chairman of the High Value Manufacturing Catapult, alongside Chris Brown, director of Marketing Liverpool.

Gilbert, who is also chairman of Paintbox Group and the government's UK Intellectual

"We need to engage children in inspiring manufacturing and need a new approach to education policies."

**Bob Gilbert**

Property Office, called for a new approach to education policies to inspire students.

"It will be no good having the best technological manufacturing solutions if we don't have the necessary skills to use them," he told the audience. "We are not bringing

enough of our brightest younger generation into manufacturing. Many of them still think manufacturing is a dirty business. We need to change this mindset by engaging our children, even from primary school age, in inspiring manufacturing processes. This demands a new approach to our education policies."

Gilbert said the building blocks were in place to "create a future for manufacturing in the UK" that brings further growth for the sector, improved productivity, exciting new technology and applications, plus new generations of talent. He added: "All of us here can help make this happen by maintaining a consistent vision for the long-term growth of high-value manufacturing, and by helping us secure continued support and funding from the UK government and industry."

IN ASSOCIATION WITH SPONSORED BY



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# AWARD WINNERS 2015 AND SHORTLISTS

## Manufacturer of the Year

**Sponsored by International Festival for Business**

- ElringKlinger GB (North East)
- Challenge Packaging (SME, South East)
- IQE (Wales)
- Wyke Farms (South West)
- Astonish Cleaning Products (SME, Yorkshire)
- Beaconsfield Footwear (trading as Hotter Shoes) (North West)
- Rolls-Royce (Large, Yorkshire)
- Elekta (South East)
- Jaguar Land Rover (North West)
- SDC Trailers (Northern Ireland)
- JRI Orthopaedics (Sheffield)
- Mechan (SME, Sheffield)
- GE Precision Engineering (East & Central)
- A1 Flue Systems (Midlands)
- Russell Roof Tiles (Midlands)
- Arla Foods UK (East & Central)

**WINNER BEACONSFIELD FOOTWEAR**

## Advanced Manufacturing Innovation / Creative Design

- Adande (East & Central)
- Edgetech UK (Midlands)
- PolyPhotonix (North East)
- Reid Lifting (Wales)
- Rolls-Royce (Yorkshire)
- BBI Solutions (Wales)
- Precision Dippings (South West)
- One Nine Design (Wales)
- Sigmatex (UK) (North West)
- The Floop (Yorkshire)

**WINNER ROLLS-ROYCE**

## Advanced Manufacturer / Technology

- Tynetec (North East)
- Innovative Physics (South East)
- Axiom Manufacturing Services (Wales)
- Vizolution (Wales)
- Plastic Card Services (North West)
- Dextra Group (South West)
- Renishaw (Midlands)
- Cambridge Nanotherm (East & Central)

**WINNER RENISHAW**

## Export

**In association with UK Trade & Investment**

- Acorn Mobility Services (Yorkshire)
- Fentimans (North East)
- Acro Aircraft Seating (South East)
- Green Light Products (Wales)
- Third Dimension (South West)
- CDE Global (Northern Ireland)
- Gripple (Sheffield)
- The Senator Group (North West)
- Cambionix (East & Central)
- Abacus Lighting (Midlands)

**WINNER ACORN MOBILITY SERVICES**

## Food & Drink

**Sponsored by Positive Cashflow Finance**

- Fourayes Farm (South East)
- Tiny Rebel Brewery (Wales)
- Seabrook Crisps (Yorkshire)
- Thatchers Cider (South West)
- Frank Roberts and Sons (North West)
- It's All Good (North East)
- Greenvale (East & Central)
- Suncream Dairies (Midlands)
- WD Irwin Bakery (Northern Ireland)

**WINNER FRANK ROBERTS AND SONS**

## Green Manufacturer / Sustainable Manufacturer

**Sponsored by M&M Communications**

- SPTS Technologies (Wales)
- Siniat (South West)
- Polyflor (North West)
- Purity Brewing Company (Midlands)
- Cleveland Biotech (North East)

**WINNER PURITY BREWING COMPANY**

## Manufacturing Apprenticeship / Training Scheme

**Sponsored by Institute of Directors**

- GE Aviation Wales (Wales)
- Superior Seals (South West)
- Powertecnique (South East)
- Nestlé UK & Ireland (Yorkshire)
- Naylor Industries (Sheffield)
- Eldon Tool & Engineering (Sheffield)
- AeroAcademy (East & Central)
- Nylacast (Midlands)
- WEC Group (North West)

**WINNER WEC GROUP**

## Medical / Life Sciences & Healthcare

**Sponsored by Arthur J. Gallagher**

- Premaitha Health (North West)
- GBUK Group (Yorkshire)
- Nicobrand (Northern Ireland)

**WINNER GBUK GROUP**

## Aerospace and Defence

**Sponsored by GIL Investments**

- Aeromet (South East)
- CQC (South West)
- Marshall Aerospace and Defence Group (East & Central)

**WINNER MARSHALL AEROSPACE AND DEFENCE GROUP**

# COMFORTABLE WINNER

Beaconsfield Footwear, crowned Manufacturer of the Year at Made in the UK in 2015, has its sights on global expansion

Winning was “the pinnacle of my time in the footwear industry”, according to quality control co-ordinator Steven Stewart. He’s spent the past 18 years at Beaconsfield, which makes shoes under the Hotter brand. His boss, chief executive Peter Taylor, says picking up the most high-profile award at Made in the UK was “great for the team to get recognition for all the years of hard work and perseverance.”

Based in Skelmersdale, Lancashire, Beaconsfield was set up in 1959 to make slippers. It soon started making Hotter shoes, which have a reputation for comfort. It’s now one of the UK’s biggest shoe makers, manufacturing 1.7 million pairs of shoes per year. The judges were impressed by the company’s ability to make quality products for diverse markets, amid challenging retail conditions. We caught up with Taylor.

## WHAT DOES IT TAKE TO BE A SUCCESSFUL MANUFACTURER IN THE UK?

Having a world-class quality product that people want and the ability to make it at a competitive price; continual investment in people and plant; and optimising the benefits of having production in the UK, such as the ability to change what you are making at short notice to reflect demand. In our case it also helps that we are a vertical business that designs, manufactures and sells direct to consumers with more than 70 stores across the UK and a growing online presence.

## HOW DO YOU COMPETE AGAINST THOSE WITH LOWER COSTS?

Designing and engineering a product that is unique to our brand; value and quality, more than low cost; good productivity and a really committed and passionate team within the business; being a brand which people trust and like; and building a great brand following who want style and comfort and making sure we continually deliver both.

## WHAT CHALLENGES HAVE YOU OVERCOME?

We were one of the early adopters of robotic technology in the UK footwear industry so



Chris Brown, director of Marketing Liverpool, presents the award to Beaconsfield Footwear



Peter Taylor, chief executive of Beaconsfield

there was limited applicable technical and engineering knowledge. We had to train and develop people internally and use specialist advice where needed. In the early days, there was a risk in buying our premises and installing production lines which far exceeded the size of the business. It focused the mind on having to grow quickly and efficiently.

## WHAT’S THE MARKET FOR SHOES LIKE RIGHT NOW?

Footwear has always been competitive. Generally people are spending a little more each year on shoes. They’re looking for style and comfort as well as innovation.

## WHAT’S YOUR BEST-SELLING ITEM?

Our lightweight active collection, which you can wear to the gym or walking the dog;

and our boot collection. In men’s we are doing really well with our range which uses Gore-Tex to give an ultra lightweight shoe which is tough, breathable and waterproof.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

Invest in the business; expand our brand in the US and Germany; and listen to our customers.

## RUNNER UP

### Elekta

Based in Crawley, West Sussex, Elekta makes devices which help to treat cancer and brain disorders. It has built up a big share of the international oncology and radiation therapy markets.

## ALSO SHORTLISTED

ElringKlinger GB | Challenge Packaging | IQE | Wyke Farms  
Astonish Cleaning Products  
Rolls-Royce | Jaguar Land Rover  
SDC Trailers | JRI Orthopaedics  
Mechan | GE Precision Engineering  
| A1 Flue Systems | Russell Roof Tiles | Arla Foods UK





AWARD SPONSOR

WINNER | PURITY BREWING COMPANY

# BEER WITH A CONSCIENCE

Purity Brewing won the Green/Sustainable Manufacturer Award for measures to reduce costs and waste



Equipment uses steam recapture technology

Sustainability is one of the founding principles of Purity Brewing, which makes beers including Pure Ubu, Mad Goose and Lawless Lager. The Warwickshire company picked up the Green/Sustainable Manufacturer award for introducing measures so it would have a more positive effect on the environment. The company created a wetland system and cut the volume of water needed to create each pint of beer. It also invested £1.5m in a brewing system to increase its yield from ingredients, reducing waste. Managing director Paul Halsey spoke to *Insider*.

## WHAT'S YOUR APPROACH TO SUSTAINABILITY?

Our responsible business approach is a key reason we have been able to grow as a business. Our remit has always been to brew great beer with a conscience and embed a culture of sustainability and responsibility across the business. It is a part of our pure quality mantra that everyone follows and starts from the ground up, from suppliers to the pint of beer in the glass.

## WHY USE SUSTAINABLE METHODS?

Our brewing equipment uses the latest steam recapture technology and we have invested

in heat exchangers that reduce our energy consumption and allow us to recycle water and energy that would otherwise be released into the environment. We also use our reed bed to recycle waste water, naturally filtering out all the waste products to ensure only pure water is put back into the water system.

Using these processes has reduced our water use from the industry average of five pints of water for one pint of beer to three. We recycle all our spent grain, which goes to feed the livestock on our farm and our spent yeast goes to a local pig farmer. We have also started canning our beers, which is a more environmentally friendly process than bottling as less water is needed and cans are easily recycled. They also weigh less so transportation is cheaper and less fuel is needed.

## WHAT CHALLENGES HAVE YOU OVERCOME, AND HOW?

The biggest challenge we faced was when we increased our brewing capacity. We didn't want to start brewing increased volumes until our wetland system was capable. This meant increasing the capacity of the reed bed, which we have done.



Purity's reed bed recycles waste water

## HOW'S BUSINESS LOOKING NOW?

Purity had a ground-breaking year in 2015 in terms of sales and brewing production. We also celebrated our 10th anniversary. Purity is now the official cask ale provider to Wasps Rugby and the Ricoh Arena, and looks in a healthy and sustainable position for the next ten years. In 2015 turnover rose 40 per cent, with profits nearly doubling.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

We are continuing to explore how we can further reduce our carbon footprint and at extra energy sources. Canning our beers will become more prominent, as well as exploring more environmentally friendly glass packaging. We will be adding new beers to the range and expanding with the opening of new bars in Nottingham and Leeds.

## RUNNER UP

### Cleveland Biotech

From its base in Stockton-on-Tees, Cleveland Biotech devised an environmentally friendly fat digesting product for use in catering kitchens. A litre of Amnite Nano has the same effect as 25 litres of its standard product and takes less energy to produce and transport. It uses bacteria rather than harsh chemicals or bleaches.

## ALSO SHORTLISTED

SPTS Technologies | Siniat | Polyflor

# INSTANT SUCCESS

Renishaw won the Advanced Manufacturer/Technology Award for its 3D printing technology



Bill Tiplady, practitioner consultant at the Manufacturing Institute, presents the award to Renishaw

Renishaw's EVO project to make Britain's first metal 3D printing machine for production manufacturing really impressed the judges. The machine, developed in Staffordshire, embodied Gloucestershire-based Renishaw's 40 years of supplying precision equipment to demanding global manufacturers. Chris Pockett, head of communications, gave us some insights into the business.

## WHAT DOES IT TAKE TO BE A SUCCESSFUL MANUFACTURER IN THE UK?

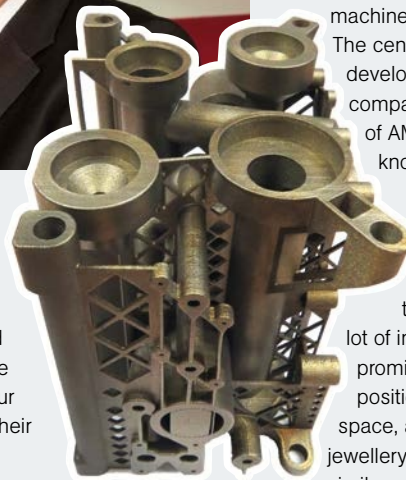
Innovation is the key, regardless of where you are in the world. The only way to become an industry leader is by committing to research and development (R&D). Renishaw typically reinvests between 13 per cent and 18 per cent of sales into R&D and engineering. This has allowed us to diversify into a range of metrology related products and explore complementary sectors, including healthcare. We have also entered the additive manufacturing market in the past four years.

We've always put great emphasis on keeping the majority of R&D and manufacturing in the UK, allowing us to train and improve the skills of our workforce and contribute to the local and regional economy. We have high levels of automation within our machining operations, underpinned by our own products, which allows us to maintain quality and efficient manufacturing processes.

To succeed internationally, we've forged strong links with other industrialised countries that value the benefits that our products bring to their own products and processes, such as accuracy, traceability and improved performance. Today we have more than 70 offices in 33 countries and 95 per cent of our sales are due to exports.

## WHAT IS THE EVO PROJECT ABOUT?

EVO was the initial name given to our latest metal additive manufacturing (AM) machine, the RenAM 500M, which was first shown in November 2015 at Formnext in Germany. Additive manufacturing is known in the wider media as 3D printing. Our latest machine is designed and engineered in-house to be used for serialised production. It uses powerful lasers to build complex metal components directly from computer-aided designs. This method is called metal powder bed fusion technology. The machine illustrates the design and manufacturing benefits of using AM as a complementary manufacturing tool, alongside more traditional options such as vacuum casting, injection moulding and CNC machining.



## WHAT CHALLENGES HAVE YOU OVERCOME?

When adopting any disruptive new manufacturing technology, companies will go through a rigorous assessment process. The investment in time, resources and equipment can be significant. Renishaw is launching a network of global solutions centres that will lower this entry barrier by providing cost-effective access to additive manufacturing machinery, facilities and expertise.

The centres will provide a confidential development environment in which companies can explore the benefits of AM and quickly build their knowledge and confidence.

## WHAT'S THE MARKET LIKE RIGHT NOW?

AM is a growing market and the technology has sparked a lot of interest. The global market looks promising and is consolidating its position in sectors such as aerospace, automotive, medical, dental and jewellery. We believe we can expect similar growth over the next few years as the technology matures and industry standards and regulations are put in place on a national and international scale.

## RUNNER UP

### Dextra Group

Dextra is the UK's largest privately owned lighting manufacturer. Its £4m investment in surface mount technology resulted in four new production lines for light-emitting diodes (LEDs) which placed £60m worth of LEDs in nine months.

## ALSO SHORTLISTED

Tynetec | Innovative Physics  
Axiom Manufacturing Services  
Vizolution | Plastic Card Services  
Cambridge Nanotherm



# RISING TO WORLDWIDE PROMINENCE

Sales to North America overtook UK sales for Acorn Mobility Services, helping it to win the Export Award



Acorn Mobility Services collects the award from Kevin McGlone of UKTI

Exports have been a big UK success story over the past decade, and that makes the victory for Acorn Mobility Services in the export category at Made in the UK all the more impressive. The judges were impressed with the way the stairlift maker can design, manufacture, deliver and install a stairlift in an amazingly short period of time.

Based in Steeton, West Yorkshire, Acorn has been designing, making, selling and installing stairlifts for more than 20 years. It has built up turnover of £135m and makes more than 50,000 stairlifts a year at factories in Yorkshire and Edinburgh.

Between 2010 and 2014, Acorn's worldwide exports more than doubled from £35.7m to almost £80m. Turnover in North America has trebled from £19.5m in 2010 to £58.6m in 2014 and now exceeds its UK turnover. In the past three years, Acorn has exported its stairlifts to more than 80 countries and set up subsidiaries in the US, Canada, France, Germany, Italy, Belgium, Ireland, South Africa, Australia and New Zealand. Company secretary Dave Belmont explains Acorn's approach to exporting.



## WHAT'S YOUR APPROACH TO OVERSEAS TRADE?

The key is to use our financial and managerial resources to create our own subsidiaries in our main target markets. We believe it is essential that we invest in our own sales and service capability wherever the size of the market makes it worthwhile. By doing this, we can retain full control over the marketing and sales processes, together with the speed and quality of installation.

We now have our own sales and service subsidiaries in the US, Canada, Italy, France, Germany, Belgium, Ireland, South Africa, Australia and New Zealand. We are also prepared to invest for the long term, knowing

that we may lose money initially, until we gain sufficient market penetration to become profitable.

## WHAT CHALLENGES HAVE YOU OVERCOME?

To overcome the lack of product awareness in the US, we needed to educate American consumers on what a stairlift is and how it can benefit people who need assistance using their stairs. We did this using such catchphrases as "Just don't fall". We have also invested in designing our stairlifts to meet the latest European and worldwide safety standards.

## WHICH COUNTRIES ARE YOU TARGETING IN PARTICULAR?

In 2014, Acorn's turnover in North America exceeded UK sales for the first time. Acorn is now the clear market leader for stairlifts in the US. There are few British manufacturers and suppliers of consumer products that can claim to be the US market leader. To put it into context, Acorn's revenues in North America during the year to September 2014 were more than three times those of our biggest global competitor. Our expansion in Europe, and in Italy especially, has also been very encouraging.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

To continue to invest in expansion, especially in North America and Europe. We will also continue to invest in our UK factories. In the past five years we have spent £8m on plant and equipment, and we now manufacture more than a million components a year at our UK factories.

## ALSO SHORTLISTED

Fentimans | Acro Aircraft Seating  
Green Light Products  
Third Dimension | CDE Global  
Gripple | The Senator Group  
Cambrix | Abacus Lighting



# Trade and get paid

## Thinking of exporting? We can help.

When you're trading overseas or at home, it's good to know there's a partner you can consult with to obtain sound advice, a specialist insight into new markets and who will support you by helping protect your bottom line and cash flow.

Atradius already provides this role to thousands of UK businesses, so we know a thing or two about the commercial challenges that you'll face, as well as being able to provide a range of tailored solutions to protect your business as you trade overseas.

Contact us

[www.atradius.co.uk](http://www.atradius.co.uk)

Tel: 0800 21 21 31

Email: [info.uk@atradius.com](mailto:info.uk@atradius.com)

 [@atradiusUK](https://twitter.com/atradiusUK)

 **Atradius**  
Managing risk, enabling trade

## New Horizons

The global economic shocks of 2008 – 2009 may seem like yesterday's news but for many UK businesses the effects continue to have an impact. During the darkest days the need to adapt quickly presented a steep learning curve for many with businesses becoming skilled at handling the day-to-day cash flow trials thrown up by the volatile economy. The recession may be behind us but, as every trader knows, the market is always evolving and risk is never very far away.

For a business thinking about trading overseas, those risks can seem daunting. Times are still tough in much of the international trade landscape and the complexities of different cultural and legal practices make navigating the eternally shifting landscape even trickier.

For example, cultural differences in payment practices is something that is often overlooked, although pretty rudimentary. Did you know that in Italy 60 or even 90 day payment terms are not unusual? And China – did you realise that it is, in fact, illegal for a non-Chinese business to attempt to collect an overdue debt? These are the kind of things a businesses need to be aware of before taking the plunge and where detailed information can really add value.

At Atradius we hold real time information on more than 200 million companies worldwide – so whatever you need to know and wherever you need to know it, we can help. For nearly 100 years Atradius has been supporting business by providing innovative and effective protection for domestic and international trade; so if you are thinking about expanding your trade horizons let us help you take the next step.

Our risk specialists are spread across all corners of the globe, experts in sectors, culture, trade legislation, and payment behaviours and this, combined with access to up to date trading intelligence, makes them a force to be reckoned with. Before you even ship, they will tell you if your prospective trade partner is worth trading with. And if you trade but don't get paid as expected, you're protected by your insurance cover.

### Jason Curtis, Commercial Director at Atradius, said:

“With our strong export heritage, we are able to offer our customers trading overseas expert advice so that they can do business safe in the knowledge that they will be paid. With that kind of confidence businesses really can plan to expand their horizons.

Atradius is delighted to be supporting the Made in the UK series. The range of award categories within the series truly demonstrates the wealth of diversity, innovation and skill within the UK manufacturing sector.

We wish all the finalists the best of luck in the upcoming awards and hope they inspire others towards manufacturing excellence just as we always aim to promote excellence in good credit management.”

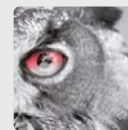


## Stay in the know...

As one of the leading credit insurance companies, Atradius is in the knowledge business.

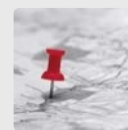
Never before has information been so crucial to business success. While specific company information is available exclusively to our customers, we do share our country and industry expert knowledge as well as useful advice on good credit management.

Take a look at the publications area of our website, [www.atradius.co.uk](http://www.atradius.co.uk), where you'll find a wealth of free and downloadable publications designed to help and inform you.



### Trade Successfully With...

These reports highlight the opportunities that emerging markets offer foreign exporters, and the steps to take to avoid the pitfalls of trading in new and unknown territories.



### Payment Practices Barometer

Biannual survey, which provides a detailed insight of payment behaviour around the world and how it could affect your business in overseas markets.



### Market Monitor

Be aware of trends in your buyer's markets and factors that could influence trade.



### Country Reports: Trading Abroad

Learn about your chosen export market within your industry sector.

# AROUND THE WORLD

UK manufacturers sell goods around the world, and punch well above their weight among exporters from this country. We look at some of the key export products and markets

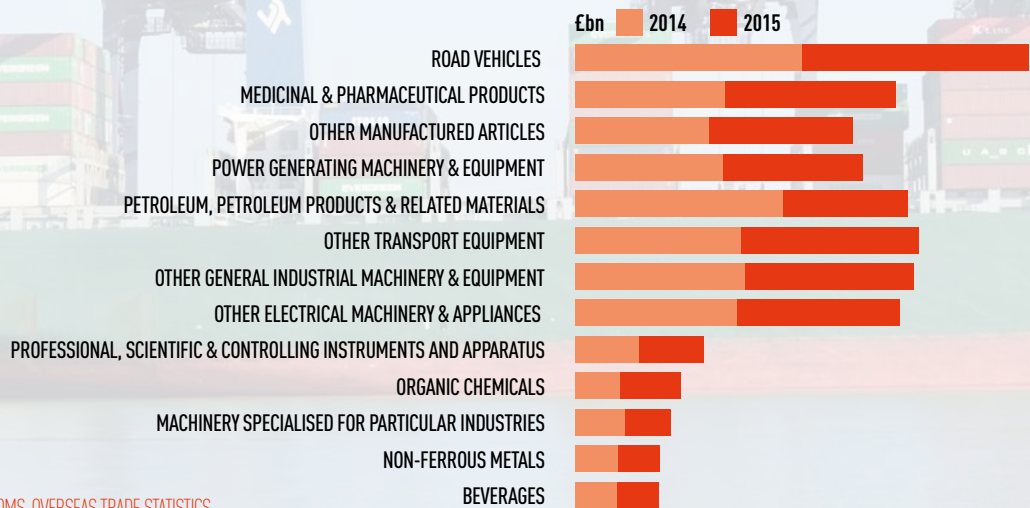
Exports have played a big part in the acceleration of UK manufacturing over the past eight years. In some sectors, notably car production, that growth is still strong. In other industries, export growth has been pinned back by tough international competition, some slowing international markets and the higher value of the pound. But international trade still provides a great way to boost

sales. And some companies find that competing abroad prompts them to raise their own standards, develop new products and work more effectively.

Manufacturers are more likely to export than companies in other sectors. According to the EEF, manufactured goods make up almost 50 per cent of UK exports, compared with 10 per cent of UK output overall.

Emerging markets have bought many of the UK's additional exported goods. China, for example, imported an additional £2.5bn from UK producers between 2012 and 2014. The EEF warns manufacturers that exports to China may ease up as that country focuses more on domestic consumption. But it says that India, Indonesia and the Philippines offer strong growth prospects.

## UK EXPORTS

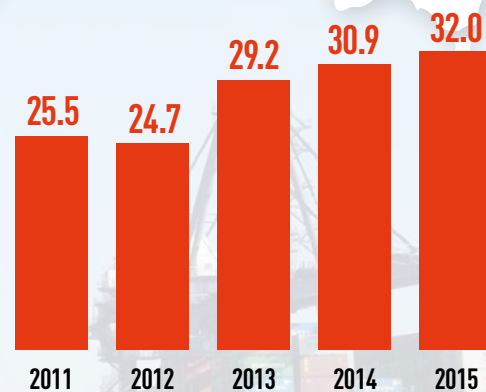


SOURCE: HM REVENUE & CUSTOMS, OVERSEAS TRADE STATISTICS, NATIONAL STATISTICS, EEF, UK TRADE & INVESTMENT

### TOP TEN UK MANUFACTURED GOODS EXPORT MARKETS £BN



### MOTORING AHEAD: MOTOR VEHICLE AND TRAILER EXPORTS £BN



### ON THE UP: AIR & SPACECRAFT MACHINERY EXPORTS £BN



WINNER | ROLLS-ROYCE

# QUICK THINKING

Rolls-Royce's Rotherham turbine blade casting facility was the "stand-out" winner among a strong shortlist for the Advanced Manufacturing Innovation/Creative Design Award



Marlen Roberts, managing director of Insider Media, presents the award to Rolls-Royce

Rolls-Royce makes turbine blade castings for large civil aero engines at its factory in Rotherham. The investment in innovation of its products and culture truly impressed the judges. The new plant was also regarded as a sign of the group's commitment to the Sheffield city region. The impact the 14,000 sq metre facility had on the region made Rolls-Royce "the stand-out winner".

Rolls-Royce says it aims to create a culture of innovation which is relevant to customer

needs. It runs an innovation portal that is open to the group's 55,000 employees. Innovation is part of the induction process, and its performance management criteria.

By innovation, the group means gaining competitive advantage and customer value by creating and implementing new technology and ideas. It provides financial and other forms of recognition for employees who reflect such innovation in their roles.

Aircraft engines are particularly complex

products to develop. There are more than 65 single crystal turbine blades in each Rolls-Royce Trent engine. Each one squeezes about 1,000 horsepower from the gas flow towards the rear of the engine – the equivalent of a Formula One racing car.

The Rotherham plant can produce more than 100,000 blades per year, more quickly, and at a lower cost. Adding lean manufacturing processes, says Rolls-Royce, gives the company global product and cost leadership in its market. Using technologies developed with universities and government gives the Rotherham plant a particular competitive advantage, the company says.

The turbine blade casting facility was opened in February 2015, and is scheduled to be fully operational in 2017. The blades will feature in the Rolls-Royce Trent XWB engine, which powers the new Airbus A350 XWB airliner.

## RUNNER UP

### Adande

Trading as Adande, Applied Design and Engineering impressed the judges with its refrigerated display cabinets. The cabinets, which have been installed at a Tesco store in Lincoln, are aimed at eliminating "cold aisle syndrome" and saving energy, while providing easy access to products on display. The Suffolk company's customers include Jamie's Italian restaurants, McDonald's and KFC.

Also highly commended was Edgetech UK, a glazing manufacturer in Coventry, which has developed the most thermally efficient insulated glass unit spacer bar in the world.

## ALSO SHORTLISTED

Edgetech UK | PolyPhotonix  
Reid Lifting | BBI Solutions  
Precision Dippings | One Nine  
Design | Sigmatax | The Flow



©AIRBUS SAS



# OVEN FRESH WINNERS

Family baker Frank Roberts and Sons won praise from the judges for its sustainable growth and commitment to invest

Family-owned bakery business Frank Roberts and Sons sells its products through big supermarkets and independents. The company, which was set up in 1887, makes more than 3.5 million items of bread, rolls, sandwich thins and sweet treats at plants in Northwich, Cheshire and Ilkeston in Derbyshire each week. As *Insider* went to press, it was the only UK top five bread-maker enjoying year-on-year value and unit growth. The pace of growth, investing in technology and staff made it an outstanding winner in the food and drink category. We caught up with deputy chairman Mike Roberts.

## WHAT DOES IT TAKE TO BE A SUCCESSFUL FOOD PRODUCER?

Product quality is essential for long-term success. To produce consistently high quality bread at large volumes requires investment in plant and processes. Retailers rely on the efficient delivery of daily fresh bread, so we also focus heavily on providing great service to customers. Great people are also important, and we have a loyal and talented team. Fourth generation members of the Roberts family work within the business.

## WHAT'S THE BEST DECISION YOU HAVE MADE RECENTLY?

To make bold investments in our plant and people. The past 18 months has been our busiest period ever for capital investment. Our £14m investment into a third bread plant was the biggest project we've undertaken. It has increased our capacity by 50 per cent.

We have also invested more than £2m to improve production capabilities and install a new sandwich thins line in Ilkeston. The investment led to 30 jobs being created. We've also invested more than £1m in a system for decorating biscuits at The Little Treats Co bakery in Northwich.

We formalised a partnership with Bibby Distribution to open a new depot in Scunthorpe, which has extended our reach beyond our heartland. Plus, everyone who works for the business takes part in our experiential learning and personal development programme. It's an enlightening experience



Simon Cook, commercial director of Positive Cashflow Finance, presents the award to Mike Roberts, deputy chairman of Frank Roberts & Sons

## WHAT CHALLENGES HAVE YOU OVERCOME?

A fall in the average price of a loaf of bread is driving category deflation. To combat this we have focused on our point of difference, which is our brand. Roberts champions quality soft and fluffy white bread, and it's working. In the sweet treats category, innovation drives growth. In the past 12 months we have brought a range of giant biscuits to the market and our new product development pipeline is full for the next 12 months.

## WHAT'S THE FOOD MARKET LIKE RIGHT NOW?

Challenging, with marked deflation on prices and a high level of disruption within the retail sector. With the big retailers reacting to losing share and price wars raging, competition within the sliced bread category is fierce. Achieving consumer loyalty is vital to maintain market share. High product quality and a strong brand proposition are integral, and these give our product personality, a point of difference and presence on the shelf. New product development will drive value back into the category.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

We will be making more noise in the market with an aggressive campaign to challenge the bigger brands. We will build the brand

further and invest in our focused marketing programme. Internally, we will continue to engage our staff: 300 people completed our development programme in 2015 and a further 300 people will take part this year. We will also continue our campaign to help raise money towards specialist gene research that could lead to changes in the UK breast screening service. The campaign is being led by fourth generation family member Lindsay Occleston, who survived breast cancer. Roberts will carry bold pink packaging on five million wholemeal loaves.

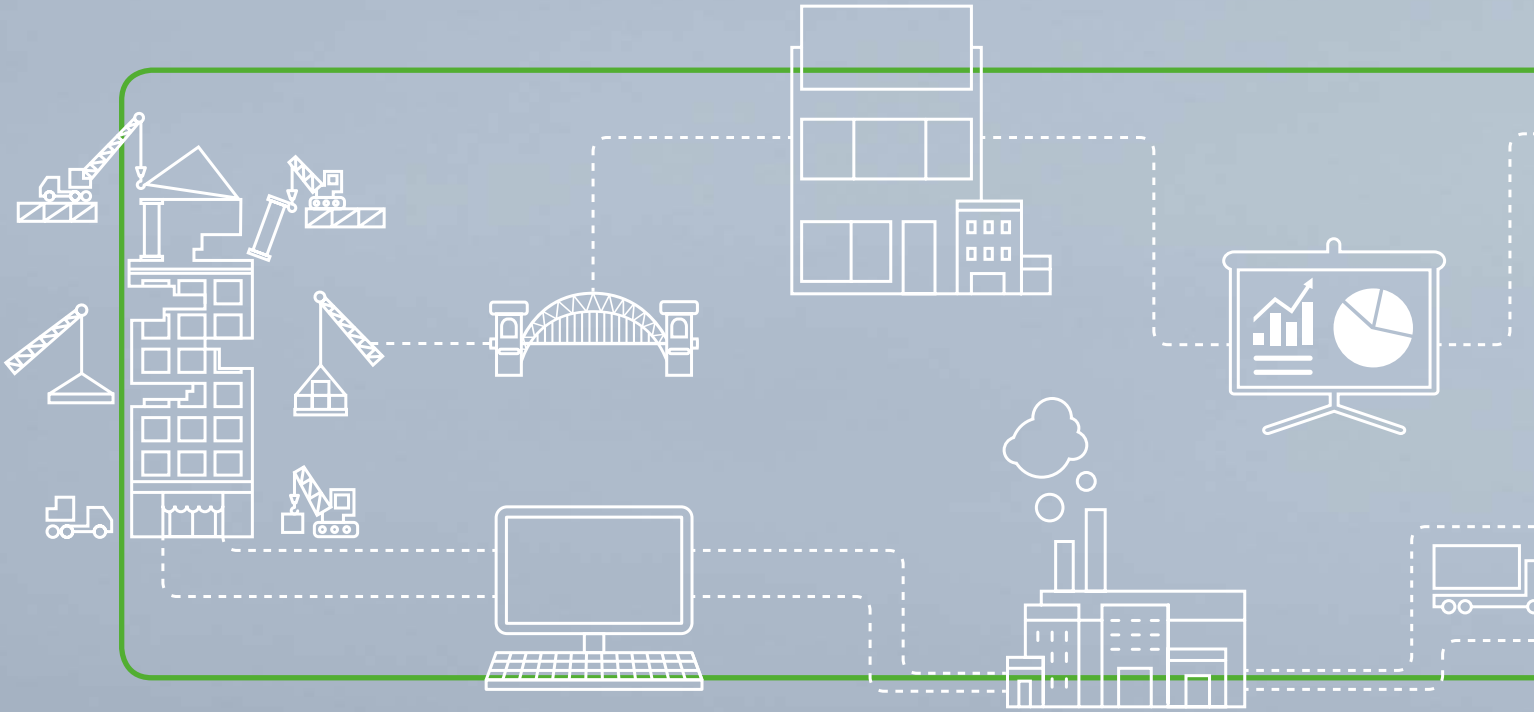
## RUNNER UP

### Thatchers Cider

This Somerset cider maker invested £3.5m in a packaging and warehousing facility with a kegging plant that can fill 450 kegs with draught cider every hour. It also boosted its Thatchers Gold cider with a £6.5m marketing campaign.

## ALSO SHORTLISTED

Fourayes Farm | Tiny Rebel Brewery  
Seabrook Crisps | It's All Good  
Greenvale | Suncream Dairies  
WD Irwin Bakery



# Don't just see potential – see it

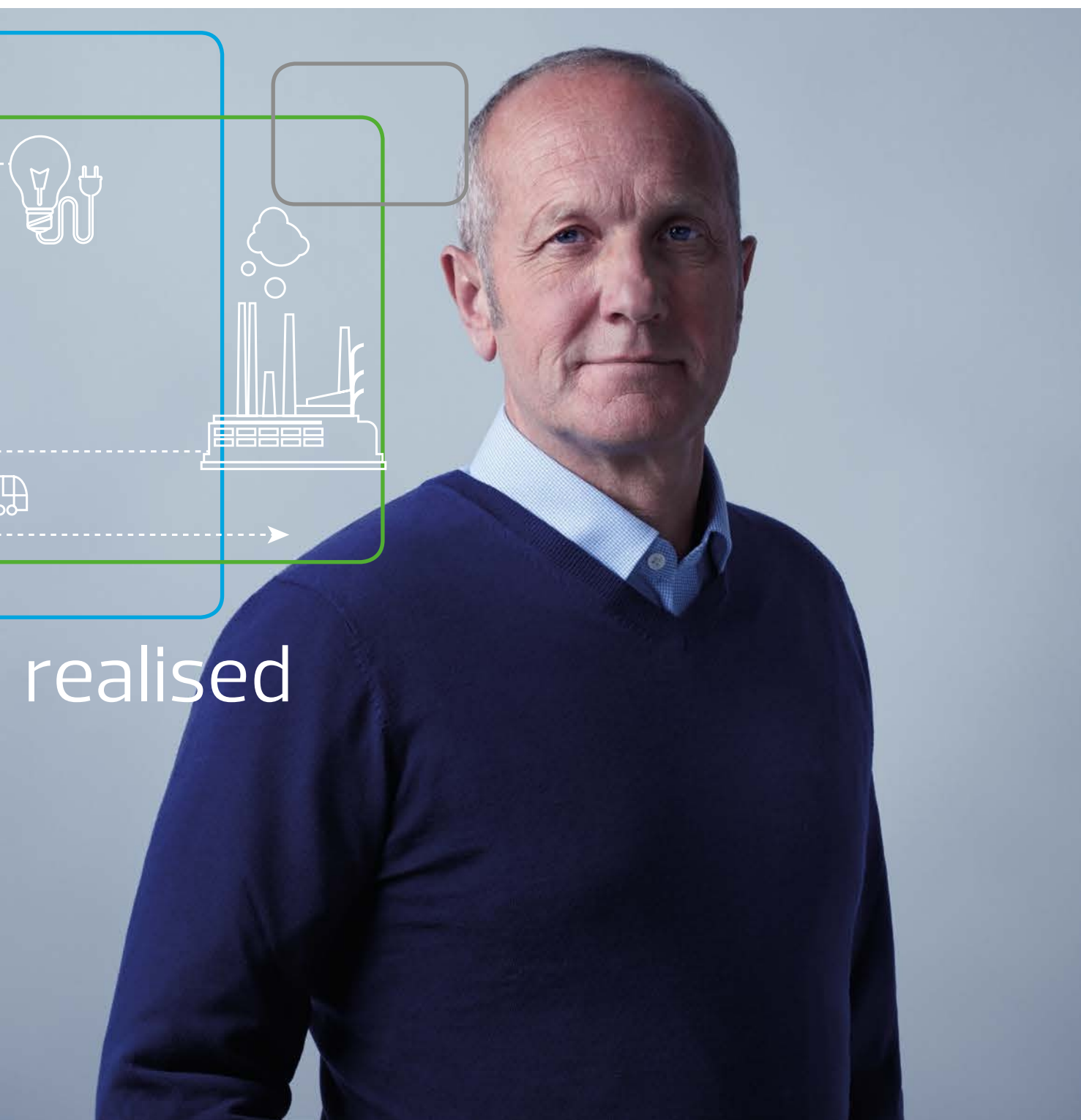
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# AN APPETITE FOR GROWTH

The UK's food and drink industry has a reputation for innovation, and has seen sales of value-added exports rise. Douglas Friedli looks at two stars of the sector and weighs up its opportunities and concerns

You can buy Westaway's sausages in Asia, the Falkland Islands and the Caribbean. But they're all made at the company's factory in Kingsteignton, less than a mile from Newton Abbot racecourse in Devon. The success comes as UK producers sell more high-value food and drink products around the world. According to the Food & Drink Federation, exports of value-added foods increased by 0.9 per cent to £4.6bn in 2015, bucking a more general decline of 4.4 per cent in UK food and drink exports.

Westaway also supplies more than 500 retailers in the West of England. Owner Charles Baughan says sales value and volume are up 8 per cent this year, compared with last year, with profit margins holding firm. The company invested 10 per cent of its turnover last year in growing capacity and capability, and plans to keep investing this year. Asked what drives success in food manufacturing, Baughan says: "Success is having a good strategy for where you are looking for business, monitoring costs closely and constantly looking to add value to your products. Being responsive and flexible is key."

In North Yorkshire, R&R Ice Cream has grown to become Europe's biggest private-label maker of ice creams and lollies. It started out as Richmond Foods in the UK and Roncadin in Germany, which came together in 2006. Led by chief executive Ibrahim Najafi, R&R makes Fab lollies, Rowntree's Fruit Pastille lollies, Kelly's Cornish ice cream – made from local cream and milk – and the Skinny Cow brand of healthy treats.

The company, which picked up the Food & Drink award at Made in Yorkshire 2016, employs 3,500 people and runs UK factories in Leeming Bar, North Yorkshire; Skelmersdale in Lancashire; and Bodmin, Cornwall.

Having a long-term goal is vital for success in food manufacturing, says Neil Millan, European human resources group talent director: "R&R's ambition was to become number two in the UK, which was achieved in 2001 with the acquisition of Nestlé's UK ice cream business. We then replicated this success in Europe becoming number two in 2006.

"The subsequent acquisitions of businesses in Australia and South Africa have given us global status and taken us to number three in the world. The vision now – through a planned joint venture with Nestlé which is under discussion – is to create the world's second-largest ice cream business with more than 12,000 employees working in 30 factories operating in more than 20 countries."

The ambition, he says, is

11%

The increase in UK food & drink productivity in five years, compared with an overall increase in UK productivity of 0.5 per cent

£81.8 BN

Total UK food & drink turnover, 16 per cent of UK manufacturing



Charles Baughan, owner of Westaway Sausages



Ibrahim Najafi, chief executive of R&R Ice Cream

to sell more, buy better and control cost: "We achieve that by having a sustained focus on specific aspects such as product innovation, and by providing market insight so the retailers are confident we are making recommendations that will benefit everyone; the consumer, the customer and not just us."

UK food and drink producers are among the best in the world at coming up with ideas, according to Ian Wright, director general of the Food & Drink Federation. "I think we are more innovative. That's not because British people are naturally more innovative, it's driven by competition in the domestic market." He's positive about the industry's prospects overall: "We should be optimistic. The business has grown significantly over the past 20 to 30 years. It has a fantastic reputation around the world."

Opportunities include increasing export sales, Wright says. But rapid growth will require a couple of conditions to be met. First, the industry needs more people to close a potential skills gap – 100,000 additional recruits by 2025. And federation members would like to see continued access to a flexible labour market through Europe.

The potential for a UK exit from the European Union is a concern, Wright says, because it could reduce the UK's access to the European single market. George Osborne's downbeat assessment of the global economic climate is a worry, as is the plan to introduce a tax on sugary soft drinks by 2018.

Wright says: "Any extension of government into a (new) area is a concern. If it is treating sugar in the same way as alcohol, that is a huge concern. It could make investment difficult. A lot of the companies involved are foreign-owned. They may have to choose between investing here and elsewhere. Overall, there are lots of opportunities, balanced with uncertainty."

### TOP TEN UK FOOD AND NON ALCOHOLIC DRINK EXPORTS 2015

Chocolate	£579.6m
Salmon	£496.4m
Cheese	£449.3m
Beef	£427.7m
Sweet biscuits	£383.5m
Soft drinks	£377.6m
Breakfast cereals	£368.6m
Vegetables	£336.3m
Chicken	£282.6m
Sauces/condiments	£280.5m

### EXPORT CHANGES

All food and non-alcoholic drink  
**2014** £12.9bn **2015** £12.3bn

Value-added food and drink  
**2014** £4.59bn **2015** £4.63bn

# SHOP FLOOR EXPERTS

Engineering and fabrication company WEC Group impressed the judges with its commitment to boosting skills

WEC, based in Darwen, Lancashire, set up its own training academy to help it close what it saw as the industry's skill gap. The academy provides training on welding and fabrication to people in the North West. Since it was set up in 2006, more than 75 apprentices have completed its five-year programme. Marketing manager Jean Dziki told us more.

## WHAT'S YOUR APPROACH TO TRAINING?

Our students have constant access to our modern equipment, enabling them to learn the most modern techniques while mixing with our existing staff to get a real taste for the workplace.

Students spend four days on the shop floor and one day at college, ensuring they also acquire the academic knowledge to pursue a successful career in engineering. We have a full-time training and development manager to ensure apprentices gain the relevant skills and qualifications while in our academy.

Welding apprentices receive the high-end coded welding BS EN 287 qualification, and we have a 100 per cent pass rate for first year apprentices. Our CNC machining apprentices undertake the Mazak Training Programme

while gaining an NVQ level 3 in CNC machining. We accept projects free of charge from the local community each year so our apprentices can hone their skills and give something back to the town. Projects have included repairing a historical weathervane for a local church, manufacturing a steel ramp for an amputee veteran and an LS Lowry statue.

## WHAT CHALLENGES HAVE YOU OVERCOME?

We found that local schools, colleges and specialist training providers did not provide students with the necessary practical skills to fill our skilled and semi-skilled vacancies. We partnered with Themis at Burnley College to help us provide young people with the necessary training. The biggest challenge last year was getting our apprentices through to the WorldSkills UK final in construction metalwork, as they were the youngest and least experienced in the competition.

Despite this, we scooped a gold and bronze medal at the national final, with the gold winner scoring the highest ever recorded in the UK. He is now preparing to compete and represent the UK at the WorldSkills competition in Abu Dhabi in 2017.

## HOW EASY OR DIFFICULT IS IT TO GET THE RIGHT PEOPLE?

We receive 100 applications for just ten positions each year. Not all of these applicants are suitable for our apprenticeship scheme, so it is important to undergo a rigorous selection process. Our recruitment drive begins with interviews for at least 50 applicants, and 20 of the best will be offered the chance to attend an assessment day at our academy. Applicants who perform well will then be called in for a second interview where they take exams on what they've learned, and we employ the highest-scoring people based on interest, motivation and basic knowledge.

## WHAT PLANS DO YOU HAVE?

We recently invested £1m in a 120,000 sq ft facility in Blackburn to be used as a training school. The facility will house a number of laser cutting machines, CNC lathes, welding bays and press brakes as well as offering advanced welding programmes. We also set up a new training school earlier this year at our Rotherham-based facility, MTL Advanced. We've also decided to roll out our apprenticeship scheme to different departments, including human resources, payroll and accounts.

## RUNNER UP

### Superior Seals

Superior Seals, based in Dorset, takes on six apprentices a year across all relevant sectors. Each spends their first year in the academy, before working in different departments to get an overview of the business. Four years after the programme was set up, apprentices have started to take senior roles in the company.

## ALSO SHORTLISTED

Powertechnique | GE Aviation Wales  
Nestlé UK & Ireland | Naylor Industries | Eldon Tool & Engineering  
AeroAcademy | Nylacast

Natalie Sykes, regional director for Yorkshire & North East at the IoD, presents the award to WEC Group



# HEALTHY GROWTH

Yorkshire medical products maker GBUK Group's investment in premises and product development was behind its win



Steve Penketh, regional managing director, North West at Arthur J. Gallagher, presents the award to GBUK Group



Every day, more than 110,000 GBUK products are used by patients in the UK. The manufacturing and distribution company's range includes surgical suction, patient moving and handling, patient care and diagnostics products. Based near Selby in North Yorkshire, it's the UK market leader in open suction catheters.

Judges said the launch of its self-funded purpose-built head office and distribution centre demonstrated its commitment to supplying quality products. The 40,000 sq ft centre is supplemented by a contingency warehouse. A further warehouse will enable GBUK to store more product types and sell more to European countries.

GBUK said its investment in premises, people and product development had raised confidence in the company as a supplier, leading to higher sales. The company forecast revenue of £18m for 2014/15, up from £11.8m in 2011/12. Its organic growth has been supported by acquisitions, and it's now attracting new international distributors. We caught up with marketing manager Tim Newton.

## WHAT DOES IT TAKE TO BE A SUCCESSFUL MEDICAL BUSINESS?

Much the same as it takes to be successful in any other market. A successful business listens carefully to its customers, identifies where there is a need, works with industry experts to develop, manufacture and bring to

the market products which meet the customer needs – at the right price. In the healthcare supplies industry there is the added responsibility to ensure full regulatory compliance, and to provide the best technical support.

## WHAT'S THE BEST DECISION YOU HAVE MADE RECENTLY?

We have become expert at working with manufacturers around the world. We decided to take ownership of as many of our products as possible. By taking full responsibility for all stages of design, production and distribution we can best respond to the specific requirements of customers, control product quality and secure best value.

## WHAT CHALLENGES HAVE YOU OVERCOME?

There are many for any company working within the healthcare industry. The nature of our products mean that it is critical that we maintain supplies at all times, and that the service is always of the highest quality. We know that hundreds of thousands of our products are used every day in caring for patients. The daily challenge is to ensure our products and logistics will meet the demands of all our customers. Our head office and distribution facility is located in the Yorkshire countryside, with easy access to the UK motorway network. We make full use of technology solutions in communication and in the day-to-day

management of our business, optimising operating efficiency and maintaining the highest standards of customer service.

## WHAT'S THE MEDICAL AND HEALTH MARKET LIKE RIGHT NOW?

The NHS is under tremendous pressure to meet increasing demand with finite resources, and this is reflected in the way in which NHS buyers constantly seek to obtain best value.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

GBUK has ambitious plans to develop our product range and new opportunities through 2016. Our business is built on the manufacture and supply of quality medical and clinical products and we are constantly exploring and evaluating opportunities to develop new products and new markets. Cementing our ability to export is going to play a vital part in the future growth of the company.

## ALSO SHORTLISTED

Premaitha Health | Nicobrand

# HIGH FLYERS

Local impact and global reach helped Marshall Aerospace and Defence Group win its award category



Trevor Middleton, investment director at GIL Investments, presents the award to Marshall Aerospace and Defence

Marshall Aerospace and Defence in Cambridge specialises in the conversion, modification, maintenance and support of military, civil and business aircraft. It designs, tests, certifies and makes auxiliary fuel tanks for the Boeing P-8 maritime reconnaissance aircraft. In June 2014, it delivered its 300th set of tanks, having improved its performance and reduced costs over the length of the contract.

Marshall has a track record. It has worked in the aviation sector for more than 80 years. It has run its apprenticeship scheme for 96 years. Most of its board directors are former apprentices. Now it sees the diversity of markets it serves as an advantage. The markets include military, security, non-governmental organisations, humanitarian, commercial and civil. And its capabilities include concept, design, manufacturing, in-service support, test, operation, installation, certification, training, personnel and advice. The judges saw it as a company demonstrating local impact with global reach. Oliver Drury, director of external communications, set the scene.

## WHAT DOES IT TAKE TO BE SUCCESSFUL IN YOUR SECTOR?

We maintain our competitive edge through innovation and an adherence to the founding tradition of a spirit of adventure. As our business has expanded abroad into new sectors, we have never lost sight of the need to reinforce our reputation for integrity and fair play.



## HOW DO YOU WIN AGAINST COMPETITORS WITH LOWER COSTS?

For more than a century we have put our customers first and this single-minded emphasis on service will continue. We recognise that outstanding customer service can never be taken for granted, so we continually measure, and constantly seek to improve. Cost is not the only metric that a business should use to make a decision.

## WHAT CHALLENGES HAVE YOU OVERCOME, AND HOW?

We strive to exhibit the highest standards of integrity and fairness in everything we do. There must be no gap between what we say and do. Our founder put integrity and fairness among the fundamental principles of his fledgling enterprise. Four generations on, we still abide by these core values.



Photography © Crown 2015

## WHAT'S THE MARKET LIKE RIGHT NOW?

Fortunately, innovation is the lifeblood of our business. We are well placed to face new challenges and grasp new opportunities. With flair and creativity, we constantly strive to adapt and find imaginative solutions to evolving customer demands. In an ever-changing world, this deep-seated innovative streak helps us break into new markets, open up new territories and achieve technological breakthroughs.

## WHAT PLANS DO YOU HAVE FOR THE YEAR AHEAD?

We are excited about what 2016 and beyond holds for us. We will continue to focus on our values to grow our business organically and through acquisitions.

## ALSO SHORTLISTED

Aeromet | CQC



# WHO'S IN THE RUNNING?

## MADE IN THE UK AWARDS 2016 FINALISTS

The Made in the UK Awards will be presented on 17 June at the Exhibition Centre in Liverpool, at one of the UK's biggest manufacturing awards dinners. Some shortlisted companies are listed below. The others will join them following regional awards ceremonies in Sheffield, the North West, Eastern and Central England, the Midlands and Northern Ireland

### Advanced Manufacturing Innovation/Creative Design Award

Kromek Group (North East)  
Asset International (Wales)  
Advanced Insulation (South West)  
G.O.S Tool & Engineering Services (Wales)  
FAUN Trackway (Wales)  
Innovative Technology (North West)  
Ideal Manufacturing (England)  
Fracino (Midlands)  
Magnomatics (Sheffield)

### Advanced Manufacturer/ Technology Award

Solar Capture Technologies (North East)  
Fibercore (South East)  
Blackwood Embedded Solutions (Wales)  
Airbus (South West)  
Acorn Stairlifts (Yorkshire)  
IQE (Wales)  
Evoke Creative (North West)  
Chargemaster (England)  
XCAM Ltd (Midlands)

### Export Award

Seaward Group (North East)  
Electronic Temperature Instruments (South East)  
BBI Solutions (Wales)  
Clipper Teas (South West)  
Karro Food Group (Yorkshire)

Cubis Industries (Northern Ireland)  
ChargePoint Technology (North West)  
Pumptronics (England)  
Cooper Research Technology (Midlands)  
Diamond Dispersions (Sheffield)

### Food and Drink Award

Sir Hans Sloane (South East)  
Calbee (Wales)  
Ministry of Cake (South West)  
R&R Ice Cream (Yorkshire)  
On A Roll Sandwich Company (North East)  
Mash Direct (Northern Ireland)  
Blends (North West)  
Bokomo Foods (England)  
Warner Edwards (Midlands)

### Green Manufacturer/ Sustainable Manufacturer Award

Flightweight (Wales)  
Wyke Farms (South West)  
Wax Lyrical (North West)  
Purity Brewing Co (Midlands)

### Manufacturing Apprenticeship/ Training Scheme Award

Morgan Innovation and Technology (South East)  
Magor Designs (Wales)  
Pendennis Shipyard (South West)  
Nestlé UK & Ireland (Yorkshire)  
British Engines (North East)

Cartwright Group (North West)  
Autotech Controls (England)  
Portmeirion Group (Midlands)  
Mechan (Sheffield)  
Chesterfield Special Cylinders (Sheffield)

### Medical/Life Sciences and Healthcare Award

Paxman Coolers (Yorkshire)  
TG Eakin (Northern Ireland)  
Crawford Healthcare (North West)

### Aerospace and Defence Award

Portsmouth Aviation (South East)  
Airbus (South West)  
Salcey Precision Engineering (England)

### Manufacturer of the Year Award

Calsonic Kansei (North East)  
G&B Electronics (SME, South East)  
Vector Aerospace (Large, South East)  
Axiom Manufacturing Services (Wales)  
Herman Miller (South West)  
Winder Power (SME, Yorkshire)  
Harrison Spinks (Large, Yorkshire)  
Hutchinson Engineering (Northern Ireland)  
Lawrence David (England)  
Sorion Electronics Ltd (SME, Midlands)  
HydraForce Ltd (Large, Midlands)  
Birley Manufacturing (SME, Sheffield)  
Chimo Holdings (Large, Sheffield)  
Jaguar Land Rover (North West)

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# COMING SOON

Four UK products that could shake up the world



## AIRLANDER

The world's longest aircraft, at 92 metres, is an airship hybrid which uses a quarter as much fuel as normal aircraft. The test version can carry ten tonnes, can reach 92mph in level flight, can stay airborne for up to five days at a time and can hover for extended periods. It is being developed by Hybrid Air Vehicles, backed by Iron Maiden singer Bruce Dickinson and tycoon Richard Branson. In March 2016, it was unveiled and successfully floated inside an aircraft hangar in Cardington, Bedfordshire. The BBC reported that it was developed for the US government for surveillance, and bought by the UK company when the US Army ran out of money to develop it further.

## ASTON MARTIN DBX

James Bond's carmaker of choice is developing its first SUV (Sports Utility Vehicle) crossover car, combining sporty performance with a bit more space for passengers and luggage. An early sight of the new model was provided in February 2016, when Aston Martin revealed its plans to build the car at St Athan in South Wales, to the delight of first minister Carwyn Jones. Aston Martin's chief executive Andy Palmer said: "The DBX Concept is a challenge to the existing

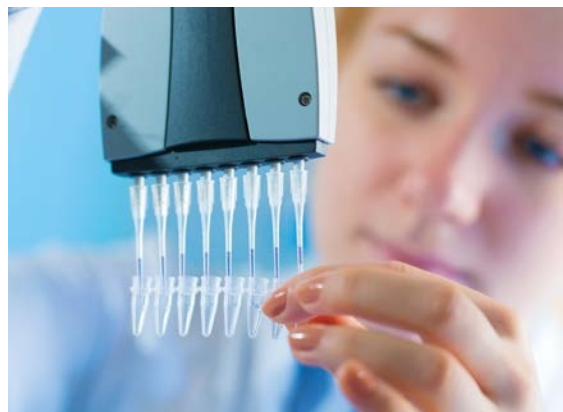
status quo in the high luxury GT segment. It envisages a world, perhaps not too far away, when luxury GT travel is not only stylish and luxurious but also more practical, more family-friendly and more environmentally responsible."

## GIANT BATTERY SYSTEM

Developed by the University of Sheffield, a £4m battery facility launched in March 2016 at Willenhall substation near Wolverhampton will be the fastest battery energy storage system in the UK. It was opened with an innovation project with energy companies E.ON and Uniper looking at future possibilities for large-scale energy storage. Many countries will need energy storage technologies to balance the sometimes unpredictable supply of renewable energy and demand. As the demand for energy increases in the UK, storage systems are needed to balance supply. The National Infrastructure Commission suggested that energy storage could contribute to innovations that could save consumers £8bn a year by 2030 as well as securing the UK's energy supply for generations. In a separate development, Dyson, the UK company famous for its bagless vacuum cleaners, plans to invest £1bn in battery technology.

## POTENTIAL CANCER TREATMENT

Scientists at University College, London, are reported to have found a way to encourage the human body's immune system to kill cancers. They developed a method to identify unique markings in a tumour, enabling the body to tackle the disease. Researchers believe that by analysing people's DNA, they can develop treatments which are unique for each user. The work was funded by Cancer Research UK and could form the basis of future treatments. But the method has not yet been tried in patients, and could prove expensive.



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2016**  
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BRITAIN & NORTHERN IRELAND