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Made in the UK

How manufacturing holds the key to our growth story

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Introduction



Firms have faced many challenges over the past few years – from COVID-19 lockdowns and continued supply chain disruptions to the present high inflationary environment and risk of looming recession. Throughout this, one thing has remained constant, the requirement for macro-economic stability as a precondition for growth. Stability matters to bring in investment, bring down debt and pursue growth.

The UK has rising spending pressures, a historically high tax burden, and too little growth. Breaking this cycle must focus on the economic necessity of long-term, sustainable growth. Once macro-economic stability is restored, government and businesses have a responsibility to develop a plan to unlock the huge growth opportunities for UK businesses. Nowhere is the opportunity more evident than in the future of manufacturing.

While public finances and household budgets are under significant pressure, the role business plays in the service of the nation has never been more important. Delivering value for taxpayers has long been a hallmark of success for UK manufacturing with every £1 million contributed by the sector to UK GDP generating a further £1.5 million of benefit across the wider economy.¹ It is a sector capable of game-changing innovation, no more so than during the COVID-19 pandemic with its efforts to ensure the NHS was supplied with life-saving ventilators. It is leading the way in adapting process and production towards reaching the net zero target as part of the drive for investment in the green economy. With internationally recognised market and export capabilities, an employment footprint spanning the entirety of the UK and its cutting-edge innovation, the UK manufacturing sector is ready to be at the forefront of the global race for growth. Yet despite these strengths, there remains growth potential waiting to be unlocked.

The first step should be to create enough headroom for growth by preventing unnecessary business failure. Restoring macro-economic stability and working with business to ensure the right targeted support reduces the impact of rising energy costs will help unlock industry capability and innovation – seeing firms return to a growth mindset.

With stability and certainty secured, the UK can commit to the right framework for investment and send a powerful signal to the rest of the world that it is open for business. At the heart of this, is an industry-led vision showcasing the role manufacturing can play in growing the UK economy. The government has a vital role to play in supporting that vision by streamlining and simplifying the public funding available to manufacturers. This is about asking the government to do it smarter, not do more.

To that end, this paper lays out a series of recommendations for how the government can make big bold plays to harness the strength of the sector to become the powerhouse of the UK's post-COVID economy, seizing upon the benefits of Brexit and driving UK growth going forward.

Summary of key recommendations



Manufacturers recognise that difficult decisions will need to be made over the next year. While investing and growing our economy will produce better and higher paid jobs for people in the medium term, putting the public finances on a sustainable footing will need some taxes to rise, and some spending reduced.

But in making these difficult choices, we can also be mindful that we don't prevent or stop recovery and trap the UK back in a low-growth cycle. Below is a summary of recommendations that will help protect and grow the sector. Each will ensure UK manufacturing - one of our globally leading sectors - can support jobs, UK growth and our international competitiveness.

Unlock private sector investment to transform manufacturing as an engine for growth

1. Address the business rates cliff-edge firms are facing in April 2023, including abolishment of downwards transitional relief and a freeze to the Uniform Business Rate (UBR) for 2023/24.
2. Unlock domestic and international private investment with a simplified, UK-wide full expensing regime.
3. Improve funding to facilitate increased SME exports in both goods and services to support UK growth.
4. Government to deliver a landscape review of public funding available for the manufacturing sector following the Manufacturing Prospectus.

Remove regulatory barriers holding back skills investment and growth

5. Turn the Apprenticeship Levy into a Skills Challenge Fund, so it can be spent on any regulated or accredited modular course eligible.
6. Recognise the full range of skills needed to support growth by allowing the Migration Advisory Committee to consider shortages at all skill levels when recommending changes to the Shortage Occupation List.
7. Alongside wider levy reform, target digital skills by helping firms navigate the training market.

Utilise catalytic public investment to stimulate new markets

8. Extend the Industrial Energy Transformation Fund (IETF) beyond 2025 to 2030 and commit an additional £315m to the fund to support industrial sectors to decarbonise and become global leaders in green technology.
9. Fulfil commitments to deploy at least two more carbon clusters by 2030 and drive private sector investment in Carbon Captured Utilisation Storage (CCUS).
10. The UK ETS should be urgently linked with the EU ETS to reduce the risk of volatility and improve liquidity, as the UK addresses the risk of carbon leakage

Supercharge innovation in manufacturing towards the UK becoming a global innovation hub

11. Make R&D Tax Credits internationally competitive and innovation focused by including Capital Expenditure as an allowable expense.
12. Scale up Made Smarter into a national programme across the whole of the UK by 2024.
13. Improve funding to facilitate increased SME exports in both goods and services to support UK growth.



UK manufacturing: A record of delivery, a promise of more



The UK's manufacturing expertise, innovation, and history is incomparable to any other nation in the world. Since Britain's first Industrial Revolution in the 18th century, manufacturing and production have boosted industry and encouraged invention and innovation. From the invention of the simple weaving machine in 1733, to the steam hammer to shape steel components in 1839, this proud history of manufacturing has been essential to the economic health of the UK, with its innovation driving advances in science and technology, and its workforce supporting communities across the UK.²

The quality of the UK manufacturing industry has long been a global calling. Encompassing Sheffield steel and potteries in Stoke, advanced manufacturing in Manchester, aerospace in the West of England and clean energy technology in Teesside and Humberside.

UK manufacturers represent high value sectors and some of the biggest competitors on the international stage. BAE Systems, Babcock and Rolls-Royce, for instance, in the aerospace and defence industries, or Aston Martin and McLaren who are renowned as key drivers of the automotive industry. Pharmaceutical manufacturers GlaxoSmithKline and AstraZeneca are also two of the leading global investors in R&D with major footprints in the UK.³ AstraZeneca illustrated their global reach through the COVID-19 vaccine roll out. The manufacturing sector also boasts a high proportion of SMEs who foster a culture of enterprise, account for a significant amount of job creation, and contribute significantly to the UK's growth ambitions.

In the export market, both SMEs and larger manufacturers are big players, with data revealing goods account for 51% of the UK's total exports⁴ despite only accounting for around 10% of GVA.⁵ To truly harness the global potential of the sector in a post-Brexit environment, the government can be more ambitious. McKinsey research on behalf of the CBI found that mobilising a new generation of SME exporters has the potential to create around £20 billion in additional export revenues.⁶

Recent analysis of the sector truly showcases manufacturing's strength, revealing an annual output of £196 billion⁷ and the creation of opportunities in every part of the country through around 2.7 million jobs.⁸ It also provides average wages 12% higher than the rest of the UK economy and contributes 64% of all UK business research and development.⁹

Manufacturing is a diverse sector, comprising a wide range of different industries and economies that transform raw materials into immediate goods or final products. In 2021, major industries – food and drink, chemicals, pharmaceuticals, automotive, aerospace, defence and space – contributed £100 billion GVA annually (FY2019) and employed around 800,000 people.¹⁰ By truly backing the sector, the government has an opportunity to showcase to the world what British manufacturing stands for.

Exhibit 1 Direct contribution by industry, 2021

	Workforce Jobs	Output (£ billion)
Food and drink	450,000	30
Automotive	151,000	14
Chemical	89,000	14
Pharmaceutical	42,000	16
Aerospace and Space*	130,000	13
Defence*	147,000	10

Source: JOBSO3: Employee jobs by industry (ONS, 2022), GDP output approach – low-level aggregates (ONS, 2022), * Facts & Figures (ADS, 2022)

Manufacturing is uniquely placed to deliver on the UK’s growth agenda

As a sector that offers high skills, export opportunities and leads the way in the adoption of innovative technology, manufacturing businesses have a significant role to play in pursuit of the government’s ambitious plans for the economy. There are two high-priority areas where manufacturing is uniquely placed to support the government. The first is ensuring that the UK raises its ambitions for how – and where - growth is created from across the economy. Ultimately it is business and markets that deliver growth, not governments, and manufacturing is ready to play its part through ‘market-led’ clusters of excellence. The second area is focused on the biggest growth opportunity of them all – achieving net zero by 2050 where UK manufacturing has the innovation and investment potential to be a trading powerhouse in a post-Brexit environment.



Maximising the growth potential from the race to net zero

The demand and expertise within the sector to make net zero happen is high, with a recent Make UK survey revealing that 92% of manufacturing firms believe net zero by 2050 will be achievable with the right support.¹¹ Bosch, for instance, achieved its global target to become scope 1 and 2 carbon neutral in 2020.¹² Now working to achieve scope 3 status, reducing CO2 emissions along its entire value chain, they are supported by a binding target agreed with the Science-Based Targets Initiative to achieve an absolute 15% drop in emissions by 2030.

While the Climate Change Committee's 2022 data revealed that manufacturing (and construction) sectors contributed 14% of UK emissions in 2020,¹³ the evolution and ready adoption of new manufacturing technology shows the sector is constantly adapting process to achieve greener and more prosperous results.

Case Study: Schneider Electric

Demonstrating their commitment and contribution to a more sustainable world, Schneider Electric have signed up to the Race to Zero campaign (launched by the UN on 5th June 2021).

Since signing up the campaign, Schneider Electric have committed to net zero CO2 emissions across their operations by 2030 and across their supply chain by 2050. Marking significant progress towards these targets, as of 2021, the firm have 51 zero-CO2 sites, more than a third of the way to their target by 150 by 2025.

Also supporting the reduction of carbon emissions across the whole supply chain, 1,000 companies have joined Schneider Electric's 'The Zero Carbon Project'. Launched in 2021, this project supports suppliers with expertise and tools towards halving their carbon emissions by 2025.

Industry is engaging with carbon removal activities, developing new technologies for Carbon Capture, Usage and Storage and energy efficiency, while progressing game-changing outputs such as electric vehicle battery production. With a reputation as a leading centre for engineering excellence and innovation, the UK is well placed to lead in CCUS and transition to an innovation-based economy. The question for firms is not whether we decarbonise, but how we should do it in a way that maximises UK growth and opportunity.



Clusters of excellence can be the ‘market-led’ vehicle for strengthening regional economies

Manufacturing firms play a crucial role in local economies and communities. Their focus for job creation and career progression is clear across local communities and places. The sector already boasts a regional footprint larger than other industries, with factories across the UK. Through their involvement in the wider supply chain and with a clear emphasis on social impact, manufacturing firms make vital contributions to the communities where they operate. Toyota UK manufacturing, for instance, have contributed to a variety of local and national community causes since production started in 1992. Through their social contributions programme, they have donated over £6.3 million to charities and organisations focused on health, road safety, and social deprivation/inclusion.¹⁴

Manufacturing is an industry where clusters of excellence form naturally, whether in Teesside, Humber, Central Scotland, Merseyside, South Wales, or Southampton. The CBI recognises that clusters can be a driving force of wealth in regional economies, strengthening competitiveness and increasing productivity. Data has shown, for instance, that 31 economically significant clusters contained 8% of UK businesses but generated 20% of UK output (GVA) and together employed 4 million people.¹⁵ The Motorsport Valley cluster, based around Oxfordshire and the Midlands, represents a leading hub of innovation for cutting-edge technology to Formula One. The cluster employs around 41,000 people and involves around 4,500 companies,¹⁶ demonstrating a vital contribution to local employment and prosperity.

Contributing to the wider goal of achieving net zero by 2050, the UK government has set out its plan to create a net-zero carbon industrial cluster by 2040 and at least one low-carbon cluster by 2030.¹⁷ This includes the Humber which accounts for 40% of the nation’s industrial carbon emissions.¹⁸ The CBI is working with over 20 leading firms in the Humber industrial cluster, establishing a new National Cluster Demonstrator, to advance the decarbonisation economic opportunity of the region. This involves developing new green

technologies and energy solutions, such as hydrogen power, towards reaching the net zero goal.¹⁹

The cluster model will test new approaches to business collaboration to unlock private sector investment at scale and help to drive growth across the region and wider supply chain. Clusters such as these will be a cornerstone of regional prosperity that attracts inward investment and secure long-term viability of jobs. Analysis shows the potential of UK-wide deployment of CCUS and low carbon hydrogen across several decarbonisation projects. Projects based in the Humber, Teesside, Scotland and Northwest, for instance, could support up to 33,000 direct jobs and £2.5 billion in direct GVA by 2030.²⁰

Case Study: The University of Sheffield AMRC

The University of Sheffield Advanced Manufacturing Research Centre represents a flagship model for clusters of excellence, bringing together ideas and expertise to help manufacturing businesses to innovate, compete and expand.

The AMRC lead advanced machining and digital manufacturing research with some 120 industrial partners including CBI members BAE Systems and Rolls Royce. It forms part of the government's High Value Manufacturing Catapult and demonstrates innovation and collaboration that create jobs and inward investment. Boeing and McLaren, for instance, recently opened factories alongside the research centre and overall, the AMRC has brought more than £260 million of private investment and 600 jobs to South Yorkshire.

Also ensuring their role in the transition to a more sustainable future, the AMRC recently opened a new site in Lancashire focused on manufacturing and clean energy technologies. This will be a hub for research and development that combines capabilities across digital manufacturing, batteries and automation and low-carbon technologies. The AMRC Training Centre provides businesses with a pipeline of skills through its apprenticeship programmes, acting as a lever towards improved social mobility in the wider community.



Industry-led efforts can deliver a high skill and high productivity economy

Keeping pace with the UK's international competitors and to deliver on the government's ambitions to raise the growth potential of the economy ultimately requires action on productivity. It is a problem that cannot be solved only by government and requires industry to play its full part. The manufacturing sector is at the front of the pack in providing industry leadership to achieve the shared goal of a high skill, high productivity economy.

This ambition is vital as the UK currently lags behind international peers in adult technical skills, with just 18% of 25-64-year-olds holding vocational qualifications (a third lower than the OECD average).²¹ Manufacturing plays a crucial role as a sector that employs around 2.7 million people.²² From factory floor to Artificial Intelligence and engineering, these jobs vary in scope and complexity and showcase highly skilled roles that contribute significantly to the productivity of the UK economy.

The sector also indirectly supports many more jobs through their involvement in the wider supply chain, including warehousing, logistics, transport, and procurement. Suppliers produce essential components for varying sectors - food processing equipment for the food sector, capsule equipment for the pharmaceutical sector, control systems for the aerospace sector, car seats for the automotive industry and turbines for offshore windfarms.

Combining world-class research and design expertise, global medical device designer and manufacturer Owen Mumford develops pioneering products and custom device solutions for leading pharmaceutical and diagnostic companies.²³ The company's work incorporates design engineering, design for manufacturer and test engineering teams who transfer the latest technologies to manufacturing teams. This showcases the complexities of creating products and varied roles involved in the whole manufacturing process – considering the needs of users, manufacturers, and suppliers.

The government's Skills for jobs reform to post-16 technical education and training also provide manufacturing businesses in England with a key framework to operate within.²⁴ It marks the ambition for industry to be at the heart of upskilling and ensure training is invested in higher-level technical qualifications as an alternative to university degrees. Food manufacturer Bakkavor demonstrate their involvement in this through a variety of award-winning apprenticeship programmes that include manufacturing operations, engineering, food science and IT.²⁵ Apprentices on Bakkavor's programmes gain a recognised qualification and earn a competitive salary. This offers apprentices a strong start towards their future careers in industry and showcases Bakkavor's investment in the necessary skills for future generations.

In line with the government's ambition towards a more sustainable and more productive economy, there is a clear imperative on reskilling and upskilling for the right jobs across manufacturing firms. In particular, in digital skills vital for the jobs within factories and the adoption of new technology. A focus on digital skills is crucial, with the digital skills gap estimated to cost the UK economy £63 billion per year in lost potential gross domestic product (GDP).²⁶ Echoed by CBI members when discussing factors constraining their growth, many businesses cite lack of available talent, with the right digital skills, as a major hindrance towards growth.²⁷ But manufacturers are rising to the challenge, increasingly accelerating their plans to ensure they have the skill force to engage in greener and more

innovative manufacturing practices. This includes involvement in industrial automation and a multitude of digital technologies including additive manufacturing, cloud computing, and Internet of Things (IoT).

Case Study: Siemens

Siemens is leading the way on digital transformation, demonstrating how businesses can better weather current challenges through acceleration of digital technology and skills.

Siemens' Predictive Services use "assessment, connectivity and analytics" to help manufacturing firms identify machine failures before they occur and avoid failures in production lines, a crucial step towards greater resilience against current supply-side disruptions.

In the area of digital skills, Siemens' Connected Curriculum programme ensures that critical Industry 4.0 skills are integrated into the higher education curriculum. Through partnerships with 10 leading UK universities, the curriculum continues to help over 400 learners with real-world industrial experience and new digital skills.



Manufacturing innovation can help firms drive markets where the UK can outcompete the world

Innovation will be critical towards helping firms drive markets to outcompete the world that can form a key pillar of a roadmap for growth. The government's Innovation Strategy outlined the goal for the UK to be a global hub for innovation, boosting investment in R&D to 2.4% of GDP by 2027 and committing to increase annual public investment on R&D to £22 billion per year by 2026/27.²⁸ This marks an important ambition with the UK spending significantly less on R&D than the OECD average of 2.5%.²⁹ As a key driver of R&D expenditure and accounting for 42% of total GERD (Gross Expenditure in research and development),³⁰ the manufacturing sector is in the driving seat for the UK's ambition to be a global innovation hub.

Innovation in industrial manufacturing has already seen great impact on society and the economy. Automation has transformed factory floors, making them more efficient and cost effective. New technologies for agriculture have made farming more systematic. Now technologies for electric vehicles, smart grids and wind turbines are at the forefront of reducing carbon emissions and shifting to greener transport and energy.

Manufacturers are innovating to decarbonise their operations and infrastructure, outlining R&D and innovation as core to delivering lower-carbon solutions. Tata Steel in the UK have partnered with the University of South Wales to turn industrial gases into commercially viable products, and a long-standing relationship with Swansea University is investigating the use of steel as a substrate for energy-generating coatings. They also follow a data-led approach to new energy efficiency governance process comparing a site's energy performance to a benchmark. This showcases the direct relationship between innovation and the move towards a net zero future. Indeed, the widespread adoption of industrial digital technologies is predicted to reduce CO2 emissions by 4.5%, as well as deliver a £455 billion boost for the UK's manufacturing base and produce a net gain of 175,000 jobs.³¹

Exports represent a vehicle for growth, innovation, and resilience for business. While the CBI's recent forecast expects UK exports to continue to underperform compared with our international peers, remaining 10% below their pre-Covid level at the end of 2023.³² As major exporters, UK manufacturers are a key asset in forging global links with established and emerging markets – and can play a key role in supporting the UK's post-Brexit trade agenda. In 2021, for instance, manufacturing exports brought an estimated £176 billion to the UK economy.³³ Scaling up SMEs internationally can also be an integral component of driving growth to regional economies. Especially given the opportunity for around £20 billion additional export revenues through mobilizing a new portfolio of SME exporters.³⁴ Encouraging manufacturers already exporting to increase exports will also help to achieve world class business clusters and drive further innovation across the UK.

The manufacturing sector continually demonstrates its versatility and ready adoption of more innovative practices. During the Covid-19 pandemic manufacturers stepped up to play a vital role in mass PPE production lines through the UK Ventilator Challenge, delivering over 13,000 ventilator units to the NHS.³⁵ The Ventilator Challenge further demonstrates the importance of sovereign UK high value manufacturing capability when the world faces crises - whether a global pandemic or conflict. Manufacturers have also stepped up to help the people of Ukraine and refugees in neighbouring countries during

the ongoing war in Ukraine, showcasing a readiness to contribute during times of crisis. CBI manufacturing members have outlined the donation of key supplies and significant monetary donations to Ukraine. As well as a concerted effort to support the wellbeing and mental wellbeing of staff caused by the crisis.

Case Study: UK Ventilator Challenge

Led by Dick Elst of High Value Manufacturing Catapult (HVMC), the UK Ventilator Challenge involved a consortium of UK industrial, technology and engineering businesses to deliver medical ventilator units to the NHS.

Including several CBI members such as Airbus, Renishaw, McLaren and Siemens, the group produced and delivered over 13,000 medical ventilator units to the NHS. This showcased what can be achieved when bringing together the innovative and agile minds within the manufacturing ecosystem.

For instance, Ford Motor Company transformed an empty warehouse into a ventilator sub-assembly manufacturing facility with 190 socially-distanced workstations in just three weeks – a feat that would usually take a full year. A number of emerging technologies were either accelerated or newly adapted to support the project, and the second 50% of total volume was produced in just 23 days, averaging 260 units per day.

Airbus formed two distinct sub-assembly manufacturing lines in Brought within three weeks, redeploying 500 employees to the project. These lines were both replicated eight times to target production capacity and was achieved using Siemens' Digital Twin approach.



Creating headroom for growth: preventing unnecessary business failure



Stability is the most important pre-condition for growth. It is also a necessity for investment. The government can help prevent unnecessary business failure by using fiscal policy to restore credibility with the markets and economic policy to give firms the headroom they need to survive, enabling them to focus on future productivity and growth.

Alleviate energy costs so manufacturers can get back to a growth mindset

The prospect of businesses being exposed to high prices once again from Q2 2023 remains a significant concern for the economic outlook, with the potential to depress growth and keep inflation higher for longer. Despite the prospect of a global economic slowdown over the year ahead – and less demand for energy – concerns over supply and the risk of further disruption are still dominating markets, suggesting prices are likely to remain high in the near term.³⁶ Crucially, the effect on business, including UK manufacturers, has been significant with some CBI members speaking of costs impacting on their ability to deliver on net zero plans. To help manufacturers deal with rising energy costs, in addition to wider inflationary pressures, the government can address demand-side measures, including energy efficiency, helping businesses to reduce cost and energy use.

The government acted quickly and decisively by announcing steps to shield households from catastrophic energy costs and its plan to cushion the impact of skyrocketing energy prices on firms will ensure that fewer viable businesses fail. The Energy Bill Relief Scheme provides a discount on business gas and electricity use between 1 October 2022 and 31 March 2023.³⁷ Discounts will be applied to energy usage with a government-support price set at £211 per MWh for electricity and £75 per MWh for gas. However, even with this support, energy prices will be 3 to 4 times higher in Q1 2023 than two years earlier, with considerable uncertainty over costs facing businesses as support is yet to be guaranteed from 2023. So more targeted measures for the most impacted firms will be vital, as well as enabling an economy-wide push on energy efficiency, providing them with vital headroom to go for growth.

The Energy Intensive Industries (EIs), including steel and paper manufacturers, have been particularly hit by rising energy costs. Data from BEIS shows that compared to the previous year, gas consumers in the manufacturing industry in Q2 2022 have seen an average price increase of 125 percent, and the average price for electricity consumers increased by 67 per cent.³⁸ For EIs, such a significant spike in energy prices risks

production shutdowns or severe financial strains. While recognising the competitive disadvantage on energy costs even before the Covid-19 pandemic, the UK government can boost the sector's international competitiveness and help firms move quickly back to a growth mindset through a targeted package of reforms to reduce the disparities between UK EIs and EU EIs.

Alleviate energy costs so manufacturers can get back to a growth mindset

- Move forward with proposals to increase the subsidy intensity of the Exemption Scheme for Energy Intensive Industries (EII) from 85% to 100%.
- Provide energy efficiency support for the most energy intensive sectors through an expansion to the Industrial Energy Transformation Fund.

Unlock industry capabilities and innovation to overcome supply chain pressures

Over the past three years, the global economy has faced turbulent times and the effects of Brexit, the Covid-19 pandemic and the war in Ukraine have hit all firms. Though demands for manufactured goods remains high, margins are being squeezed due to the litany of rising energy costs, expensive logistics, and shortages across the supply chain. Manufacturers have been grappling with material shortages, unfinished products, factory shutdowns and often a struggle to meet demand.

Global supply chain disruption has greatly impacted manufacturers, and, generally, businesses expect supply chain disruption to persist. A recent survey found that more than two-thirds of businesses from the industrial manufacturing and materials sector anticipate disruption to end by the middle of next year.³⁹ In August 2022, 20.2% of manufacturers reported major disruption due to supply chains.⁴⁰

Highlighting the continued impact on the sector, the CBI's Industrial Trends Survey (based on the response of 279 manufacturers) in October 2022 revealed that 54% of manufacturers believed materials or components shortages were likely to limit output in the next three months. Members of the CBI's Manufacturing Council, an official standing committee and the CBI's senior steering body for the sector, have outlined continued strong demand but severe impact on production from shortages of raw materials, labour, and rising energy costs. Also outlining the mid-term threat to their businesses and impact on the competitiveness of UK manufacturing. Where possible, the government must continue to support businesses to weather the storm.

Adding to this, manufacturing firms have been faced with acute labour shortages stretching across the whole supply chain. While labour shortages present an immediate challenge for many firms, shortages will likely have a longer-term impact, with businesses recognising the need to adjust their operations and invest in upskilling. In October 2020, CBI's Learning for Life report outlined that nine in ten workers will need some form of reskilling

by 2030.⁴¹ A 2021 CBI survey further revealed that 69% of businesses believe access to skills will remain a drag on the UK's competitiveness over the next five years.⁴²

Manufacturers are rising to the challenge and doing all they can to maintain production. For instance, a large proportion of firms in manufacturing (48%) are diversifying supply chains in response to disruption, with a smaller proportion (10%) having on-shored/near-shored operations or are planning to do so.⁴³ Some manufacturers have also invested in hiring supply chain managers for the first time to ensure they manage and respond to disruptions. Others continue to build agility in the supply chain through the acceleration of digital technology including predictive analysis and real-time operational intelligence.

Uncertainty around supply chains and cost pressures has the potential to affect business investment and longer-term planning. The CBI's quarterly Industrial Trends Survey in October 2022 revealed sentiment had declined at the fastest pace since the onset of COVID-19 over the previous quarter. Investment plans were mixed, remaining above average for tangible assets (plant & machinery, buildings), broadly in line with the long-run average for training & retraining, but below average for product & process innovation. CBI members have echoed this sentiment, revealing that difficulties along the supply chain and rising costs are changing their investment intentions. Firms also outline minimum requirements being met for services further down the supply chain, with a lack of critical equipment delaying projects and adding cost to already tight margins.

Unlock industry capabilities and innovation to overcome supply chain pressures

- Scale up Made Smarter into a national programme by 2024, allowing SMEs to take advantage of the digital supply chain hub.
- Improve funding to facilitate increased SME exports in both goods and services to support UK growth.
- Negotiate improved international market access for raw materials.

Support the cost-of-living response by preventing unnecessary business failure

The cocktail of challenges over the past two years has impacted on cost, with many manufacturing firms feeling the squeeze on already tight margins. Cost pressures have come from a range of sources including materials and components shortages, global energy prices and transportation. These headwinds will have implications for the pace of post-pandemic recovery, and for manufacturers already struggling to meet demand.

August 2022 saw CPI inflation reach 9.9%⁴⁴ and price pressures are set to remain strong throughout the rest of the year, as producer input price inflation rose by 20.5% and producer output price inflation rose to 16.1%.⁴⁵ Likely to further impact on business confidence, the Bank of England are projecting inflation to peak at 11% in October.⁴⁶ Amid dented business and consumer confidence, the CBI's most recent economic forecast

showed weakened growth towards the ends of this year and into the first half of next year. The forecast downgraded its GDP growth outlook significantly, to 3.7% in 2022 (from 5.1% previously) and 1.0% in 2023 (from 3.0% previously).⁴⁷

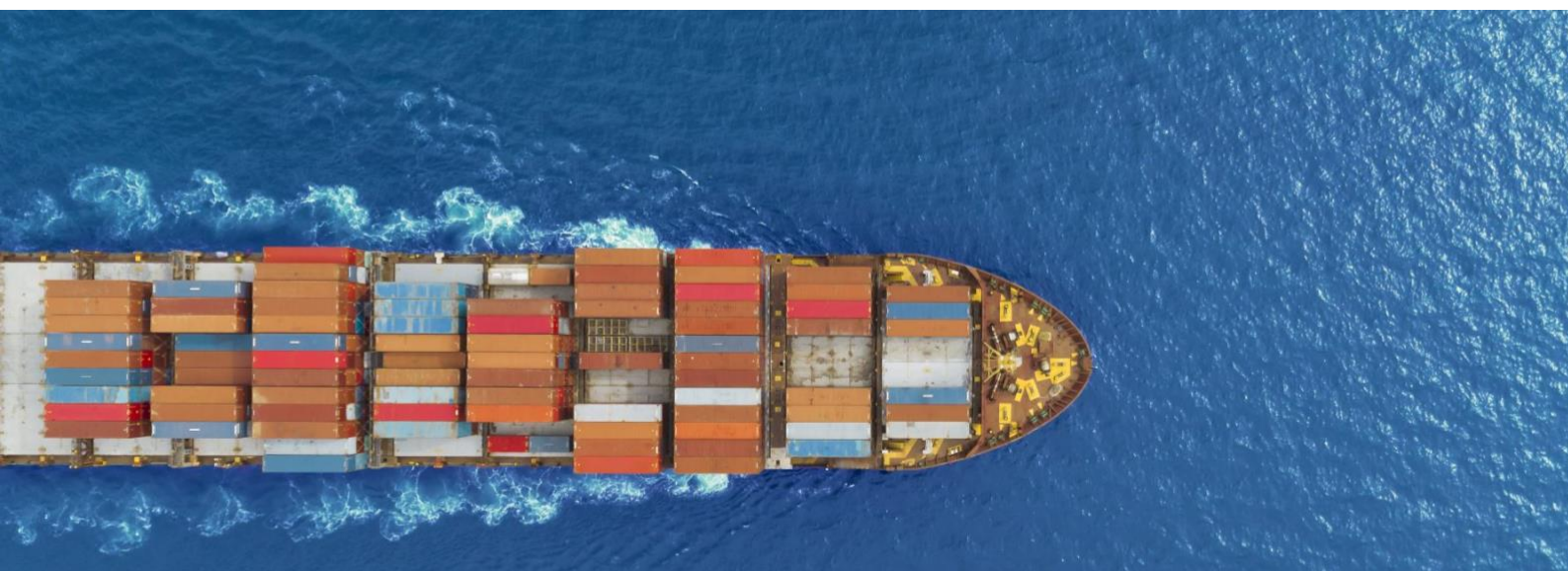
The CBI has heard from manufacturing businesses doing what they can to support their employees and suppliers further down the supply chain deal with rising costs. For instance, firms are committing to the hybrid working model to strike the right balance between home and office working and mitigate travel costs. Or, allowing free recharging points for staff at Electric Vehicle points installed – further demonstrating a commitment to fuel switching and low carbon future.

Supporting smaller manufacturing businesses with cash flow through an extension of the Recovery Loan Scheme by a further two years⁴⁸ and the Energy Bill Relief Scheme marks steps in the right direction. But to prevent unnecessary business failure, the government can use targeted spending and the policy levers at their disposal.


Addressing the business rates cliff edge manufacturers are facing in April 2023 will prevent a huge step change in costs on 1 April together with the end of the energy support package. The government can also take action to drive sustainable, long-term growth by using the tax system to incentivise investment. A simplified, UK-wide full expensing regime can help unlock domestic and international private investment. A CBI survey of 325 firms (of which a large proportion were manufacturers) revealed that a fifth of qualifying capital spend is only taking place because of the opportunity presented by the super deduction.⁴⁹ The survey also shows that a new permanent successor to the super deduction could boost UK investment by up to £40 billion a year.

Support the cost-of-living response by preventing unnecessary business failure

- Address the business rates cliff-edge firms are facing in April 2023, including abolishment of downwards transitional relief and a freeze to the Uniform Business Rate (UBR) for 2023/24.
- Unlock domestic and international private investment with a simplified, UK-wide full expensing regime.



Open for business: showcasing UK manufacturing to the world



At a crucial inflection point for a post-Brexit, post-Covid Britain, there is an opportunity to send a signal to domestic and global investors that the UK manufacturing sector is open for business. By unleashing industry potential for green investment and capacity for innovation, UK manufacturing can create growth opportunities and energise investor interest. The government can play a vital enabling role by outlining steps to boost manufacturing firms' investment in greener and more innovative manufacturing, signaling that this a growth sector vital to achieving more sustainable growth and higher productivity.

Back UK manufacturing to take advantage of new export and growth opportunities

The UK is at a pivotal moment, with a chance to redefine its place in the world in a post-Brexit environment. The government's 'Made in the UK, Sold to the World' campaign laid the foundation for businesses to benefit from exporting their goods to the world. The Export Strategy outlines a 12-point plan geared towards the ambition of £1 trillion in UK exports per year by 2030 and includes initiatives such as the Export Support Service (ESS).⁵⁰ Now is the time for government and business to work in partnership to position the UK as a thriving, open and global economy. There is genuine energy and enthusiasm amongst manufacturers to look towards new export markets. An extension of the Internationalisation Fund beyond 2023 and greater support to allow SMEs to access tradeshows would help facilitate more SMEs to take advantage of post Brexit trading opportunities in both goods and services. This will enable manufacturing businesses to grasp international opportunities, with exporting as a significant driver of growth and innovation.

Streamline and simplify government input to unlock the sectors vision for the future

Publishing a UK manufacturing prospectus⁵¹ represents an opportunity to showcase the UK's manufacturing capability and signpost opportunities and existing support to stimulate private investment within the sector. This will also outline the policies that affect manufacturers, ensuring firms can make the most of support that is already available. It marks a crucial step in promoting the UK as a choice of destination for investment in manufacturing.

At the same time, there is a need to outline a long-term vision for the sector. Implementation must be led by industry but with the government spearheading that vision. Streamlining the different strategic objectives with the needs of business can help provide certainty and stability for firms. Understanding where new initiatives and investments are needed, and where they are not, would help create a manufacturing sector that can deliver greater productivity and drive economic growth. Industry is ready to support the delivery of a landscape review of the public funding available for manufacturing firms. This should aim to create a more joined up approach across government departments, detailing their priorities, how they interact with each other and how external stakeholders can interact with them. This should clearly define the remit of each structure and funding body in the manufacturing landscape avoiding waste and duplication. Such a review would ensure that departments are working effectively together, resources are allocated to have most impact, and manufacturers can access the support they need.

Learning from international examples, the UK government should consider the role that manufacturing businesses play in delivering economic and societal impact, and the policy and funding mechanisms that will best enable the UK manufacturing sector to capitalise on emerging innovation and decarbonisation technologies. Singapore's manufacturing output increased 0.6 percent year-on-year in July 2022 and, excluding biomedical manufacturing, output grew 2.9 percent.⁵² The Singaporean government demonstrate clear backing for the Singaporean manufacturing plc. For instance, their 10-year Manufacturing 2030 Vision announced in January 2021 clearly signals continued support and investment in the manufacturing ecosystem.⁵³ This also outlines a vision for Singapore to become a global business innovation and talent hub for advanced manufacturing.

Germany represents Europe's leading manufacturing exporter and holds the highest rank in UNIDO's Competitive Industrial Performance (CIP) Index.⁵⁴ Their industrial model contains important lessons for the UK government. For instance, the German government demonstrates support for the sector through their National Industry Strategy 2030.⁵⁵ The strategy outlines clear objectives and action to ensure lasting competitiveness for their industrial sector. Developed in collaboration with industry, actions prioritise key enabling technologies such as artificial intelligence and battery cell manufacturing. While policy priorities include strengthening industrial SMEs, energy prices and taxes.

Unlock private sector investment to transform manufacturing as an engine for growth

- Improve funding to facilitate increased SME exports in both goods and services to support UK growth.
- Government to deliver a landscape review of funding available for the manufacturing sector following the Manufacturing Prospectus.

Create the right market conditions for industry to lead to charge on the green transition

Reaching net zero by 2050 will require systemic change across the manufacturing sector. While manufacturing firms are stepping up to the challenge, the government can provide stability and confidence for investors by maintaining the commitments outlined in the previous administration's ten-point plan for a Green Industrial Revolution.⁵⁶ Containing the vital pledge to support green jobs and accelerate the sector's path to net zero, the plan outlines £12 billion of government investment to create and support up to 250,000 green jobs. This marks a major commitment for the UK to lead the way in delivering a more sustainable economy.

The government's subsequent Industrial Decarbonisation Strategy (IDS), published in March 2021, marks the crucial steps for industry to support the investment in decarbonisation. It sets out how industry can decarbonise in line with net zero while continuing to remain competitive, outlining the target to reduce industrial emissions by two thirds by 2030, and by at least 90 per cent by 2050.⁵⁷ To achieve this, it marks an imperative to switch away from fossil fuel combustion to low carbon alternatives and support businesses to maximise their energy and resource efficiency at industrial sites. Given the UK's industrial heartlands comprise 2.6 million jobs and £170 billion to the economy each year, the necessary changes are crucial for the wider UK economy.⁵⁸

Achieving the goal of net zero carbon emissions by 2050 will only be possible with the right market conditions, in partnership between business and government. The Climate Change Committee's most recent Progress Report to Parliament reveals the government's medium-term decarbonisation ambition for industry has increased substantially over the past two years, with support from several clear policy plans.⁵⁹ However, it outlines that greater focus must be placed on the delivery of these policy ambitions. The consultation on a UK ETS cap consistent with Net Zero Strategy and some progress on the development of hydrogen and CCUS business models mark steps in the right direction. However, this is unlikely to deliver the government's full net zero ambition. Strong government signals can help stimulate the right market conditions to support the green transition across the sector. Policy and action in key areas of electrification, energy efficiency, carbon leakage and fuel switching will send a strong message to investors and provide industry confidence. For instance, extending and increasing the IETF to kick-start an energy efficiency drive and reduce demand.

Utilise catalytic public investment to stimulate new markets

- Extend the Industrial Energy Transformation Fund (IETF) beyond 2025 to 2030 and commit an additional £315m to the fund to support industrial sectors to decarbonise and become global leaders in green technology.
- Fulfil commitments to deploy at least two more carbon clusters by 2030 and drive private sector investment in CCUS
- The UK ETS should be urgently linked with the EU ETS to reduce the risk of volatility and improve liquidity, as the UK addresses the risk of carbon leakage.

Innovation and skills hold the key to driving up sector productivity and resilience

Innovation will be central towards unlocking the improvements in productivity needed to raise UK growth levels. The government's Innovation Strategy released in July 2021 marks an important step in ensuring innovation plays its full part in addressing society's biggest challenges.⁶⁰ It outlines a recommitment to growing investment in R&D, illustrating the importance of fueling our science superpower ambitions.

The CBI were pleased to see the government recommit to increasing annual public investment on R&D to £22 billion⁶¹ and the commitment of a further £8 million for the Made Smarter Programme,⁶² supporting SMEs through one-to-one advice, training and co-funding for industrial digital transformation. The CBI are calling for Made Smarter to be rolled out nationally, building on the success of the Made Smarter Northwest Pilot, which scaled up support in the West Midlands, Northeast of England, and Yorkshire & the Humber. A national roll out will also ensure that SME manufacturers across all regions in England can capitalise on digital technology support. Steps like these will send an important signal that government will work with industry to deliver on ambition set out in its Innovation strategy.

Supercharge innovation in manufacturing towards the UK becoming a global innovation hub

- Make R&D Tax Credits internationally competitive and innovation focused by including Capital Expenditure as an allowable expense.
- Scale up Made Smarter into a national programme across the whole of the UK by 2024.

The sector can only be match-fit for the future if it has access to the right skills. The Covid-19 pandemic, as well as recent supply chain disruptions, have accelerated the imperative on upskilling and reskilling across the wider economy and within the manufacturing sector. With a pressing need to equip people with the skills needed to participate in the economy, the government's Digital Strategy highlights plans to reform and improve digital skills provision.⁶³

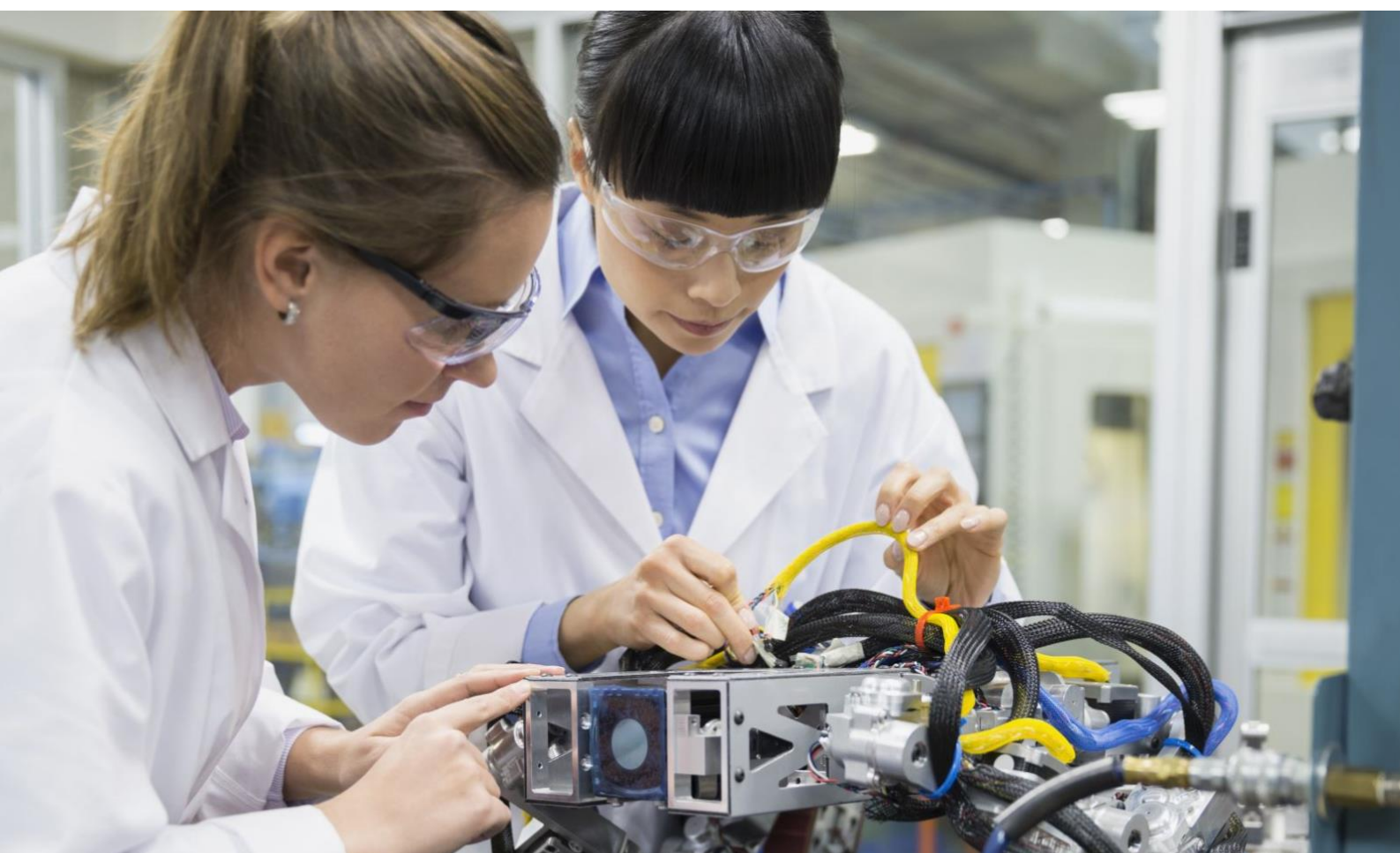
The Digital Strategy sets out the ambition to harness digital transformation, building a more competitive and innovative economy that is digitally led. Strengthening the digital education pipeline, increasing awareness of the pathways into digital occupations and work to develop an enhanced digital skills base were all important measures outlined in the strategy. The Covid-19 pandemic saw more manufacturing businesses embrace digital basics, applying readily available solutions such as cloud computing and value chain management. Investments in data are also helping manufacturing firms unleash the potential of digital technologies. Research by Make UK also finds that 64% of manufacturing businesses have recently engaged in training to improve digital skills.⁶⁴

However, labour and skills shortages persist right across the manufacturing sector. The current skills system doesn't give manufacturing firms the flexibility needed to invest in

short-burst, modular courses that will quickly give staff the digital skills they need to unlock further growth across the sector. We must create a skills system that is responsive to economic need, allows firms to upskill current and returning employees and provides the skills needed to manage new technologies and innovations. The government and educators must work with the manufacturing sector to expand the Apprenticeship Levy into a broader Skills Challenge Fund as well as on plans within the Digital strategy to ensure the pipeline of a digitally skilled workforce. Immediately updating the Shortage Occupations List without delay, allowing the Migration Advisory Committee (MAC) to recommend roles at all skills levels and using its recommendations to target future investment in domestic skills would also ensure the immigration system effectively helps to address labour shortages. A skilled workforce in the manufacturing sector would stimulate private-sector growth, bringing further prosperity to the most deprived regions of the UK and contributing to the government's main ambitions.

Remove regulatory barriers holding back skills investment and growth

- Overhaul the Apprenticeship Levy into a Skills Challenge Fund, so levy funds can be spent on a variety of accredited and regulated training.
- Recognise the full range of skills needed to support growth by allowing the Migration Advisory Committee to consider shortages at all skill levels when recommending changes to the Shortage Occupation List.
- Alongside wider levy reform, target digital skills by helping firms navigate the training market.



Conclusion

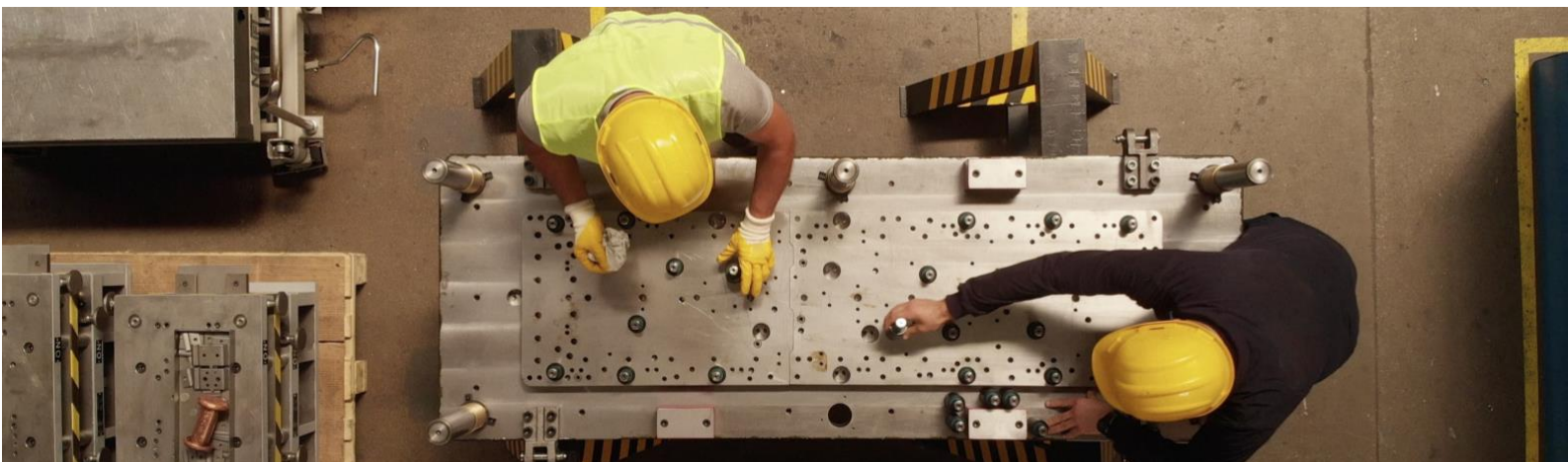
With a strong and resilient economy, we deliver more jobs, higher wages, and raised living standards.

Over the past 12 months businesses have been operating amid constant instability – political, market, and economic. Manufacturers ambition for 2023 is to focus on promise, potential and prosperity. Ultimately, higher growth is the only way to deliver long term fiscal sustainability. There is huge investment and growth potential in UK manufacturing, but those investment decisions won't wait forever. We must act now or risk falling behind in the global race for growth. The UK manufacturing sector is ready to work at pace with the government towards the delivery of its growth ambitions, with a focus on attracting and unlocking investment.

Decisive action to create certainty should focus on creating the right conditions for business investment and innovation and reducing burdensome regulation and taxes. In turn, creating jobs, wealth, and economic growth. Alongside meaningful supply side reforms, the tax regime is a powerful tool to get the economy growing and ensure that manufacturers can keep operating and investing.

There are big bets for growth where the right and sensible framework from government can help unlock business investment from the manufacturing sector – including in new digital, life sciences and clean energy. The government can take advantage of these markets by addressing the current headwinds, targeting government spending, and recalibrating the tax landscape.

The sector is ready with a vision for government to support. A vision that could see new export and growth opportunities, the UK reach the status of a global innovation hub and delivery of the right skills needed for delivering sustainable growth. The government can enable the delivery of industry's vision by streamlining and simplifying the different strands of policy and strategic objectives with the needs of manufacturers. Understanding where new initiatives and investments are needed, and where they are not, can drive the delivery of greater productivity, resilience and, ultimately, economic growth.



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