



The
manufacturers'
organisation

120 YEARS
BACKING
BRITAIN'S
MAKERS

MANUFACTURING AMBITIONS

An industrial strategy for a stronger economy



In partnership with:



NatWest

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FOREWORD

There are three key things policy makers and the public should understand about manufacturing in the UK today. The first is that the sector is more than a 10% output share of the economy, manufacturers make a greater than 10% contribution to exports, investment and productivity. The second is that manufacturing is more than products, it's about the know-how to make the best and the services that offer added value. And finally it's connected – to the global markets it sells to and as part of complex, interdependent supply chains.

Our latest research, in partnership with NatWest, aims to provide a deeper understanding of why our industrial base should be seen as critical for future growth and competitiveness. It also provides us with the insight to work collaboratively with the sector to make it stronger and fit for the future.

Manufacturers have ambition. The majority want to see their businesses grow and have plans in place to make that happen. Ambitions to increase market share, become more profitable and with explicit targets to improve productivity tell us that companies in the sector aren't satisfied with standing still. And in the context of the UK's forthcoming exit from the European Union, these are goals we need to nurture and support.

Success won't just hinge on doing more of the same. Many of the new business models that some thought would be a quarter of a century in the making are under development. The shift to value added service provision and a focus on the potential benefits of the circular economy are becoming more common alongside every greater efforts on innovation and supply chain development. And playing an increasingly important support role in investment in new, digitally connected technologies that will help manufacturers on their journey to the fourth industrial revolution.

There is a lot to be positive about in terms of the future plans of our sector. In the next decade, we want to see, not just even more productivity and great innovations,

but a step change in the adoption of new technology; more companies embracing the circular economy; a reversal of the sector's expanding trade deficit and the UK taking a global lead in the development and manufacture of new solutions and in new sectors.

Global headwinds and the new source of uncertainty that has arisen following the EU referendum must not get in the way of progress. Manufacturers also report internal challenges from insufficient resources to deliver their business ambitions and the pressures of managing conflicting priorities to challenges in identifying sufficient domestic supply capacity and developing collaborative relationships.

We are also all too familiar with some of the challenges in the UK business environment – some longstanding and other more recent in the making – which make it more difficult for companies to achieve their growth goals or make the UK a less compelling location choice for new investments. This is where an ambitious, cross-government industrial strategy has to play a more active role.

Businesses have clarity over their plans for growth and how they are going to get there. Government needs a plan too. A targeted focus on improving productivity, raising investment in technology and innovation and righting our trade deficit must be a priority. And not just for one part of government, but for all of it. This shared sense of purpose should then translate into greater predictability for UK manufacturers about new policies and drive a more coherent approach to supporting growth.

We know there is a lot to do, but for manufacturers, government action across the four pillars of a more productive workforce, more reliable infrastructure, a lower cost of doing business and better support of growing businesses would send a strong signal that government is committed to boosting industrial excellence across the UK for the long term.

THE CURRENT MANUFACTURING LANDSCAPE

The UK economy has been through the mill over much of the past decade, but in many ways growth has proved resilient. UK GDP has expanded in every year since the end of the financial crisis with cumulative increases over this period putting us in third position in the G7 growth league.

Households have been one of the big driving forces behind growth, and business investment in new equipment and intangibles has been rising steadily, making an important contribution to the UK's recent economic performance.

There are some challenges, however, that we have struggled to overcome. The patchy performance of the global economy has dented our ability to secure much in the way of export-led growth, and the UK economy has been plagued with the developed world curse of feeble productivity growth in recent years. And these challenges have contributed to divergent growth outcomes for different sectors of the economy. For example, the services sector regained all its recession losses within three years, while manufacturing and construction have not yet made up the ground lost in 2008/09.

Where is UK manufacturing today?

Manufacturers are still on the long climb back to pre-recession levels of output, but there are some key sectors and regions in the UK that have bucked this trend. Critically, investment in modern machinery and in research and development has marched forward, maintaining the sector's greater share

of the economy-wide total relative to output.

The on-going need to fill skills gaps and bring new talent into the industry has seen employment grow and average wages across the sector stay ahead of that in the economy as a whole. Despite a rather stop-go productivity performance, both levels of output per hour, and growth, have continued

to beat those in the service sectors, with continued strong performance from industries such as the UK's world leading transport and pharmaceuticals sectors.

All of this gives us much to be optimistic about, in terms of manufacturing's future potential and its contribution to the UK economy in the next decade and beyond.



MILLION EMPLOYEES



45% OF UK EXPORTS

68% OF BUSINESS R&D



Where manufacturing needs to be

Some of the inherent strengths across UK manufacturing have helped the sector retain its 10% output share of the economy and it continues to rank amongst the top ten manufacturing nations in the world. But we must be striving for more ambitious outcomes for the future.

While UK manufacturing has survived the challenges of the past decade, more of the same will potentially see the UK slip down the international rankings and leave the UK over-reliant on importing technological solutions from the rest of the world. Rather, by 2026 we should be striving for the outcomes set out in Table 1. We shouldn't adopt a balanced scorecard approach to these aims, rather, making progress on each one will be critical in ensuring we have a dynamic and strengthened industrial sector over the next decade.

The following sections look at the extent to which manufacturers have the ambition and the business plans in place to make the necessary progress on these targets, our chances of success, and what barriers the sector will need to overcome on the way.

Table 1: 2026 Ambitions for UK Manufacturing

A more productive sector	productivity levels out-ranking the G7 average
	a significant reduction in skills shortages and hard-to-fill vacancies in the sector delivered through upskilling and increased levels of automation
	development of the UK 'mittelstand' with more manufacturers breaking out of the SME ranks, growing in mid-size and large international businesses
A stronger trade position	the UK to retain its status as a world-leading destination for manufacturing FDI
	a greater proportion of manufactured content sourced from UK supply chains
	a drastically reduced trade deficit in manufactured goods and increased trade surplus in services from manufacturers, secured through on-going export links with EU partners and greater penetration into emerging markets
Greater investment in technology and innovation	the UK to build on its global strengths in industries such as transport, defence and life sciences
	UK manufacturing to be seen as an early mover in the fourth industrial revolution ¹
	a doubling of R&D expenditure as a proportion of GDP, taking the UK from an innovation follower to an innovation leader
	manufacturers' making a clear contribution to improving resourcing efficiency and embracing the circular economy

¹See more at www.eef.org.uk/fourthindustrial

WHAT ARE MANUFACTURERS' AMBITIONS?

The theory of economic rebalancing gives UK manufacturers a fairly significant supporting role in delivering the innovation, technology and trade-driven growth necessary to underpin sustainable growth and improvements in living standards. But in the midst of the headwinds facing manufacturing and the rest of the UK economy, are companies gearing up to make this contribution in the coming decade?

In an industry survey conducted before the EU referendum in June 2016, we explored how far manufacturers' growth ambitions stretched; whether these were backed up with a business plan, and what investments, partnerships and business models we'd be seeing more of in the future.

Growth: How much are we aiming for?

When looking at the contribution that industry makes to growth we frequently jump to the problems; there are often assumptions that companies are complacent, or too cautious and risk averse, to take the steps needed for transformational growth.

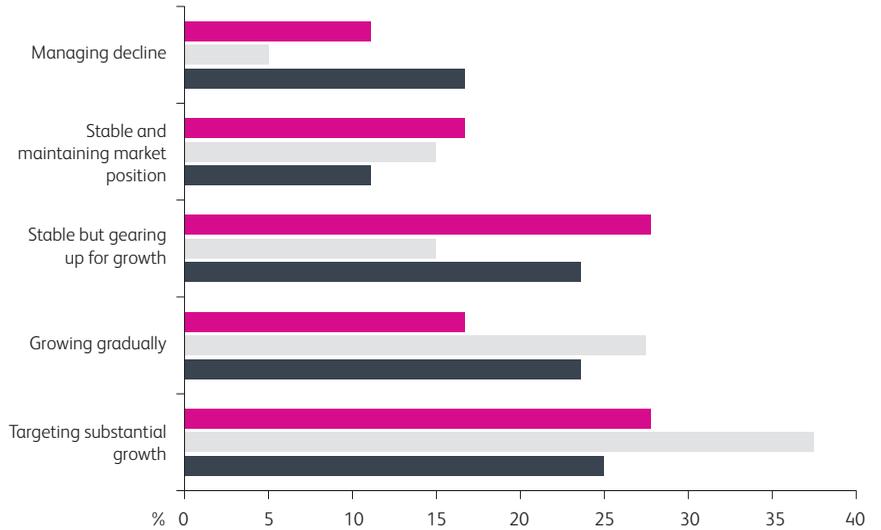
Our starting point in this report is to understand the ambitions of manufacturers themselves. Pre-referendum, our survey showed an encouraging three-quarters of manufacturers were going for growth – ranging from the substantial to those laying the necessary foundations for future growth (shown in Chart 2).

These goals are underpinned with clear business plans which, for over 70% of

Chart 1: Majority of manufacturers going for growth

% of companies describing their current approach to business growth

■ Large ■ Medium ■ Small



Source: EEF Manufacturing Ambitions Survey

“ Three-quarters of manufacturers were going for growth – ranging from the substantial to those laying the necessary foundations for future growth. ”

manufacturers, extend into the next three to five years.

Growth means different things to different manufacturers. While expansion is the end goal for around three-quarters of manufacturers, there are multiple metrics of success, as shown in chart 2.

There isn't a one-size-fits-all view of ambition, it means different things to different manufacturers:

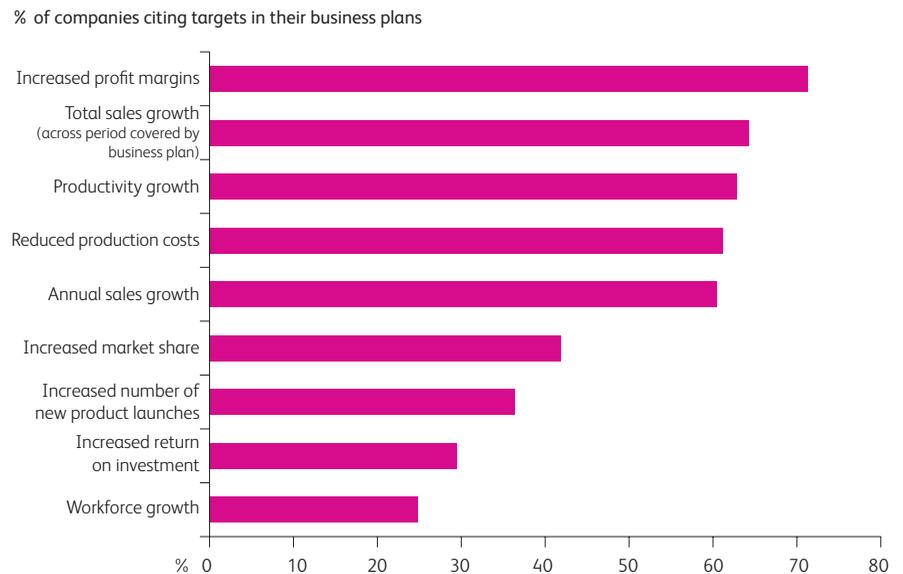
1. Improving profitability: seeking to address the weakness in performance

Regardless of size or how ambitious their growth plans are in the coming years, manufacturers are looking for improvements in profit margins. This has been noted over the past two years as an area of weakness, as companies report falling profitability. Additionally, companies in manufacturing and in other segments of the economy have become increasingly reliant on retained earnings to finance investment plans. The SME Finance Monitor indicates a continued reluctance to borrow for investment, upping the ante on delivering improved profitability for future growth.

2. The importance attached to productivity growth by politicians and economists is not lost on industry

The weakness in UK productivity, particularly the gulf that has opened up since the financial crisis, is a source of national concern. Sustainable economic growth and improved living standards won't come without productivity growth. For companies, getting

Chart 2: Profits, productivity and sales are goals for growth



Source: EEF Manufacturing Ambitions Survey 2016

a productivity higher value of output with fewer inputs is key to success in international markets. It's encouraging that improving productivity is an explicit aim of three-fifths of companies in our survey, an objective that is evenly shared across the supply chain.

3. Ambitions are rooted in winning new business – increasing sales and growing market share almost unanimously cited by our survey respondents

New sales, securing new customers and gaining market share are measurable indicators of success, and a combination of these outcomes is ultimately what every manufacturer in our survey is striving for. In our sample, those

manufacturers setting out for substantial or gradual growth are more interested in gaining market share.

4. Success is not however, actively gauged by headcount or innovation outcomes in the form of new product launches.

In contrast to how success might be measured by those outside of industry, manufacturers generally are not targeting metrics such as levels of employment, or the number of new or improved products launched into the market. These are more likely to be consequences of higher levels of growth or innovation, and having the right skill set amongst employees, rather than priority outcomes in themselves.

GROWTH INTERDEPENDENCIES – THE IMPORTANCE OF SUPPLY NETWORKS

Getting the supply chain right

No manufacturer is an island. Modern manufacturing is built on complex supply networks which extend beyond UK regions and around the globe. Just over three-fifths of manufacturers report having over half of their supply chain located in the UK, although large organisations and those at the top of the tree have rather less domestic supply chain capacity – either by choice or necessity.

The relationship across these supply chains can be an important determinant of success. All of the manufacturers in our survey collaborate with their supply chain, to some degree, in order to achieve the objectives in their strategic business plan. Current and planned supply chain engagement is illustrated in chart 3.

The final product – design and development, and customisation – is at the centre of supply chain relationships. Around two-thirds of manufacturers currently see collaboration on product development as a means of achieving their goals. Inevitably, these responses are consistent regardless of where our respondents sit in the supply chain. Following close behind is the role of process improvement and demand planning in delivering business goals. Over 70% of OEMs and Tier 1 manufacturers see this as mission critical right now. Complex production schedules, and the importance of on-time delivery and quality in

Chart 3: Production collaboration the backbone of supplier relationships

% of companies working with supply chain to achieve strategic business plan objectives



Source: EEF Manufacturing Ambitions Survey 2016

maintaining competitive advantage, mean working with the supply chain to provide good visibility of demand schedules and working to secure the advantages that come with on-going production process improvements. Together, these four most cited actions (chart 3) offer the greatest benefits to the companies engaged in these activities with their supply chain. What appear to be the rather less mature forms of supply chain co-operation – working with the supply chain on the adoption of lean

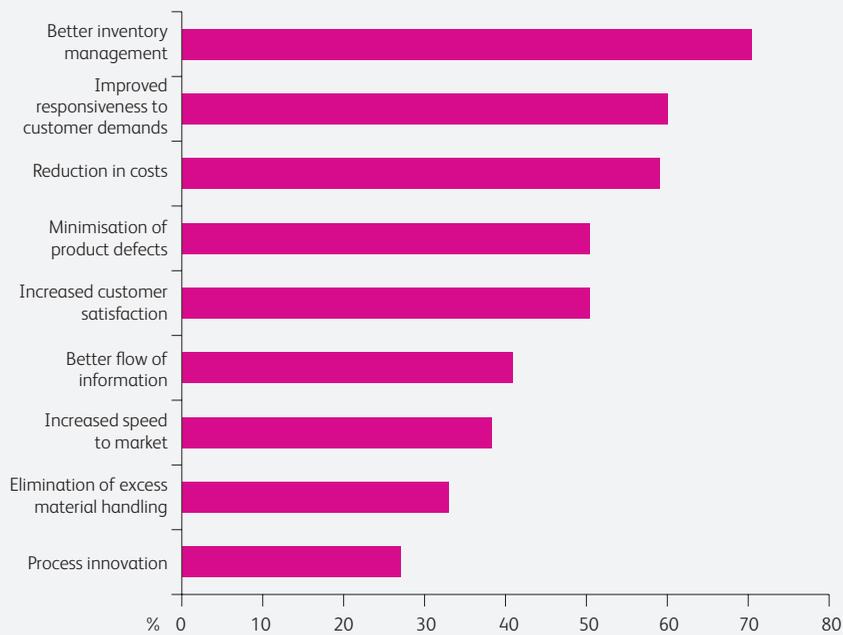
techniques or new technology uptake – fall into the more strategic and potentially more intensive, end of the collaboration spectrum. Encouragingly, almost as many companies plan to, or have expressed a desire to, work with their supply chain on new technology investment as are currently doing so.

Does collaboration help deliver business ambitions?

With finite resources and a highly competitive trading environment, efforts to develop deeper supply chain

Chart 4: Better cooperation works across the supply chain

% of companies citing benefits from cooperation



Source: EEF Manufacturing Ambitions Survey 2016

relationships have to pay off and our survey suggests that this is indeed the case. Across the whole sample of manufacturers the biggest benefits from supply chain collaboration are improved inventory management, better customer responsiveness and lower costs. There are also gains to be had in terms of customer satisfaction, product quality and better information flows across the supply chain.

The upside of collaboration appears, however, to fall differently depending

on manufacturers' position in the supply chain. Much of the benefit is reported by OEMs and Tier 1 manufacturers – with this group most likely to cite gains from cost reduction, inventory management and quality. Further down the supply chain, there are advantages to be found through increased speed to market and the ability to be more responsive to customer requirements.



Growth: How will we get there?

Manufacturing is, once again, entering a period of significant evolution. Manufacturers and industry watchers are increasingly discussing the advent of the fourth industrial revolution (4IR) or Industry 4. But what actually is it, what will it mean for businesses and can we see signs of this impacting on manufacturers' future growth ambitions?

What is 4IR?

It is about linking physical networks with cyber networks as one system to allow real time information flow. This will give companies insights that can be discovered and acted upon quickly, boosting the value add to customers.

The business models of the fourth industrial revolution?

While the focus on 4IR often quickly switches to investment in new equipment and software, it will also be an enabler of new business models, which can drive higher value activity across the sector. In 2013, the Government Office for Science considered the future of manufacturing out to 2050 and how manufacturer's business strategies might have evolved by the middle of the century. The report identified some big shifts that would underpin the future competitiveness of the sector – outlined in box 1.

To some extent, the Foresight analysis may have underestimated the pace of change. In order to meet their growth ambitions, many manufacturers are currently spreading their wings into these new activities or developing strategies to adopt new business models in the not too distant future.

Adding value through innovation

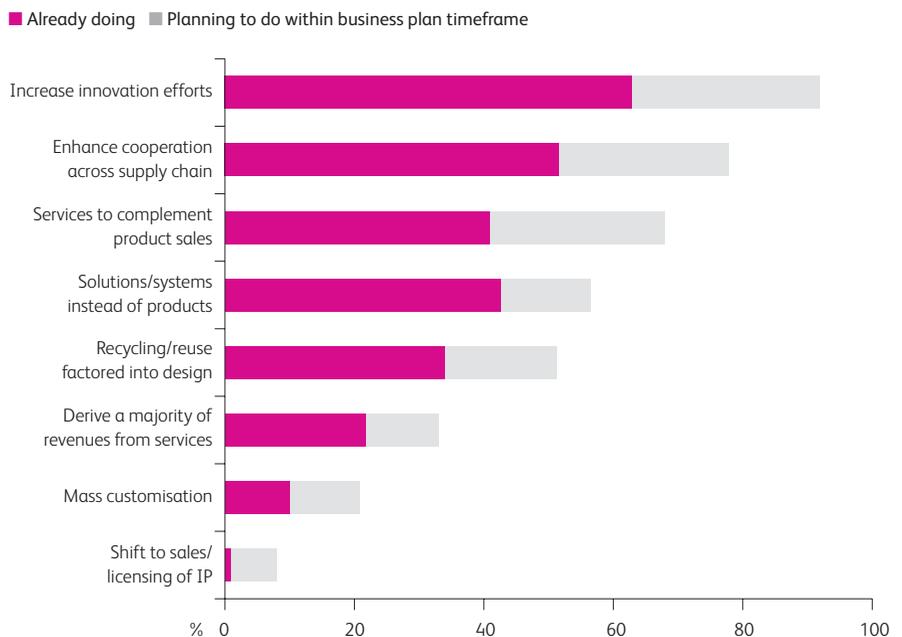
Chart 5 illustrates the strategies which

Box 1: New business models explained

Personalisation of products/ Mass customisation	Using information and technology advances to enable products and services to be tailored with greater customer-specificity. Information-enhanced products and services will offer opportunities for additional value creation.
Service-enhanced business models	Part of the current move towards servitisation, with increasing revenues derived from services related to the final product sold.
Service-oriented business models	Part of the current move towards servitisation, where a high proportion of revenues are service derived through charging for access to a product and exploiting technology to manage equipment performance.
Factory-less goods producer	Design and sale of products with outsourcing of production. Expenditure on R&D will be recouped not just from selling products but the sales or licensing of design and development.
The circular economy	Driven by resource security and changing customer demand, this will lead to a shift in the design of products to reduce costs and also different ownership models. Re-manufacturing will be commonplace with more standardisation and initial design considering re-manufacture from the outset.

Chart 5: Manufacturers use winning innovation formula and new business models to deliver growth

% of companies implementing strategy as part of their business plans



Source: EEF Manufacturing Ambitions Survey 2016

will deliver growth ambitions, that are under operation or being developed. Almost compulsory amongst UK manufacturers is the need to raise their game on innovation, with three-fifths of companies currently upping their focus on innovation and just under a third planning increases over the course of their business plan. Further analysis also points to the fact that the most ambitious manufacturers are more likely to be already raising their efforts to secure better innovation outcomes.

If there are any cracks in this positive picture of innovation performance it's amongst smaller companies. While SMEs in manufacturing continue to have a higher propensity to innovate relative to other parts of the economy, our survey still reveals that around one in seven of the smallest companies don't see innovation as playing a role in their future growth plans.

This could be a disadvantage when it comes to building relationships with customers and other parts of the supply chain, given the prominence that is also being given to working with supply chain partners now and in the future on new product development (see chart 3). These plans are consistent with a whole

range of data which highlight the overall importance of manufacturing to the UK's innovative output, but also the critical nature of R&D in companies' strategies to improve competitiveness.

Manufacturers as service providers

Featuring strongly in manufacturers' business plans is the provision of services and solutions rather than simply a product. We've seen a growing focus on offering services to customers and associated investment in service innovation and skills.

In our latest survey we see two-fifths of manufacturers complementing their revenues from products with sales of services, and another quarter expect to be generating more sales from services over the course of their business plan.

Separate EEF research reveals that service provision is still mainly a domestically focused endeavour. Of those offering services, a quarter supply them only in the UK market, with EU customers taking up a largest share of services exports from the sector. Nevertheless, manufacturers sell a higher value of services overseas than we buy in from other countries, providing a surplus of around £5 billion

in 2015. While our discussions with manufacturers show that business models including the provision of services can support more resilient revenue generation, particularly when economic conditions become more challenging, there also appears to be untapped opportunities in overseas markets - which could improve the sector's net trade position.

Taking a service-based strategy forward, especially in export markets, does require new skills sets. And potentially new organisational structures and compliance with different rules and regulations from those which govern the export of goods. All of which means that while there are growth benefits to be had from a service-oriented business model, it can involve complexity from the innovation of new services to the organisational change and skills development needed to execute such as strategy.

Going green - eventually

Less likely to be driving business growth in the coming years are extracting benefits from the circular economy, through embedding recycling or re-use in production cycles and mass customisation. Starting with the circular

“ In order to meet their growth ambitions, many manufacturers are spreading their wings and adopting new models. ”

economy, the inevitable drive towards ever greater resource efficiency means that for reasons of cost, regulation or customer requirements, this will become an increasing priority for manufacturers. However, this is only been seen as a means of driving business growth by a third of companies.

We would caution against assuming manufacturers were ambivalent about resource efficiency given recent runs of rising commodity prices impacting on firms' bottom line. This is, potentially, linked to the challenge of turning an environmental necessity into a commercial opportunity and the change in consumer behaviour – both businesses and households – that still needs to happen before the circular economy becomes a more prominent feature of companies' business models.

Finally the rise of mass customisation – or batch 1 – is only just getting off the ground for a very small minority of manufacturers in our survey. One in ten respondents claim to already have adopted mass customisation as part of their business plans, with the same proportion laying the foundations for future changes in their production

process. Interestingly this isn't the preserve of small and potentially more agile manufacturers, with large companies just as likely to have adopted, or planning moves to, mass customisation.

Perhaps one of the most significant enablers of this strategy is information – data about customer requirements, product usage and maintenance. Technological change, such as additive manufacturing and big data analytics, will also be critical for manufactures moving towards the personalisation of products. Critically, this will also require more flexible and responsive supply chains. Given the need to line up a significant number of moving parts to take such a strategy forward, it may be some time before we see consideration being given to mass customisation as a business model by the majority.

Investing in support of business priorities

As shown, there are a breadth of strategies under development that will help manufacturers meet their growth ambitions. Ambition and strategy are only part of the equation, success ultimately also needs a range of investments.

Innovation has been a strong theme in our survey – from metrics on new product launches to raising the level of investment in R&D and strengthening collaborative innovation relationships through supply chains. This requires financial resources as companies invest more in in-house R&D, new software, design and prototyping.

Tangible investments also form part of successful business plan delivery. In recent years we've seen expansion plans tempered by economic uncertainty and the fallout from the crash in some commodity prices, such as oil. And now we have a new source of domestically-created uncertainty following the referendum vote to leave the European Union.

That said, progress towards 4IR will continue at pace in competitor countries and UK manufacturing cannot afford to take a pause until this latest bout of economic and political uncertainty passes. Certainly, pre-referendum, manufacturers were reporting some plans to invest in technological advances, such as the additive manufacturing technology that might support the shift to mass customisation, as well as a range of

“ Ambition and strategy are only part of the equation, success ultimately also needs a range of investments. ”

internet-enabled capital equipment for better data capture.

Existing and planned technology investments are illustrated in chart 6. The most common investments currently, and those being planned, are directly connected to the physical production process, with around a third of companies already invested in multi-purpose production lines and capital equipment with networked control systems and sensors. What is clear is that our sample seems to be split between relatively early adopters and those for which these advances are not yet on the radar.

The appetite for other 4IR technology seems to be lagging with more significant investments in rapid additive manufacturing or 3-D simulations currently confined to a small minority.

While we know that manufacturers' 4IR journey will involve more than investment in equipment, investment in staff (83%) and management skills (65%) will be important precursors of such expenditure. Nevertheless, with current and future business models likely to require better connectivity through the supply chain, better data and analytics, and better flexibility of production processes, levels of investment in these advances will need to accelerate. The question remains, what pace is achievable and how can businesses be better supported in their decision making and implementation?

Ambitions, targets and strategies – a round up

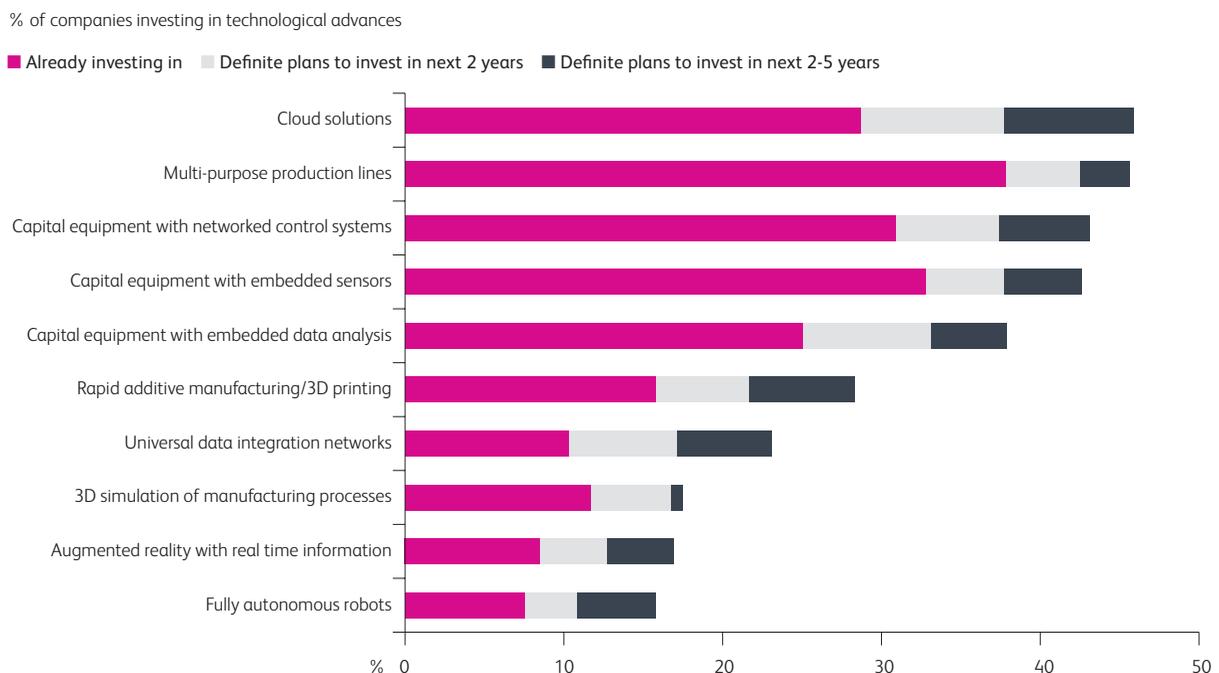
Our survey and discussions with manufacturers reveal the emergence of a number of positive trends across the sector. The majority of companies

are indeed looking to improve their performance and lock in growth in the coming years, with rising sales, profits and productivity topping the priority list.

Achieving this will require resources for investment, new thinking on the products and services that will drive increasing sales and market share in a competitive global market place, and broader and deeper relationships right through the supply chain.

While there is much here to instil some confidence about the future health of UK manufacturing, is this enough to keep the sector on track for the 2026 goals set out earlier in this report? The next section will take a critical look at the likelihood of success.

Chart 6: Production related technology leads the fourth industrial revolution



Source: EEF Manufacturing Ambitions Survey 2016

NATWEST VIEWPOINT



We all know the manufacturing sector has been dealt its fair share of challenges. But it's resilient. And so perhaps it's not surprising that the findings of this report show UK manufacturing is not only continuing to show ambition to grow, but that it's looking ahead to a future of plentiful opportunity. Particularly with the rise of some key technologies - sophisticated robotics, the internet of things, new materials and the development of high-tech, low-cost technology - they're all proving transformational and UK manufacturing is at the forefront of this exciting landscape.

Technical advancement aside, increasing globalisation and shifting demographics mean that manufacturers are steadily changing how they operate and collaborate. They're much more open to diversifying their supplier networks, and adapting to new markets so they can offer customised options to suit their customers.

And it's against this backdrop that NatWest launched the Future Fit program. Underpinned by in-depth interviews we conducted with around 300 UK manufacturers and industry experts, it continues to provide us with a balanced and informed understanding of the opportunities and challenges faced by medium-sized enterprises in the sector. And what it demonstrates to us is that each manufacturer is unique, and likewise the support and advice they need for long-term innovation and growth.

So this in turn is guiding us in adapting the service we provide to our customers. It's not just about providing finance. It's about genuinely understanding each manufacturer's needs and challenges, where they want to be, and what we can do to help them fulfil their potential. The findings in the Manufacturing Ambitions report are synonymous with the conclusions in our own research, and while as a bank we mightn't have all the answers, we do know one key area where we can help.

A robust and cohesive support network is vital for the future success of the sector. This means manufacturers having access to an ecosystem of creative and productive contacts, and mentor-type facilities that can help tackle some of the obstacles faced by businesses, while at the same time nurturing the opportunities available to progress.

One of the ways we're doing this is by teaming up with high-value manufacturing (HVM) Catapult Centres around the UK. We've started our own progressive mentorship program that encourages collaboration and communication with industry peers, universities, the government and industry associations such as EEF, to help companies find new ways to innovate.

The challenges ahead are not insignificant. But it's encouraging that the Manufacturing Ambitions report suggests that investment in modern machinery, and in research and development, has moved forward. This is echoed by our own

experiences, and NatWest's specialist asset finance provider, Lombard. It's also committed to servicing the sector, and has been supporting businesses with getting the equipment they need to grow for over 150 years.

'We're keen to support manufacturers with their investments. But we want to do far more than this to help customers reach their goals. We advise businesses on smarter choices that support their long-term needs, and suggest ways they can better manage their business. We also look for other opportunities to reduce costs and increase efficiency – such as green energy and government incentives.' Hiten Sonpal, Head of Specialist Sectors, Lombard.



Manufacturing has a significant role to play in providing a thriving economic base for the UK as a whole. But to succeed, the sector needs the right level of support to make steady and consistent progress across the areas highlighted in this report.

At NatWest we share the same ambitions for the future. And through our Future Fit program, we're committed to succeeding together - one step at a time.

Richard Hill, Head of Manufacturing and Automotive, NatWest
Hiten Sonpal, Head of Specialist Sectors, Lombard
 For a copy of the Future Fit report visit: contentlive.co.uk/futurefit

ARE MANUFACTURERS' ACTIONS SUFFICIENT TO REACH OUR 2026 VISION?

Following the economic ups and downs of the past decade we cannot be complacent about putting the UK manufacturing sector on a stronger growth trajectory.

While we've seen the extent of ambition from manufacturers in the coming years, can we be confident that this will ultimately be sufficient to drive the growth and productivity improvements we need?

We've taken a look at how our survey results stack up against our vision for a dynamic and successful manufacturing sector over the next decade. The table below provides a summary analysis.

Our simplistic RAG analysis, based on the results of our survey and discussions with companies, suggests that manufacturing is on the right path but success is not locked down. In order to move the needle on any of these metrics we need to consider what some of the barriers to progress are.

Challenges to overcome on the journey

We break these down into some inherent weakness in the sector, the barriers manufacturers themselves have identified to successful delivery of growth plans and where the business environment might also be holding back the sector's potential.

Table 2: How do manufacturers' ambitions align with our 2026 vision?

2026 ambitions	Manufacturers' ambitions
A more productive sector	
Raise productivity to the G7 average	A majority of manufacturers have an explicit productivity target, but we'll need to improve significantly faster than competitors to hit G7 average.
Reduce skill shortages	This seems to be the sector's Everest. Skills challenges across manufacturing and at all levels are well documented and 46 % of survey respondents say lack of people is a problem when defining business strategy.
A growing number of mid-size and large businesses	There is a will amongst SME manufacturers, but we have struggled to develop the 'mittelstand'. This may take more than ambition, but the right policy framework for growth too.
A stronger trade position	
Anchor and increase manufacturing FDI	n/a
Increase UK supply chain capacity	Insufficient quantity of UK suppliers a consistent problem, imported content on the rise and a quarter of manufacturers see this as a problem. Will Brexit help or hinder?
A lower trade deficit across manufactured goods and services	Current services surplus provides good platform for growth, but goods deficit requires a major push in new markets and efforts on import substitution.
Global leadership in emerging sectors	n/a
Greater investment in technology and innovation	
Early adopter of 4IR technology	Some investment undertaken in production technology advances, but non-adopters in the majority; skills development a necessity.
Double R&D expenditure	Strong focus on R&D across the sector, but availability of resources and support will be important too.
More companies embracing the circular economy	Emerging signs that this is becoming a feature in business plans, but a much greater demand pull would support further efforts.

1. Uncertainty

Firstly, uncertainty of any kind – economic or political – is the enemy of ambition and investment. A lack of visibility of future demand, policy changes that influence the returns on investment, or change the dynamics of trading relationships – all make long-term planning more challenging. Currently UK businesses are facing a mix of challenges from the lack of clarity about our future relationships with the EU and economic risks in the wider global economy – unrelated to Brexit.

2. Supply chain dynamics

Manufacturers have indicated the importance of supply chain relationships in their growth plans, but while there is much positive engagement, which is bringing tangible benefits to companies, there are weaknesses too. Our survey sought to explore where weaknesses exist and if they are particularly acute for different segments of the supply chain. Chart 7 shows the range of challenges emanating from supply chain relationships across the sector as a whole.

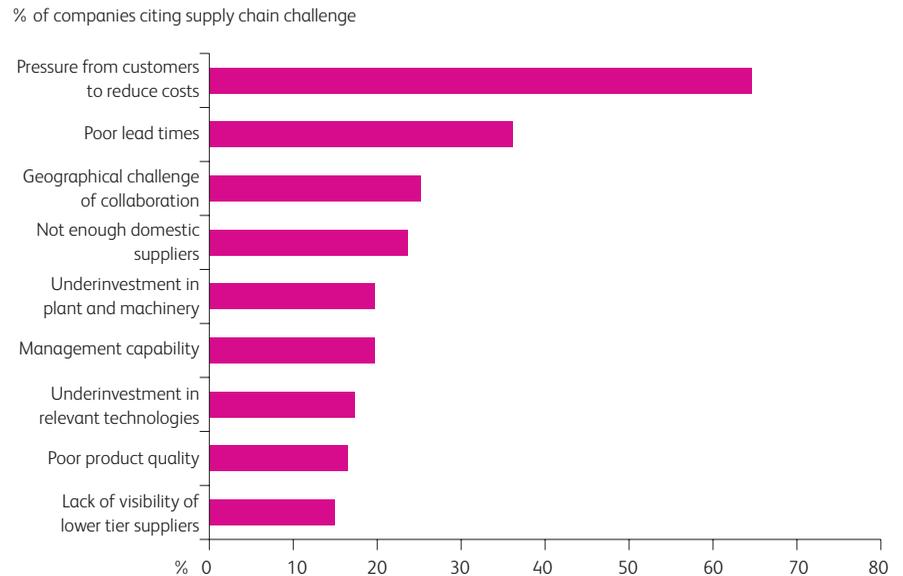
– Persistent payment problems

There has been lots of action to try and improve payment relations through the supply chain. Our survey shows that ever lower costs are taking their toll on some companies, and hence affecting relationships in the supply chain.

– The need for better quality and engagement

The second biggest challenge in the supply chain is issues with lead times, one that seems more acute in the consumer sector, than in other manufacturing industries. Unpredictability or shortcomings on lead times disrupt production schedules and has been cited as one of the reasons why manufacturers have sought to re-shore production from overseas.

Chart 7: A few clouds on the horizon for supply chain relationships



Source: EEF Manufacturing Ambitions Survey 2016

– Investment in the supply chain not matching needs of customers

While not a problem for the vast majority, the question of the right investment at the right time is causing problems for around a fifth of the manufacturers in our survey. The rise of digital technologies and their inevitable transformation of supply chains means that some industry segments risk getting left behind. But better communication with customers may also help improve decision making in this complex area.

3. Internal pressures

The internal and management issues associated with developing and implementing growth plans as highlighted in our survey are shown in Chart 8. These are well-understood and longstanding in the sector, such as access to the right skills. In addition, companies are also struggling to overcome some of their own internal structural challenges.

– Too many priorities and not enough people are the top two challenges manufacturers face in defining their strategy

The top challenge cited by manufacturers in our survey is having the right skills to implement their business strategy. We know this extends beyond technical capabilities on the shop floor and into R&D, personnel and leadership skills. Companies' 4IR journey will also require a new skill set, at almost all levels within the business, raising the heat on businesses, individuals and government to get more pro-active on training. Leadership skills also matter when it comes to managing conflicting priorities and limited resources, the second most common business challenge.

– Visibility through the supply chain is a hurdle for SMEs

SMEs are virtually alone in managing the problem of poor visibility of customer requirements. Over half of

small and mid-size companies, who are more likely to be further down the supply chain and need to plan based on customer needs, don't feel they have good visibility of what those needs are.

– **Ownership and board structures are a large company challenge**

For large companies, more significant than understanding their customers and their competitors is getting agreement on their strategy from the board and in some cases decision making which rests with an overseas parent is a major challenge in driving forward growth plans.

4. Overcoming hurdles in the business environment

– **Cost competitiveness and impact on profits: Rising business costs have topped the list of manufacturers' growth risks in each of the past five years**

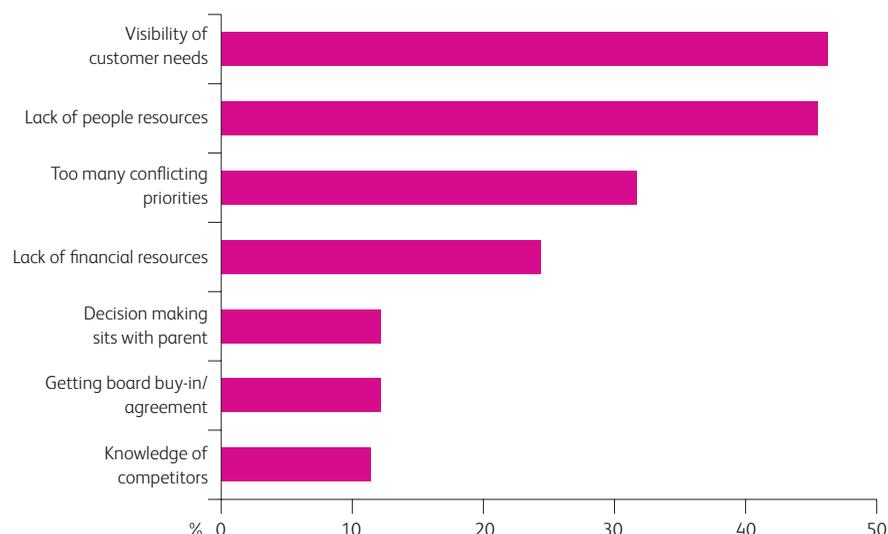
Manufacturers in the UK win new business and grow because they compete on quality, service and through the collaborative relationships they build with their customers and supply chains. The cost base in the UK still matters. The UK will not secure vital investment and good jobs if it is a more expensive place to do business than our competitor nations. Recent policy decisions – from the apprenticeship levy to the treatment of machinery in business rates have eroded the UK's attractiveness for new investment.

– **Infrastructure: Broadband internet is seen as the second highest priority for infrastructure investment after the road network**

An export intensive economy needs good quality and robust transport infrastructure including airports, ports and roads. An economy that is focused on creating quality jobs across regions of the country needs

Chart 8: Leadership challenges in developing and delivering business ambitions

% of companies citing internal challenges to success of business strategy



Source: EEF Manufacturing Ambitions Survey 2016

a comprehensive transport network and advanced broadband and communications infrastructure.

Unfortunately the UK does not score well in international rankings for the quality of infrastructure – a view which many in industry agree with.

– **People, people, people: Almost half of manufacturers said improving the availability of suitably qualified employees would encourage more manufacturing activity in the UK**

New technology, new processes and new process development require ever increasing skill levels and flexibility from the manufacturing workforce.

This in turn places ever increasing demands on the education and training institutions which must work hand-in-hand with businesses to ensure an adequate supply of these skills. UK manufacturers are currently being hindered by decisions taken over decades which have eroded the pipeline of talent into industry and

which has an impact on the UK's attractiveness for inward investment.

What's holding back success – a round up

We are cautiously optimistic that the sector can meet our 2026 ambitions, but there is a long way to go. In many cases companies are hampered by the external environment – particularly pertinent in light of the recent referendum outcome. Additionally, weaknesses in the supply chain and internal capacity to prioritise and deliver growth plans are seen as hurdles to getting companies where they want to be.

But, we also know that the business environment for UK manufacturers isn't perfect. While manufacturers have ambitions for growth, the same cannot consistently be said of government. But industrial strategy is back at the heart of the government's thinking and the next section looks at what's needed to put this into action.

INDUSTRIAL STRATEGY – RHETORIC TO REALITY

The UK government has now signalled its intent to be a more active player in sustaining improved economic outcomes through a new industrial strategy. The term industrial strategy has deep roots in the UK, but nevertheless means different things to different economic actors.

Our research shows that we have companies with enough ambition and long-term plans to generate growth and productivity improvements in the UK economy. Industrial strategy should, therefore, provide a framework for government's role in removing barriers to success and delivering a business environment that makes the UK the obvious choice for all parts of the supply chain to execute their business plans here. Government can also use industrial strategy to be a partner with industry, investing alongside businesses in the capabilities and technologies our firms and our people will need to be successful over the long-term.

A focus on economic outcomes

As with manufacturers' plans for growth, our starting point for industrial strategy must be a clear sense of the end goals. Since the financial crisis we have talked a good game about bringing about a radical shift in the composition of growth, getting on top of our productivity problems and driving up living standards for households across the UK. We've made varying degrees of progress on these aims, but have not systematically had a set of action backed goals that could have brought about these changes. The UK should still be in pursuit of more investment and exporting, with a focus on building the foundations for future competitiveness.

With investment in innovation and technology potentially at risk as a result of renewed economic and political uncertainty, we believe that addressing these issues should remain the focus for industrial strategy. But more than that, if a new industrial strategy is to have resonance with individual businesses, sectors and policy-makers across the whole of Whitehall and UK regions, there needs to be a shared sense of what success looks like.

This shouldn't be a long list of economic 'nice to haves', but a sense of the most important outcomes that we need to secure to lock in long-term growth. This provides government departments with a yardstick against which they can prioritise new policies and help to provide transparency on the trade-offs that are always necessary, but particularly when the public finances remain under strain.

In a post-Brexit world, with new trading relations, new approaches to regulation and new migration frameworks under development, this clarity of purpose around the domestic policy agenda is more important than ever. As is the need to speak to the widest possible community of business – from the Tier 3 supplier that sells into diverse companies and sectors, to the large multinational, multi-site companies that support a large number of jobs.

We need to retain and capture more activity from the entire breadth of the supply chain and support their efforts to invest, innovate and export and to do so in the UK. Box 2 below sets out the outcomes that we believe an industrial strategy should be seeking to prioritise. There should not be a long-list of ambitions, rather it should – at least initially – focus on what matters most for growth.

Box 2: Outcomes worth striving for

	Productivity	Investment	Trade
Outcomes	Output per hour	Foreign Direct investment	Trade balance
	Median Earnings	Business R&D	Trade diversification

INDUSTRIAL STRATEGY – PAST

There are some lessons from the previous approach to industrial strategy, notably the absence of clarity on what the successful outcomes would be from it. These can now inform how industrial strategy needs to evolve in future.

There were a number of positives, but also some weaknesses in the approach which meant that government policy was not fully effective in removing barriers to growth in the business environment. In summary we see these as:

- **+ve** **Wide ranging dialogue with key sectors, with strong Ministerial engagement in the Department for Business.** This created a depth of understanding of current capabilities and gaps and supported the development of future-looking growth and investment strategies.
- **+ve** **Significant investments in new innovations and capabilities which were required to sustain global competitive advantage in manufacturing sectors.** Government was in a position to provide strong backing for industries and technologies, where the private sector would, alone, have fallen short of what was needed to secure a leading global position.
- **+ve** **Increasing alignment between Sector Council priorities and strategy of bodies such as Innovate UK and UKTI.** Effectively doubling down on investments in key areas and enhancing support through the supply chain.
- **-ve** **Less clarity on the effectiveness of industrial strategy in prioritising ‘horizontal’ policy decisions such as energy, skills and business tax reform.** There were many areas of inconsistency, particularly in departments outside that sponsoring industrial strategy. The dominance of a sectoral approach placed the huge task of delivering stronger growth on a narrow set of sectors.
- **-ve** **The patchwork of sector choices was not seen as transparent and left some growth opportunities unexplored.** Inevitably sector strategies evolved at different paces, but the spectrum of supporting investments and the choice of sectors was not well articulated. The absence, for example, of foundation industries was perhaps a major supply chain gap.
- **-ve** **Many supply networks, especially those linked to a range of sectors, did not feel adequately plugged into the Sector Council approach and had limited visibility of opportunities.** Despite the broad range of Sector Councils, most manufacturers did not fit neatly under each umbrella. This left many diversified SMEs, supplying to multiple sectors wondering what industrial strategy meant for them.



Getting the right structures in place to deliver

In its commitment to industrial strategy the government has already stated that this will be a cross-government endeavour. This is a shift that will be welcomed by businesses. In the past, a single department seeking to take the reins on boosting growth and supporting industrial development has been undercut by conflicting policies from other parts of government. We have an opportunity with the new government to embed this inclusive approach to industrial strategy for the long-term. This needs to be more than statements of intent, but coherence and consistency of implementation that is visible to the private sector.

The role of the new Department for Industrial Strategy

While the new Business, Energy and Industrial Strategy Department (BEIS) will drive the new government's approach to industrial strategy, it still will not have all the policy levers at its disposal to deliver our objectives. Not least, responsibility for skills and apprenticeships moving to DfE, would leave a significant gap in the BEIS armoury if it sought to be the only Whitehall Department with a requirement to focus on industrial performance.

The Department's key functions in relation to industrial strategy should include:

- Set the vision for industrial and economic performance. This should be a series of measurable outcomes which then drive policy decision across all government departments.
- Provide a clear framework of policy priorities that will be delivered consistently across government

departments, with metrics to track progress.

- Responsibility for monitoring performance against metrics and setting out what actions need to be taken in response to progress falling short.
- A continuation of the Sector approach to investing in future capabilities.
- Ensure its own policy decisions are consistent with the industrial strategy framework. Coherence and consistency on policies such as energy, regulation and innovation will be vital in demonstrating leadership on growth.
- The creation of a new Cabinet Committee on industrial strategy should be complementary to the leadership of BEIS on policy development.

Policy priorities to achieve goals for growth

With clarity of purpose underpinning industrial strategy and the right structures in place to ensure consistency of approach across government, the meat of industrial strategy is to identify the right policy responses that will, over time, move the needle on investment, productivity and trade. Our research has identified that some of the challenges sit within manufacturers themselves and we address these with our messages to manufacturers at the end of this section.

Government can, however, focus on international competitiveness, particularly where the UK cost base affects profits and the ability of companies to re-invest. It can align with companies' actions to tackle longstanding challenges such as the lack of skills. Government also needs a framework in which it invests, where

only government can – in major enabling infrastructure. And finally, companies with growth ambitions can be supported to keep ahead of fast moving competition.

Together, we believe that the sum of these components would deliver confidence that the government was relentlessly focused on keeping the UK business environment at the head of the pack – tackling past underinvestment in areas such as infrastructure and the innovation landscape and minimising cost burdens on businesses. But also keeping an eye on the future, ensuring UK business success in the technologies and the business models of the future.

We support the government's stated aim of an economy-wide industrial strategy, which delivers the right policy settings for growth to thrive across all sectors. But we must combine this approach with one that also boosts the UK's ability to take a lead in bring forward new, game-changing innovations. We know there are gains to be had from being at the forefront of technological advances that will help us, and other countries, adapt to climate change, improve security and defence and manage demographic shifts.

All of these challenges could be huge global opportunities for countries and companies that can put technological change to work in addressing them. But in many instances the private sector won't do this alone. There will be cases for government to be a more strategic partner in specific markets to ensure the UK stays at the front of the global pack in developing solutions that the rest of the world will want to buy.

The current Sector Council approach

has many of the right foundations on which to build the collaborative approach, informing what support – through procurement, direct investment or funding technology centres – is most appropriate for different sectors and capabilities. The time is also now right to review the sectors and priorities which require the greatest level of co-investment from government. This should start a regular period of review – possibly every seven years (this would mean that sector/technology priorities straddle parliaments). This would also open the door for a more coherent strategy for the foundation industries, for example.

These policy priorities align with many of the hurdles to success that our dialogue and survey work with members has identified.

In the spirit of cross-government co-operation, the work of the Department for Exiting the EU will also need to join up with the new approach to industrial strategy. Alongside a comprehensive domestic policy agenda, our recommendations will also include proposals on access to the European market, skilled EU employees and how the negotiations should approach regulatory certainty.

Industrial strategy in action – a round up

The UK and its manufacturing base has many strengths upon which we can build. An industrial strategy from government can help us make more of what we have and develop the growth drivers of the future. This will only succeed and stick if we have a vision of where our economy needs to get to and coherent efforts across government to build a world class business environment.

A POLICY ROAD MAP FOR THIS PARLIAMENT AND BEYOND

Below we set out the policy framework in action which would send a signal to manufacturers about government priorities and keeps government focused on where its actions make the biggest difference. If industrial strategy can outline the policy priorities that will make the greatest difference to the competitiveness of the UK business environment over the longer-term, this will help support confidence and certainty for businesses looking to investment and grow here.

Table 3: Policy priorities under our industry strategy framework

Delivering a more skilled and adaptable workforce	Building more reliable and resilient infrastructure	Providing better support for growing businesses	Reducing the cost of doing business in the UK
The future of the apprenticeship levy and future support for vocational training	Airport capacity	Increased support for Innovate UK. Continuing access to Horizon 2020	Implementation of CMA recommendations on retail banking
Accessing skills from the EU and outside the EEA, and retaining skilled EU workers already in the UK	More cost effective and reliable digital infrastructure. A business USO	A new Technology Catalyst Fund	Reform of business taxation for 4IR – business rates, capital allowances and the R&D tax credit
Accelerating the approval/development of new apprenticeship standards	Local road funding beyond 2020	Reversing UKTI cuts A plan for new FTAs	Pressing ahead with lower corporation tax

“ An industrial strategy from government can help us make more of what we have and develop the growth drivers of the future. ”

We need to get this right. Manufacturers have been frustrated by stop-go efforts in the past and inconsistent and unpredictable policy making has potential had a detrimental impact on our investment and export performance. However, the potential consequences of Brexit and the continuing effort of our competitors means that some early down-payments on industrial strategy are needed. We want business to continue to choose the UK because it offers a stronger signal about long-term priorities and a more favourable

tax and regulatory regime than alternative locations.

Targeted and consistent progress on delivering a more skilled and adaptable workforce, building more reliable and resilient infrastructure, providing better support for growing businesses and reducing the cost of doing business in the UK will give businesses certainty about the environment in which they will operate in the UK. With barriers to investment or the deployment of new technologies removed and with world class support for those with great

innovations and an appetite to sell into new markets, companies of all sizes and in all sectors should be confident about striving for more ambitious outcomes for their business.

We must be striving for better productivity, more trade and more ambitious investment in new technologies. Government can help underpin this with a focus on supporting higher skills, more resilient infrastructure, a lower cost of doing business and world class support for growing businesses.

MESSAGES TO MANUFACTURERS

Manufacturers must play their part too. Current strategies will help get the sector and our economy on the road to stronger growth, but a relentless focus on driving ambition from government must be matched by manufacturers.

Develop a long-term strategy

While many manufacturers are focused on the future, more need to have fully developed, long-term business strategies that look at their current and potential markets beyond a two-year time horizon. By developing long-term, continually evolving business strategies, manufacturers will be able to create and shape their own markets and develop sustainable competitive advantage.

Be more ambitious

Manufacturers can build on their current competitive advantages through investment and new business models. Disruptive innovations, cutting-edge technologies and rapid growth must be the priority for the next decade. As the UK's proportion of the global market continues to decline, no manufacturer can afford to ignore global opportunities. Even suppliers whose customers are all UK-based are finding that many of their goods are ultimately headed for overseas markets.

Increase the focus on knowledge and value

Manufacturers must build on their successes of the past decade by expanding their core knowledge and capabilities and by using these to drive differentiation and world-class standards. Investing in knowledge – whether wrapped in the metal of modern machinery or embodied in employee expertise – is the only way UK manufacturers will be able to continually add value.

Invest in productivity and efficiency improvements

Operating in a high-labour cost economy requires continual efforts to improve productivity. Lean manufacturing delivers tangible productivity benefits and efficiency gains and must be applied across the whole business – from the supply chain to manufacturing processes. In order to thrive in a more environmentally aware climate, manufacturing must lead by example, moving towards sustainable operations. At the same time, it must focus on the development of technologies that allow society to preserve rather than deplete the value of the physical environment.



EEF is dedicated to the future of manufacturing. Everything we do, from business support to championing manufacturing and engineering, is designed to help our industry thrive, innovate and compete locally and globally.

In an increasingly uncertain business environment, where the UK is now on a path to leave the European Union, we recognise that manufacturers face significant challenges and opportunities. We will work with you throughout this period of uncertainty to ensure that you are on top of any legislative changes and their implications for your business.

Furthermore, as the collective voice of UK manufacturing, we will work tirelessly to ensure that our members' voices are heard during the forthcoming negotiations and will give unique insight into the way changing legislation will affect their business.

Our policy, employment law, health, safety and sustainability and productivity experts are on-hand to steer you through Brexit with rational, practical advice for your business.

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NatWest

We recognise the importance the manufacturing sector has to the UK economy, and have been dedicated to supporting manufacturers for over 200 years.

We've developed strong relationships with our customers across a wide range of specialisms, and have an understanding of the challenges and opportunities they face. We use this knowledge to better-support their needs.

Our teams are local experts in the sector. Operating at a local level means we develop closer networks in the industry with Government and trade associations, academic institutions, technology hubs and training centres. So when our customers need help solving complex problems, or advice to innovate and grow, we can connect them to our extensive range of contacts and work with them to develop the right solutions.

We understand how important a robust and cohesive support network is for our customers and also having a thorough understanding of the landscape they operate in. That's why we've developed the Future Fit program. We reached out to over 300 mid-sized manufacturers and industry leaders from across the UK, and pulled together key insights into what future success means for manufacturers. And whatever success looks like for our individual customers, we're committed to supporting them to make it happen.

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