AUDIT • TAX • ADVISORY

Manufacturing and Engineering

Annual Report 2018/19

Supported by

Institution of MECHANICAL ENGINEERS

LLOYDS BANK

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Now, for tomorrow

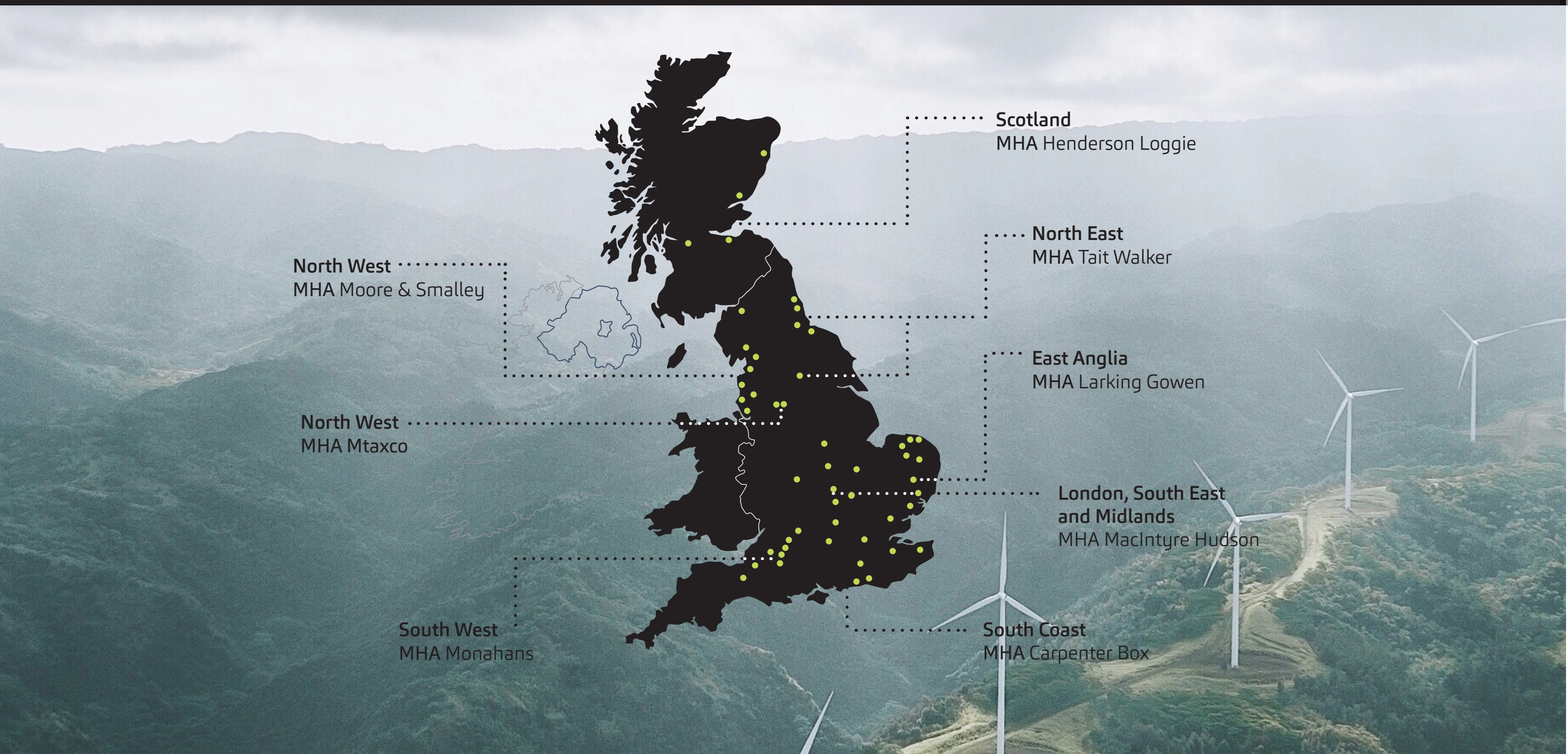
Our Sector Approach

MHA allows clients to benefit from in depth sector knowledge in addition to specialist accountancy services and expert business advice. Manufacturing and engineering is a key sector for MHA, and we are committed to assisting both our clients and the sector as a whole by promoting manufacturing and engineering in all of its forms throughout the UK.

About us

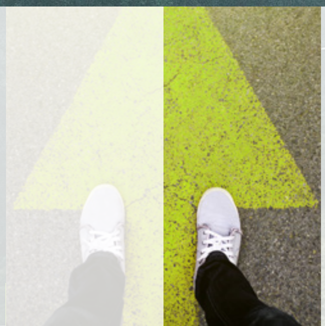
MHA members are progressive and respected accountancy and advisory firms with offices in over 50 locations across England, Scotland and Wales.

We provide both national expertise and local insight to clients. As an independent member of Baker Tilly International, a top 10 global advisory network, MHA offers clients unparalleled access to a broad range of in-country international specialists where overseas projects are on the horizon.



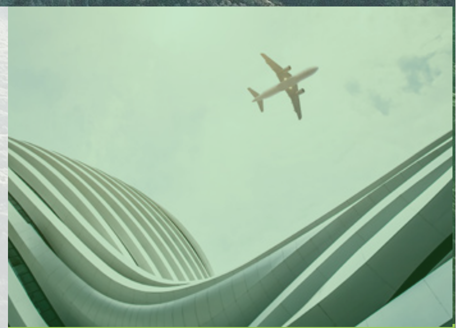
National Reach

50+ Offices nationwide



International Reach

125 Member firms in 145 territories



8 Independent accountancy firms

Combined turnover of **£143m**

10th Largest network in the world by combined revenue

US$3.6bn Combined member firm revenues

Foreword

Dave Atkinson
Head of Manufacturing, SME, Commercial Banking, Lloyds Bank

Chris Barlow
Head of the Manufacturing Group

I am delighted to sponsor for the fourth year in a row, the annual MHA Manufacturing and Engineering Report, in conjunction with the Institution of Mechanical Engineers (IMechE).

Our sponsorship helps us to develop our understanding of the manufacturing sector and educate our teams of local relationship managers across the UK. The report, having surveyed the views of over 200 businesses from across the sector, puts a spotlight on the current sentiment, issues and opportunities that Britain's makers face. Manufacturing has never been more important to the success and growth of the British economy and this is even more significant in the coming months and years as the impact of leaving the EU emerges and the landscape for our clients changes.

We know that one of the major challenges the manufacturing sector continues to face is the skills shortage, which this report again highlights, compounded this year by the impact of uncertainty following the Brexit vote and the volatility of sterling. That's why we continue to support the Lloyds Bank Advanced Manufacturing Training Centre in Coventry, having doubled the investment in 2018 to £10million investment over ten years to support the training and upskilling of around 3,500 apprentices and engineers into the manufacturing sector.

It is also clear that British manufacturers need further support to explore new opportunities in overseas markets. Whilst the devaluation of sterling has accelerated export growth, we have our innovative International Trade Portal to help businesses search for more opportunities and understand new markets. Capital Investment levels are up and it is encouraging to see that manufacturers continue to plan for the future and respond to changing conditions. We continue to support the sector by providing over £1billion of new lending to UK SME and mid-market manufacturers every year. In 2017 we delivered our four year pledge of £4billion of new lending to manufacturing and engineering, six months ahead of target. For the period of 2018 to 2020, we have recommitted a further £3billion to the sector to support investment, growth and drive productivity.

I do hope that you find this latest report both informative and interesting and my thanks again to the MHA group for allowing us to work with them and to the IMechE for their insightful commentary.

Given the political situation in which we find ourselves, there has never been a more important time for the manufacturing and engineering sector in the UK.

Now in its seventh year, the MHA Manufacturing and Engineering Survey continues to focus on significant trends and highlights both the challenges and opportunities that our makers and engineers face. Perhaps one of the most striking findings from the results of this report is the confidence of the manufacturing and engineering sector and the predictions for growth when there are so many variables in the run up to Brexit.

The skills shortages, which have impacted the sector for many years, are brought into an even sharper focus by the uncertainties around free movement of workers within the EU. The rising costs of production and distribution, which will be affected by the nature of the UK's final departure, and the continued currency fluctuations all contribute to a period of significant uncertainty. The continued complexity and shape of any final deal has impacted our survey respondents, resulting in only around a third having a Brexit strategy in place. The remainder believe that they need to see the government's strategy and the EU's response before being able to put such plans in place.

As the clock ticks down, the uncertainty continues and the resilience of this sector will be vital to our country's future prosperity. Our manufacturers and engineer's problem solving abilities are needed now more than ever.

With thanks to all those who took part in the survey which led to this report. Thanks also to Lloyds Bank, who continue to sponsor the report, and to Matt Rooney, Engineering Policy Adviser at the Institution of Mechanical Engineers for his insightful commentary.

We hope that you find our report a valuable insight into this vital sector of our economy.

Contents

MHA surveyed over 200 clients and contacts in the manufacturing and engineering sectors.
The respondents ranged from companies turning over less than £1million to global players with significant industry presence, nationally and internationally.

A national snapshot covering England, Wales and Scotland

Respondents came from a variety of sub-sectors within manufacturing and engineering including:

- Aerospace
- Automotive
- Agriculture
- Biotechnology
- Chemical
- Construction
- Electrical and Electronic
- Defence
- Food and Drink
- Marine
- Metals
- Minerals and Materials
- Oil and Gas
- Pharmaceuticals
- Precision Engineering/Tooling
- Printing
- Renewables and Transport

as well as other specialist businesses

Over 200 Responses

The majority of the respondents were SMEs

Key Findings

60%

put skills shortages at the top of their agenda. Most businesses want to see government action on expanding skills training for the future work-force at all levels of education.

30%

said that Brexit concerns and uncertainty over future trading tariffs etc. was their main barrier to growth over the next 12 months.

92%

felt their cost of production would rise in the coming year.

A range of factors contributed:

72% believe that raw material costs will rise.

66% cited increasing wage costs.

43% expect increases in the price of components.

52%

Improved productivity and efficiency is the strategy which most companies deploy in order to absorb price increases.

67%

took the view that they could not pass on any increased costs to customers.

93%

believe their main competitors are based within in the UK, with 35% of them saying that they face competition within their own region of the UK.

58%

export, with the Eurozone being the most popular destination.

100%

of exporting respondents export to the Eurozone.

73%

need to recruit production staff; this is up 9% from last year.

89%

of companies invest some percentage of their turnover in R&D.

70%

Despite uncertainty surrounding Brexit, manufacturers are optimistic in terms of growth, with 70% of respondents predicting growth for their business over the next 12 months. However, this is down by 8% from last year.

19%

indicated that they can recruit as needed.

63%

are planning on taking on apprentices in the next 12 months.

49%

expect to increase their staff numbers in the next 12 months.

51%

However, only 51% applied for R&D Tax Credits.

34%

have a Brexit strategy in place. 66% feel they cannot plan for the impact until they know the government's strategy and the EU's response.

19%

reported that recruiting appropriately skilled staff is the main barrier to growth over the next 12 month.

Where recruitment is a barrier to growth:

41% favoured investment in existing staff, such as training/ benefits/ production bonuses.

28% favoured adopting lean manufacturing strategies.

22% saw investment in updated machinery as a viable option.

Financial Considerations and Business Confidence

70% Of respondents are anticipating growth over the next 12 months

Revenue Growth

When looking at revenue growth for the last 12 months, 71% of respondents experienced growth; this is a 2% increase compared to last year which is good to see and possibly demonstrates some positivity in the sector, despite the apprehension around Brexit uncertainty. Of the 71%, 18% experienced growth of over 10% and 29% reported negative or no growth (down by 2% from last year).

> "It is encouraging to still see such an optimistic outlook in the sector. Forecasts of an immediate recession following the Brexit vote appear to have been wrong. Economic growth and manufacturing output have performed better than many had expected in the intervening period.
>
> The devaluation of sterling is largely credited with helping to boost output as British products have become cheaper for foreign purchasers. However, in October 2018 the Confederation of British Industry reported results of their latest trends survey and it suggested that manufacturing orders had fallen at their fastest rate since 2015.
>
> The risks associated with Brexit were reported to be damaging business confidence."
>
> **Matt Rooney**

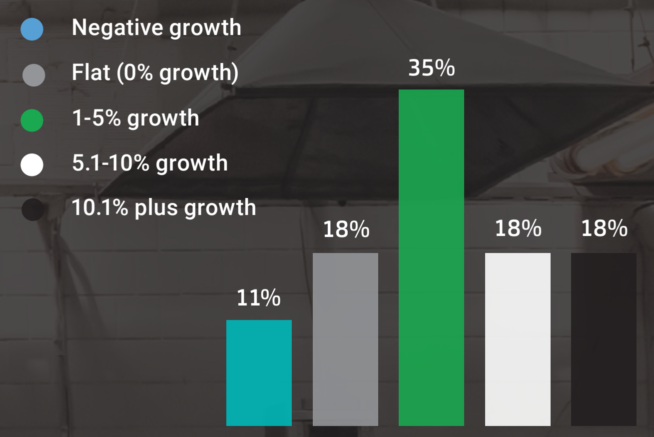
Case study: Concrete Canvas

An innovative Welsh manufacturer of flexible concrete is set to increase its turnover by more than 25% after purchasing a new 86,000 sq ft site, with support of a six-figure funding package from Lloyds Bank Commercial Banking. The transfer to the new site will allow the firm's manufacturing capacity to more than quadruple, as well as providing the business with a suite of state-of-the-art laboratories to support its extensive research and development programme.

The move comes after a record year of sales for the firm, and the company now exports to more than 50 companies across the globe. As a result of the increase in capacity, it expects to boost exports by 30% and achieve a turnover of more than £12million.
The company made a multimillion pound investment to purchase the new site, as well as using a £600,000 funding package from Lloyds Bank to facilitate the move.

The company was founded in 2005 and since then has grown dramatically. Their product is used in a range of sectors by companies worldwide, with clients including Shell, Queensland Rail and Highways England. As a result, the firm now employs 45 people in six offices across the globe. 2018 was an exciting year for Concrete Canvas, with the purchase of their new headquarters and the opening of two new offices in Milan and the UAE.

Revenue Growth



Revenue Growth Over the Next 12 Months

When looking to the next 12 months, optimism is high, with 70% expecting growth and of that, (9%) are expecting more than 10% of growth. Only 30% were anticipating either negative or no growth.

Drivers for Growth

This year we asked respondents to rank between one and five the areas they felt would be the drivers for growth over the next 12 months. Growth drivers over the next 12 months were unsurprisingly quite varied, with some businesses giving multiple reasons. 18% saw increased demand from customers as the main driver for revenue growth; this was followed by diversification (14%), followed by expansion of product range which was at 13%.

New markets in the UK, increased productivity through automation, currency appreciation and currency depreciation were all seen as the lowest revenue drivers (with only 8% selecting it as their main reason for each).

Business Confidence

We asked businesses to rate their business confidence over the next 12 months and 36 months. Over the next 12 months, only 10% ranked it as high. However, 41% ranked it above average. 19% ranked it as below average. Over the next 36 months, only 11% ranked it as high. However, 43% ranked it as above average and 15% ranked it as below average.

Case study: Stevens Services

A Portsmouth bathroom manufacturer is on track to achieve an annual turnover of £6 million within the next 18 months, after increasing its production capacity. Stevens Services Ltd employs more than 18 staff and designs, manufactures and installs bathrooms for the commercial, education, leisure and health sectors, including hospitals and Hampshire County Council. They have accelerated their manufacturing process by investing in specialist machinery after securing a £180,000 asset finance facility from Lloyds Bank Commercial Banking.

The purchase of a CNC machine, which allows a computer to control machine tools and an edgebander which creates a glass effect finish on edge panels, means the business can produce bathroom fittings more quickly and work with a wider range of materials.

This equipment was instrumental in allowing them to speed up their production. It means that they can take on new orders, free up time to spend on the design process and improve their offering. Now they have got a more efficient process in place, they can focus on growing the business further and realise their ambitions for the firm.

In line with its growing outputs, the business has increased its storage space by 50% by buying an additional two units within its current building. In 2020, the business is hoping to relocate to 20,000 sq. ft. premises, from its current 9,000 sq. ft. site, to help its rapid expansion. Stevens Services are hoping to increase their turnover by even more in the near future.

8% Of respondents believe that their cost of production will remain at present levels

30% Of respondents have received Government or grant funding in the past year

Competitors

35% said that their main competitors were based within their own region in the UK. 58% of businesses surveyed stated that their main competitors were based within the rest of the UK. The Eurozone was second at 39% and China made up 21%.

Production Cost

When looking at production costs, only 8% of respondents believe that their cost of production will remain at present levels. Of the rest, 72% are anticipating the cost of raw materials to increase, 66% believe wage costs will increase and obvious concerns also remain over the volatility of energy prices, with 47% anticipating increases (this is a 5% rise from last year).

Production Cost Increases

In looking at how businesses will deal with any increase in the cost of production, 67% of respondents said they would not pass the cost on to their customers. Last year, 38% were considering price increases whereas this year it has dropped to 33%. This demonstrates that a third of businesses have no choice but to pass production cost increases on to customers. Of the respondents that aren't considering price increases, 52% are planning to improve productivity and efficiency to offset such an increase.

Productivity Levels in the UK

27% of respondents stated that poor factory/plant infrastructure is the main barrier to improving productivity. This was closely followed by low skill levels (26%), then staff shortages (23%) and lack of investment at 22%.

Grant Funding

30% of respondents have received Government or grant funding in the past year. Reported sources of funding include: Innovate UK, ERDF, DiT and other regional growth funds support, amongst others.

"The publication of the Industrial Strategy and the development of Sector Deals has signalled that the Government is increasingly looking to be more active in working with the industry, with many funding streams available to promote innovative projects.

Sector Deals have so far been published in the fields of artificial intelligence, construction, nuclear, life sciences, automotive and the creative industries. The aim of the sector deals is to build long-term strategic partnerships with businesses to 'tackle barriers to growth, boost productivity in specific sectors, further collaboration, and ensure high-quality jobs.'

Along with the Industrial Strategy Grand Challenge Fund, these provide opportunities for manufacturing companies to access funding for innovations that will boost productivity. Decarbonisation will also become a higher priority for government as they aim to meet increasingly challenging emissions reduction targets under the Climate Change Act. This presents opportunities for the development of new, low carbon manufacturing processes.

The government has stated that they want to be a world leader in the development, manufacture and use of low carbon technologies, systems and services that are cheaper than high carbon alternatives."

Matt Rooney

Case study: Nordell Ltd

Nordell Ltd predominantly offer injection moulding manufacturing services. They also provide manufacturing services on extrusion, ultrasonic welding, assembly, printing, tooling, component sourcing and design refinement.

Nordell are a solution provider and aim to solve their clients' issues with their energy, interest and problem-solving skills; they are always keen for opportunities to apply and show this off. Nordell aim to stay one step ahead of their customers with a very agile approach. Advertising and selling their edge to new clients continues to be a creative challenge.

A third of Nordell's business is exported throughout the world, with Europe being the single largest area. The uncertainties around Brexit and trade arrangements have affected investment levels across many of the market sectors they serve. Despite this, they continue to invest in their team, infrastructure and manufacturing process with enterprise resource planning (ERP) and manufacturing 4.0 practice etc.

Nordell have joined up with Sigta for apprenticeships, and a new apprentice joined them in August 2018. For Nordell, the next 12 months is about how to best use their new ERP and continuing to work smarter for better productivity. As such, they are primarily investing in their own skills for scaling up in the near future.

Nordell would like to see the government support investment for productivity beyond the conventional Annual Investment Allowance (AIA). Nordell believe that a scheme similar to R&D tax relief would help focus and encourage UK SME productivity, and would itself become an advertisement in growing UK manufacturing and its 25% contribution to the UK economy.

Innovation

Research and Development

Research and Development (R&D) is defined as – 'Investigative activities that a business chooses to conduct with the intention of making a discovery that can either lead to the development of new products or procedures, or to the improvement of existing products or procedures'.

89%

Of respondents are investing in R&D

Percentage of Turnover Invested

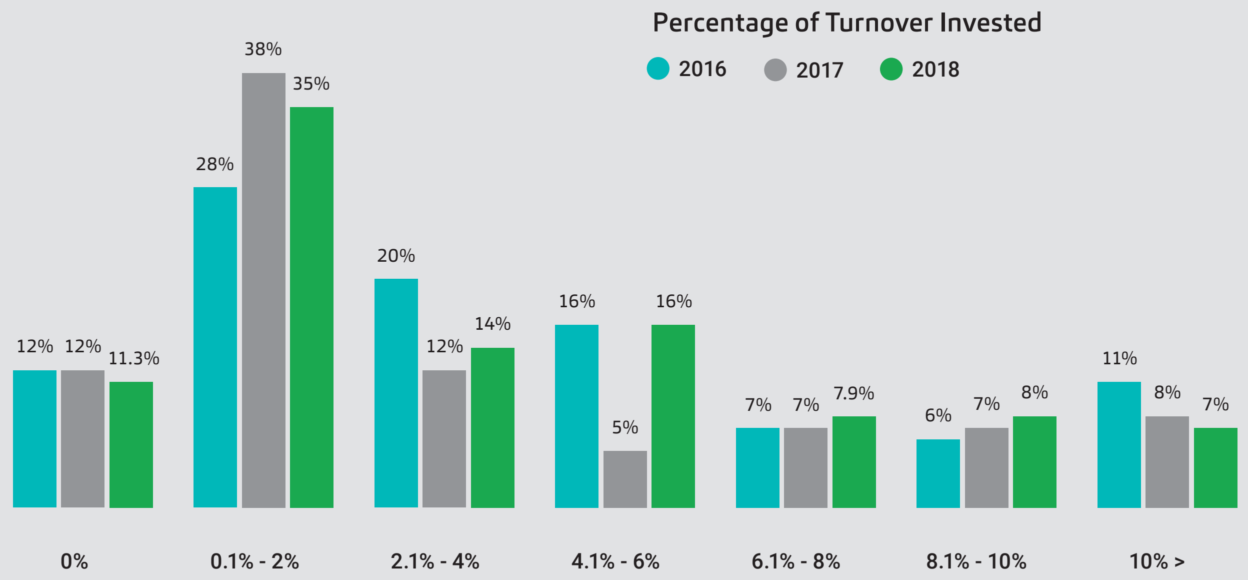
Overall, 89% of respondents are investing in R&D. 35% say they invest between 0-2% of turnover on R&D; 30% invest between 2% and 6% and 23% invest 6% or more.

Claims in the Last 12 Months

It is surprising that even though 89% of businesses acknowledge that they invest in R&D, 28% did not claim for R&D tax credits.

Not all activity will be eligible (1% of respondents say their claim failed which is the same as last year), but many who have not claimed could probably do so and save their business thousands of pounds in the process.

Therefore, the question is, why have so many businesses not applied for R&D tax relief? Over half (51%) applied successfully and 7% were waiting to hear if their claim was successful.



Making a Claim in the Next 12 Months

65% of respondents indicated R&D Tax Credit claims would be made in the next 12 months, 35% are choosing not to claim in the next 12 months

"The UK Government incentivises companies to invest in innovation through R&D Tax Credits. Companies can receive corporate tax relief on R&D spending but, as these results show, many eligible companies do not claim the relief. This is a longstanding issue, especially for SMEs. MHA has highlighted research which estimates that significant amounts remains unclaimed by SMEs. I would encourage the government to promote awareness of the policy and to work with SMEs to streamline the process of applying for relief."

Matt Rooney

"It is encouraging to see such a high percentage of companies planning to invest in R&D again this year. The Department for Business, Energy and Industrial Strategy have put digitalisation at the heart of their industrial strategy and companies should be encouraged to engage with them to succeed in the 4th Industrial Revolution.

Automation and digitalisation present both challenges and opportunities for the manufacturing industry. The main risk is to employment. Although this is often overstated, in our IMechE Automation and Autonomy report published in 2018, we quote analysis that suggests that in the long term, over 40% of manufacturing jobs are at risk to increased automation. However, this is at a global level and UK jobs are less at risk. As an advanced country with world class research and development, the UK could even grow its manufacturing industry as the cost of labour becomes a lower percentage of the overall cost of manufacturing. According to a 2015 study by one of the big four banks, an increase in automation could raise the value added by the manufacturing sector to the UK economy by £60.5billion over a decade.

It is well-known that much of the low-skilled manufacturing has been offshored from the UK in recent decades as companies have sought cheap labour in less developed countries. With increased automation, labour costs become less relevant, and these industries could be 'reshored' in the future. A 2014 survey by EEF, the manufacturers' federation, found that one in six companies has reshored production, citing various factors, including transport costs. By re-shoring, British companies can avoid transportation costs, tariffs and better co-ordinate manufacturing processes with R&D activities."

Matt Rooney

Employment

63% Of businesses are planning on taking on apprentices/ trainees in the next 12 months

81% Of respondents have a problem finding staff

Barriers to Growth

When looking at barriers to growth over the next 12 months, 30% of respondents said their main barrier was Brexit concerns and uncertainty over future trading tariffs etc. This was followed by recruiting appropriately skilled staff (19%) and working capital constraints (11%). Global economic concerns are a main barrier for 10%.

Combating Recruitment Issues

Dealing with the skills gap: Where recruitment is a barrier to growth, 41% of respondents favoured investment in existing staff, such as training/ benefits/ production bonuses. 28% said they would adopt lean manufacturing strategies. Investment in updated machinery (22%) was also seen as a viable option. Only 22% said that recruitment was not an issue.

Recruitment

Excluding apprentices, 49% of businesses expect to see an increase in staff in the coming year, down 8% from last year. 41% are expecting their numbers to stay the same.

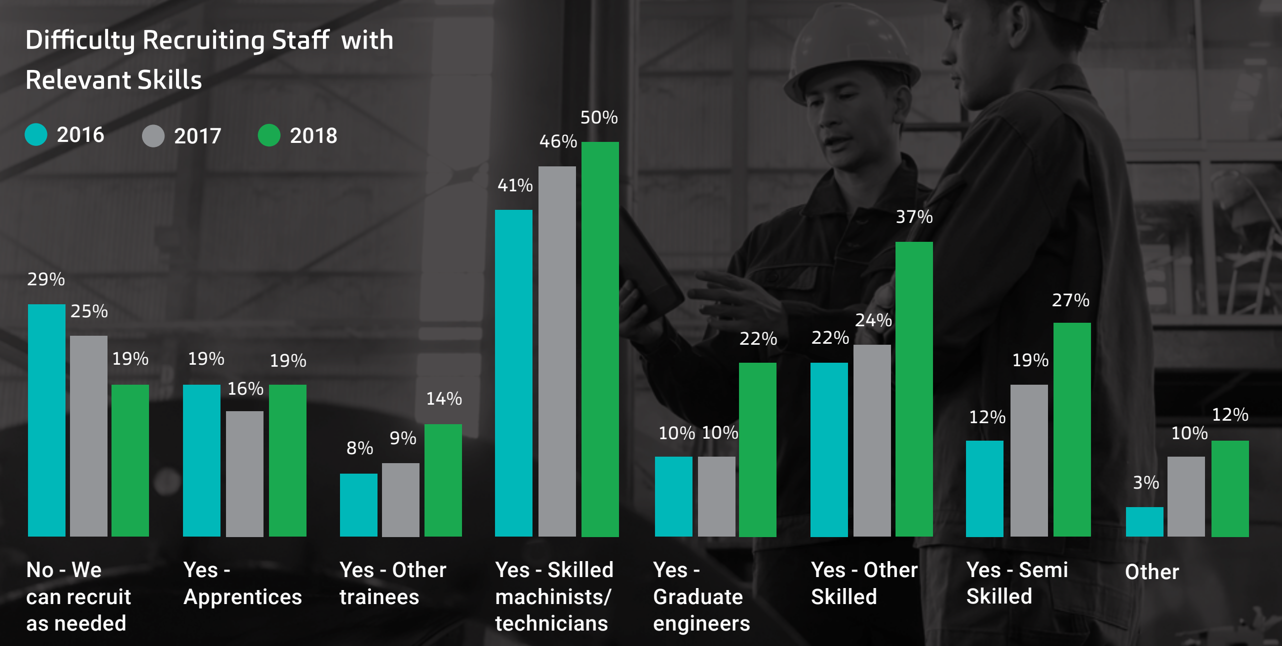
73% of those planning to recruit will be looking for production staff, whilst 8% want to recruit sales and marketing staff (a decrease of 7% from last year). 11% are looking to recruit design/ research and development staff

"Unfortunately, engineering has an image problem with young people, and this problem is particularly acute in manufacturing, so it is unsurprising to again find companies worried about a skills shortage. A recent report by Engineering UK highlights that when looking at total demand for Level 3+ engineering skills across core and related engineering roles more broadly – there is an estimated annual shortfall of between 83,000 and 110,000 recruits.

There is a common misconception that manufacturing just involves working on a production line. Changing the perception of the industry with young people requires businesses, government and learned societies like the Institution of Mechanical Engineers to continue working together to forge new initiatives that show that manufacturing is about more. One such initiative was the Year of Engineering in 2018, which encouraged young people to 'take a closer look' at engineering with the aim to promote interest and broaden diversity.

In order to expand interest in the sector, the industry needs to attract a more diverse talent pool. This includes more women and ethnic minorities, but also retraining for mature people. The recent introduction of T-Levels and the National Retraining Scheme are welcome, as well as changes to the Apprenticeship Levy to reduce the cost of the scheme to business. The difficulty in attracting women into the sector is a perennial problem. Analysis by the IMechE, in Never Too Late: Profiling Female Engineers, suggest that women tend to make careers choices later in life than men and so women up to the age of 25 should be targeted as potential apprentices. We found that those with an interest in arts and crafts, in particular, may be most receptive to applying similar skills in a career in engineering."

Matt Rooney



Does Your Business Train Apprentices?

Of the 63% of businesses that take on apprentices, 27% train them themselves, 19% are Apprenticeship Levy payers and access the funding and 17% are non-levy payers and therefore go down the co-investment route. Of the 37% that don't take on apprentices, 10% expressed that they would in fact like to take on apprentices but don't understand the system.

Difficulty Recruiting Staff with Relevant Skills

Over three quarters of respondents (81%) have a problem finding staff. Skilled machinists appear to be the most difficult to recruit, with 50% of those looking to recruit saying this was a problem area for them (a 4% increase from last year). 22% cannot find graduate engineers and 37% of respondents have trouble finding other skilled employees. According to respondents, the biggest single problem with recruitment into the sector is the shortage of applicants with relevant skills, with 34% of respondents picking this as their top reason. Another common theme amongst businesses and in second place in the ratings was the lack of motivated applicants locally for lower skilled jobs, which was ranked as first choice for 16% of respondents. Fewer candidates available from EU countries was the joint third reason (14%), along with competition from similar sized businesses causing recruitment issues (14%).

Apprentices/ Trainees to be Taken on in 2018/19

63% of businesses are planning on taking on apprentices/ trainees in the next 12 months. Does this show that the introduction of the Apprenticeship Levy has worked in terms of encouraging businesses to take on apprentices? Time will tell. Of these, 52% are looking for 1-3 apprentices and 11% are looking to take on more than 4 apprentices.

Case study: Aluminium Die Caster

The company is an aluminium die caster for the automotive sector located in Welshpool. The company exports around 70% of its output for use in cars across all the major manufacturers. The company has secured a major contract with a Tier 1 supplier for significant volumes of a particular product, which the company won due to its reputation and ability to deliver quality output. In the current automotive climate where quality and reliability is under greater scrutiny, the company beat more established and larger competitors to win the work. The company has been awarded a non-repayable grant from the Welsh Government to enable them to purchase significant capital equipment and employ the new staff to deliver the contract. The company will also be creating apprentice positions to continue to develop the in house skills and those within the sector in Wales.

Exporting

58% Of respondent companies export } This is an increase of 7% from last year

Exporting

There has been a concerted push to help UK businesses break into new markets across the globe. Through schemes such as 'Passport to Export' and subsidised trade missions, UKTI and others have been tasked by the government to increase the UK's global share.

Our survey revealed that 58% of respondent companies export (this is an increase of 7% from last year) and of those, 29% found exporting assistance from the government useful. Disappointingly, 29% of businesses felt that the help received was not useful, however, this is a decrease of 9% from last year.

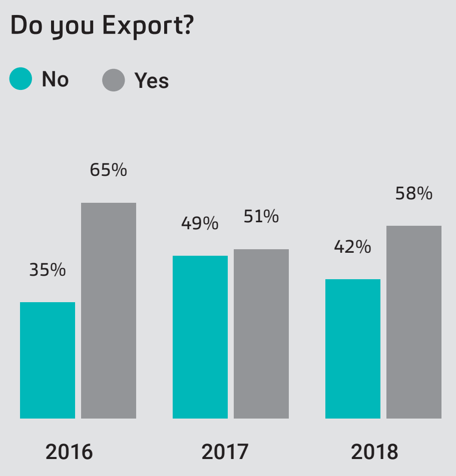
Export Destinations

The most popular export destination remains the Eurozone, with 100% of exporting companies shipping goods there. This represents a 4% increase from last year. This will, of course, be one of the main challenges as Britain leaves the EU in terms of ensuring that such trades continue unhindered by additional paperwork, tariffs or other disruption. The United States was the second most popular exporting destination, with 76% of exporting respondents exporting there (a 15% decrease on last year), followed by Asia (excluding China) accounting for 55%. North America (excluding the U.S. and Canada) was the destination which just 18% of respondents export goods to, which either means opportunities are being lost or the barriers to exporting there are perceived to be too high.

Barriers to Exporting

Of those companies that do not yet export, 74% believe it's not relevant for them. 7% put it down to an issue with sourcing and understanding local partners. 7% had other specified reasons for not exporting, including capacity issues, payment terms issues and a lack of creditor insurance.

The most popular export destination remains the Eurozone, with 100% of exporting companies shipping goods there



Case study: Lusso Stones

A Middlesbrough luxury bathroom design business is set to launch its first showroom and office in the US, with support from Lloyds Bank Commercial Banking. Founded in 2014 by Wayne Spriggs, Lusso Stone designs and manufactures stone resin bathroom products including sinks, taps and baths, for both retail and commercial clients. Lusso Stone will open the new showroom to meet its exporting demand by early 2019 after receiving enquiries from retailers across Northern America about its products. As a result, the firm expects to increase turnover by 40-60% to £12million.

Lloyds Bank implemented a Cardnet facility that helps the firm manage online payments more effectively. The business also used Lloyds Bank's International Trade Portal to access information and practical resources to help start exporting. Over the past four years the company has grown significantly, quadrupling its turnover and working with high profile customers including five-star London hotel, Claridge's.

The new office will employ four new members of staff. The business has gone from strength-to-strength in the past year and is attracting attention from some exciting clients in the US. They have decided to take the steps needed to establish permanent premises to accommodate and target potential new clients across the country. When Lusso Stone mentioned that they would like to start exporting, Lloyds Bank introduced them to the International Trade Portal. This proved to be an invaluable tool as it provided them with the background knowledge they needed to plan how they will export, leading to the opening of their first showroom.

Lloyds Bank's recent Business in Britain report found that more than quarter of firms across the region believe the US market holds the most opportunities for them over the next six months.

Future Considerations

50% Of respondents are looking to increase their spend

28% Of respondents say that they have adopted lean manufacturing principles in their processes

Capital Investment in the Next 12 Months

Capital investment levels for the coming year are in line with last year's investment plans which is encouraging. 50% are looking to increase their spend, of these, 14% of businesses are planning for a considerable increase. 42% of respondents are planning for capital expenditure to remain at similar levels to the previous 12 months.

Sustainability

79% said that sustainability was either a medium or high priority in their manufacturing process. 17% gave it a low priority, with 5% giving it no priority at all.

Lean Manufacturing

Perhaps as a way of offsetting increasing production costs, encouragingly, 28% of respondents say that they have adopted lean manufacturing principles in their processes and 52% say they have included lean manufacturing/ engineering principles in their future business strategy.

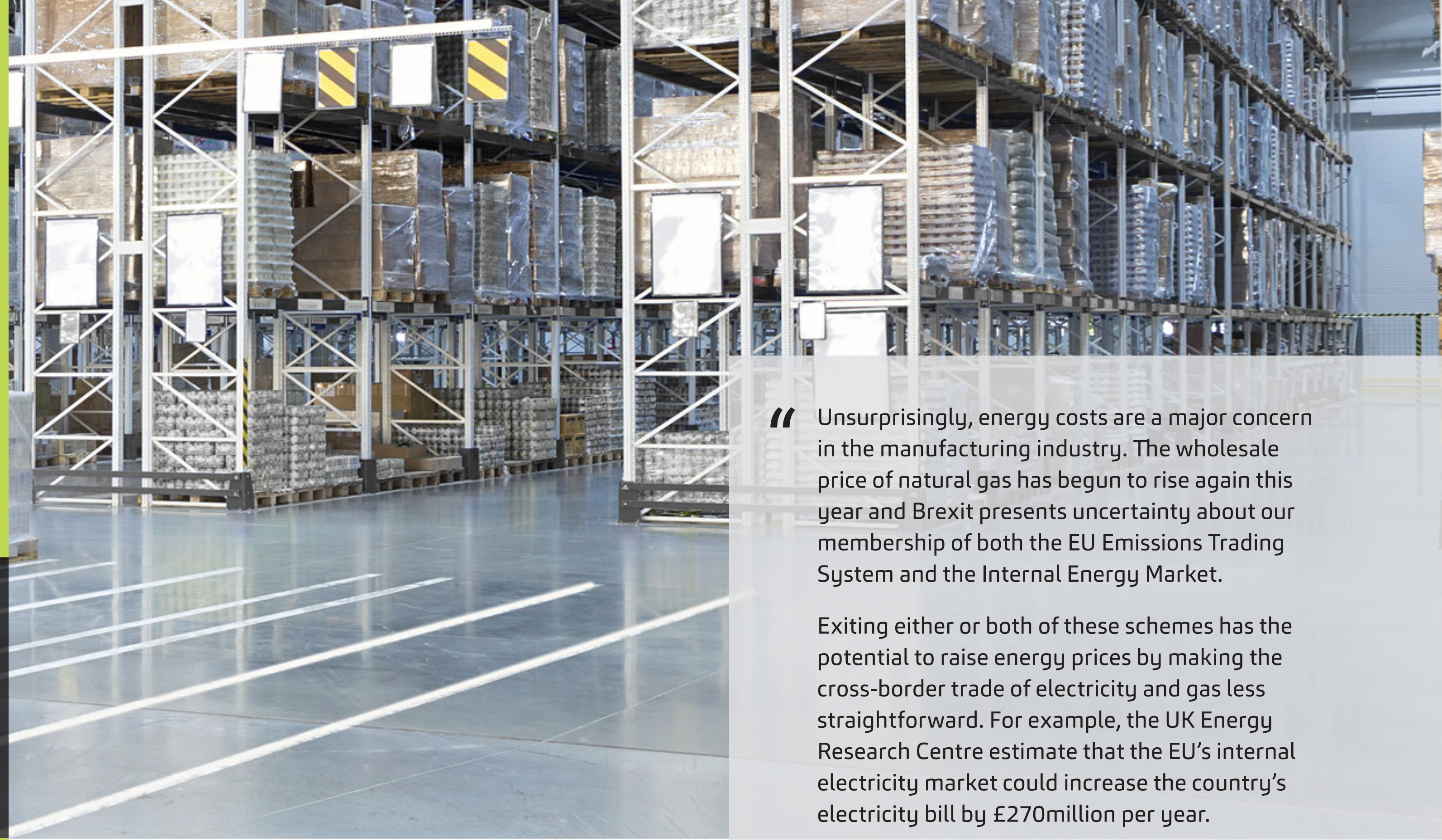
Case study: Little & Cull

An award-winning Devon food manufacturer has doubled its vegan range and is set to increase its production space with the support of a £2.7million funding package from Lloyds Bank Commercial Banking. Little & Cull supplies prepared meals to hotels, pubs, restaurants and catering companies across the UK. The firm has increased its range of vegan dishes to capitalise on the growing demand for vegan food. Sales of vegan products currently account for 10% of Little & Cull's £9million annual turnover, compared with 5% two years ago.

Following the increase in demand for its products, the company is expanding its premise for the second time in the past six months. The company has bought new office space with the support of a £500,000 loan from Lloyds Bank.

The new site will increase the firm's production space by 30%. Lloyds Bank's Global Transaction Banking team have also provided a £1million hire purchase facility to buy new fridges and a working capital facility of £1.2million to support the company's cash flow requirements.

Little & Cull currently employ 80 members of staff and is planning to recruit an additional 20 people by 2020. The latest funding means they will be able to move their admin and operations team into the new building in March, freeing up production space for their kitchen staff to create even more products.



Future Plans for Energy Requirements

With the levels of publicity around energy diversity, it is a shame to see that the number of respondents planning to remain reliant on traditional energy providers in the next 12 months has increased by 3% from last year to 54%. However, 23% are now looking for an energy efficient plant, with IE3 or IE4 motors, this has increased by 8% from last year. Also, 10% are planning to source renewable energy, and 8% already have.

Energy consumption remains a massive cost centre for manufacturers and engineering businesses, so anything that can be done to reduce those costs are a positive. Announcements of investment in new battery technologies and other initiatives around the grid could save billions of pounds thanks to major changes in the way electricity is made, used and stored, the government has said.

The ability of businesses to generate and trade in energy may be the consequence of these changes. This could be a positive and so the trend away from traditional suppliers might well accelerate.

"Unsurprisingly, energy costs are a major concern in the manufacturing industry. The wholesale price of natural gas has begun to rise again this year and Brexit presents uncertainty about our membership of both the EU Emissions Trading System and the Internal Energy Market.

Exiting either or both of these schemes has the potential to raise energy prices by making the cross-border trade of electricity and gas less straightforward. For example, the UK Energy Research Centre estimate that the EU's internal electricity market could increase the country's electricity bill by £270million per year.

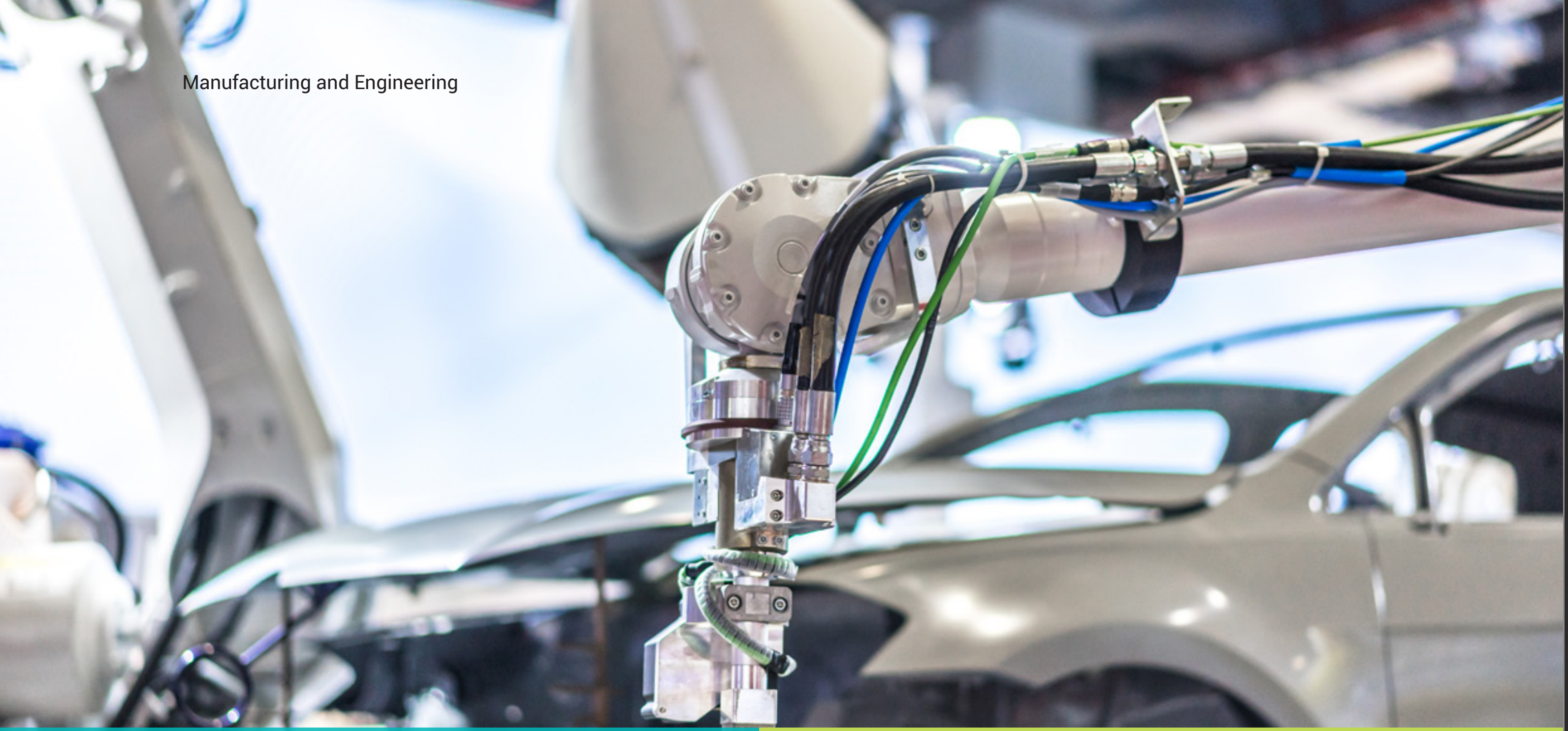
The good news is that the cost of renewable energy, like solar and wind, has fallen dramatically in recent years, and battery storage is following suit, and it is encouraging to see more companies look into alternative sources of energy and new business models of supply. Companies with suitable facilities could look into onsite production and storage of renewable electricity in order to save money.

As we move to a more distributed and flexible energy system, there will also increasingly be opportunities for businesses to generate revenue by providing balancing services for the grid. For example, by signing demand-side response contracts to agree to reduce output during periods of high electricity demand and therefore assist the system operator to manage the grid.

The government is committed to carbon pricing as a mechanism to decarbonise our economy. The price paid by industry for emitting greenhouse gases will inevitably rise over time. This has the potential to increase costs substantially for energy intensive businesses, but it also provides an incentive for leadership in low carbon alternative production processes.

The government will need to bring forward policies that enable manufacturing industries to reduce their carbon emissions, whilst ensuring factories are not lost to high emission countries through 'carbon leakage'."

Matt Rooney



66% Of respondents do not have a Brexit strategy in place

Automation

The direction the sector is heading, in terms of Industry 4.0, is demonstrated through the fact that 82% of respondents believe that they can automate a percentage of their manual processes over the next 10 years. 75% of respondents believe they could automate up to 25% of their manual processes within this time and of these, 20% believe that they could in fact automate up to 50% of their manual processes.

Industry 4.0 or the 4th Industrial Revolution is seen by many as a radical change, however inevitably its likely final outcome provokes a number of questions. What we do believe, however is that it is likely to build on existing technology with more advanced applications and better use of data rather than inventing something entirely "new". Whilst many believe that the revolution is already underway, the timescales shown in our survey are not too surprising when you consider the likely benefit for SME's will be several years after larger corporations, something that has been evident in previous revolutions, so it is encouraging to see our respondents working in this direction, although whether their timescale is "quick enough" raises another question.

A further interesting consideration would be whether it will provide an answer to the skills shortage evident within the sector, although what is perhaps more likely is that it will require different skillsets than those we have today.

Case study: A.W.Precision

A.W.Precision are Europe's leading manufacturer of Punches and Dies for the metal stamping industry. They also supply a full range of tooling components, along with offering sub-contract with turning, grinding, wire, EDM and milling/ centreless capabilities. Their latest addition is 3D printing. Their key USP is their speed to market. With in-house heat treatment, they can control the part from raw material through to finished component, which allows them to provide a bespoke service and gives their customers flexibility. They also pride themselves on their high-quality standards which are applied to every item.

Like many companies, they will have to deal with Brexit and the opportunities/ difficulties that come with it. They currently hire two apprentices on a yearly basis and have developed an in-house training programme that has already proved successful. However, they face challenges in finding and holding on to key employees, both skilled and non-skilled.

They currently export around 60% to mainland Europe, both east and west territories and around 7.5% to the USA and Asia. In order to remain competitive, A.W.Precision would like to see the government increase capital allowances, retain good free trade relationships with Europe and develop new relationships with the emerging countries. They would also like the government to increase access to training grants that include in-house/ company specific programmes.

Matt Rooney

CEng MIMechE, Engineering Policy Adviser, Institution of Mechanical Engineers

Matt Rooney is Engineering Policy Adviser at the Institution of Mechanical Engineers (IMechE).

After spending six years working on the design and manufacture of components for particle accelerators at the Harwell Science and Innovation Campus, he returned to study at the University of Cambridge where he primarily researched strategies for bringing down the cost of new energy technologies, with a particular focus on carbon capture and storage and small modular nuclear reactors.

Following this, he spent 18 months as a Research Fellow at a prominent think tank in Westminster before finally joining the IMechE in May 2018.

He is a British Science Association Media Fellow, having worked briefly as a science policy journalist with Times Higher Education. He is a fully chartered member of the Institution of Mechanical Engineers and holds an MEng in Mechanical and Manufacturing Engineering from the Queen's of University Belfast.

Making a Wish

As usual, we asked participating businesses to make a wish and tell us the three things that the government could do to help them.

At the top of the list (60%) was combating the skills gap, with businesses wanting to see an expansion in skills training for the future work-force at Secondary Schools, Further and Higher Education (FE) colleges.

The next highest priority for almost half of respondents (46%) was for a "soft Brexit", underlining that manufacturers and engineers are looking to see government providing a managed and planned exit and not risking a "no deal" scenario, followed by calls for a reduction in business taxes generally (34%).

Do you Have a Brexit Strategy in Place?

66% of respondents do not have a Brexit strategy in place as they feel they cannot plan for the impact until they know the government's strategy and the EU's response. Of the 34% that do have a strategy in place, 8% have considered the potential impacts and regard them as extensive and 26% regard them as limited.

"Uncertainty surrounding the outcome of Brexit hangs over British businesses and the manufacturing sector is no exception. It is surprising to find that only 34% have prepared a Brexit strategy with the withdrawal date so soon. However, whatever the deal that is eventually struck between the government and the EU, there will likely be a lengthy implementation period after the deal is agreed. Any Brexit deal will require time to set up the new systems and rules that will define our new relationship with the EU and the rest of the world. The only exception is crashing out with no deal.

As unpalatable as a no-deal Brexit might seem, larger companies with international supply chains are wise to prepare for the worst. Reportedly some companies have stockpiled important components and BMW announced that they have moved the annual shutdown of their Oxford plant from August to April so that production will not be affected if there is disruption in the immediate aftermath of the 29th March Brexit date."

Matt Rooney

Summary of Regional Variations

The results of the survey were taken from a cross-section of businesses across the UK. It is positive to see so many common themes, such as renewed optimism for growth, wherever these companies operate nationally.

In keeping with MHA's ethos of global expertise, national experience and local excellence, each of our member firms is committed to the local market in which it operates. Our team recognises that many businesses operate in distinctly different marketplaces, facing unique challenges depending on where they are in the UK.

North West:

The majority of respondents in the North West of England were SMEs employing fewer than 250 staff and operating in a wide range of manufacturing and engineering sub sectors. Predictions for revenue growth in the region are optimistic, with 78% of respondents expecting growth within the next year. Above the national average, an encouraging 93% of respondents intend to invest in R&D activities over the next year, with 70% of those intending to take advantage of R&D tax credits. Plans for employment are higher than the national average, with 69% of respondents intending to take on apprentices or trainees in the forthcoming year. In common with the national picture, there is clearly some work to be done around the availability of grant funding and government support in the region.

Wales:

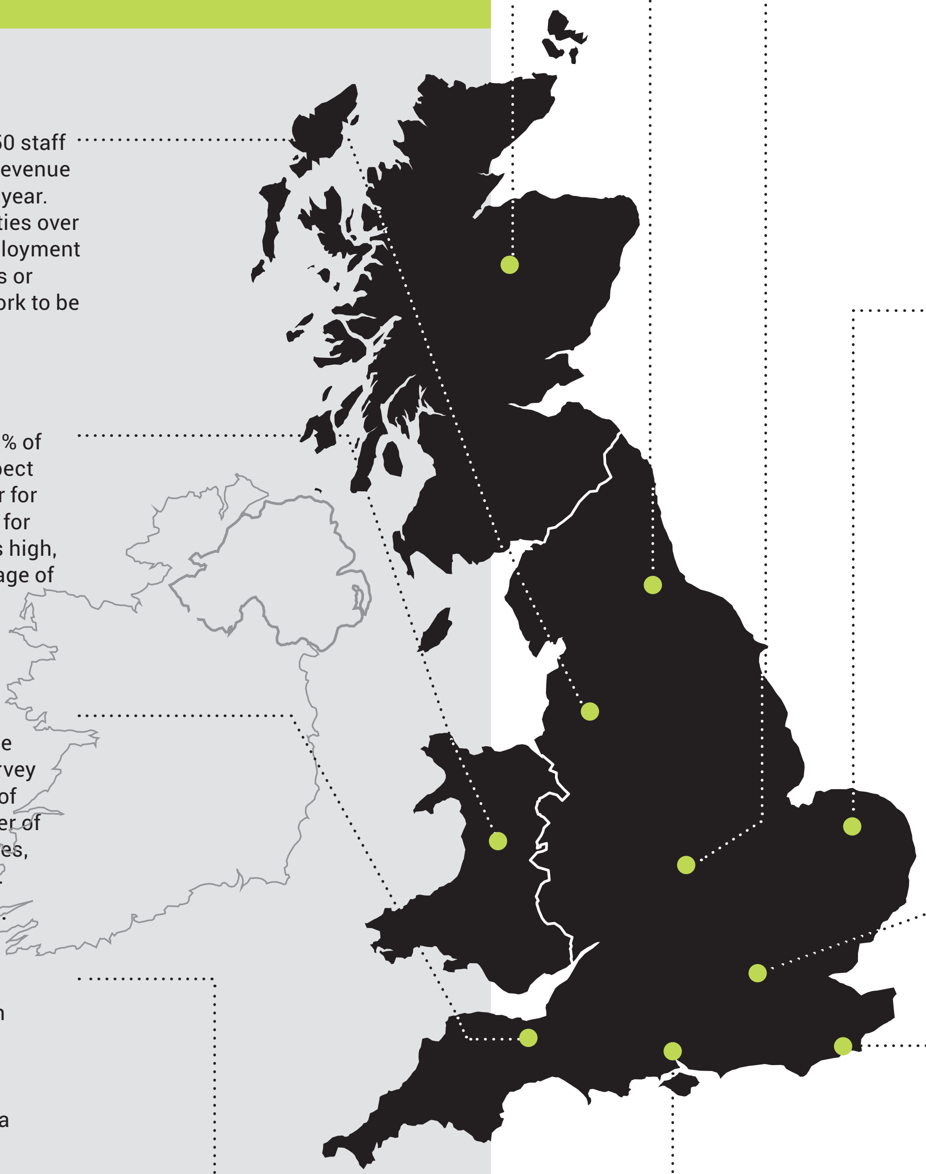
Welsh manufacturing companies remain optimistic about their predictions for growth, with 70% of respondents anticipating revenue growth of 5%+ in the next 12 months. 68% of companies expect to see staff numbers increase, as they look to expand production capacity with the main driver for growth identified as being increased customer demand, though the availability of and funding for new premises has increased in importance as a barrier for growth. Investment in R&D remains high, with 88% of businesses investing in this area, with an encouraging 60% aiming to take advantage of R&D tax credits.

South West:

Responses in the South West came from businesses of all sizes and a broad range of sectors. The view from South West businesses who responded to the survey is more optimistic than the national picture, with 73% of respondents forecasting growth, down 7% from last year. The survey confirms the ongoing struggle to recruit skilled staff, with 50% confirming there is a shortage of applicants with the relevant skills. Businesses in the South West are coping by way of a number of strategies, including investment in existing staff such as training/ benefits/ production bonuses, implementing lean manufacturing, looking to automation and investing in updated machinery.

South Central:

The South Central region confirms positive economic development in 2016/17, with 66% of respondents growing and 27% reporting levels of 10% or more growth. Optimism levels remain high, with 80% anticipating revenue growth in the coming year from increased demand and expansion of product ranges, but this is tempered by concerns over Brexit. R&D expenditure in the region lags behind the national average. Short and longer term business confidence remains high and in line with national trends, however, skills shortages continue to represent a barrier to growth for 30% of business.



Scotland:

65% of respondents achieved growth in some form in the last year, lower than the UK average at 69%. However, there continues to be optimism for growth for the year ahead with 59% (78% UK) predicting growth for 2018/19. This growth is expected to come from increased demand from customers, expansion of product, new markets overseas and increased productivity through lean manufacturing practices. 57% (16% UK) of respondents cited Brexit concerns and uncertainty over future trading tariffs as a key barrier to growth, followed by recruiting appropriately skilled staff. 36% (49% UK) of businesses expect staff numbers to increase in the next 12 months; however 55% (75% UK) of respondents have difficulty recruiting employees with the relevant skills, which are in short supply.

North East:

Respondents in the North East were typically companies with a turnover of £1million to £20million and were from a wide range of sectors including marine, automotive, construction and oil and gas. The outlook is generally positive, with 71% still predicting growth for the year ahead, this number has risen from 67% in 2017, but is down from 77% in 2015/16. This result is surprising given the turbulent political landscape, concerns over Brexit, trade and exports and a general lack of clarity in terms of available funding for the region. However, it is great to see that businesses are remaining positive, it's time for the region to pull together and encourage the manufacturing excellence they're so well known for.

Midlands:

The view from the Midlands' businesses who responded to the survey is less optimistic than the national picture, with 62% of respondents forecasting growth, a decrease of 17% on the previous year. This expected growth is forecast to between 1% and 5% and driven by diversification. During the last 12 months, 66% of businesses reported growth which compares well to the 73% who forecast growth in last year's survey. The majority of businesses do not have a strategy for Brexit in place. Of the 34% that do, 28% claim that Brexit will have a limited impact and 6% claim that it will make an extensive impact to their business. It is interesting to see the link between this and the high percentage of businesses predicting growth. In addition, 22% of businesses have lost staff as a result of the referendum result due to uncertainty relating to EU workers' rights, adding a challenge to the delivery of this growth against the prevailing challenge of recruiting the right staff.

East Anglia:

All of the respondents in East Anglia were SMEs with less than 250 employees with a turnover range of under £1million to £20million and operated in a wide range of manufacturing sub sectors. Optimism is high in this region, with over 73% of businesses expecting revenue growth in the next 12 months. Investment in R&D is also high, with 73% of businesses spending a percentage of their turnover, although this is lower than the national average. It is therefore surprising that 36% of respondents will not be making a claim for R&D tax credits in the next 12 months. It is promising to see a commitment to further investment in the sector, as 36% suggested that their level of capital spend would increase. Given the recent increase in the annual investment allowance to £1million for two years from 1 January 2019, it will be interesting to see the level of capital spend in the next two years in the region.

London and the South East:

Despite concerns about the impact of Brexit, this year's results show that manufacturers and engineers in the London and South East region are more optimistic than last year, with 80% predicting growth, which is up 5% in a year. 90% of companies surveyed are investing in R&D, which is 2% above the national average of 88%. 48% of respondents are anticipating increasing staff numbers in the next 12 months, not including taking on new apprentices. However, 48% of respondents have had difficulty recruiting staff with relevant skills. Therefore, it is not surprising that expanding skills training for the future work-force was the highest ranked action the government could take to help businesses in the region.

South Coast:

Optimism around turnover growth over the next 12 months was slightly lower than the national figure, with 60% of businesses predicting growth. Retention and recruitment is an even bigger issue this year than last year, with 89% of respondents finding it difficult to recruit staff and over a quarter (27%) already losing staff to the Brexit effect (the national figure being 20%). Anecdotally, although not specifically covered in the survey is the growing concern around the lack of availability of commercial/factory space for both new and expanding businesses in the region. The survey again confirms that the message around R&D tax credits is still not being heard by enough businesses which is a frustration, given the scope of the relief available.

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