



UK Government

# THE UK'S MODERN INDUSTRIAL STRATEGY



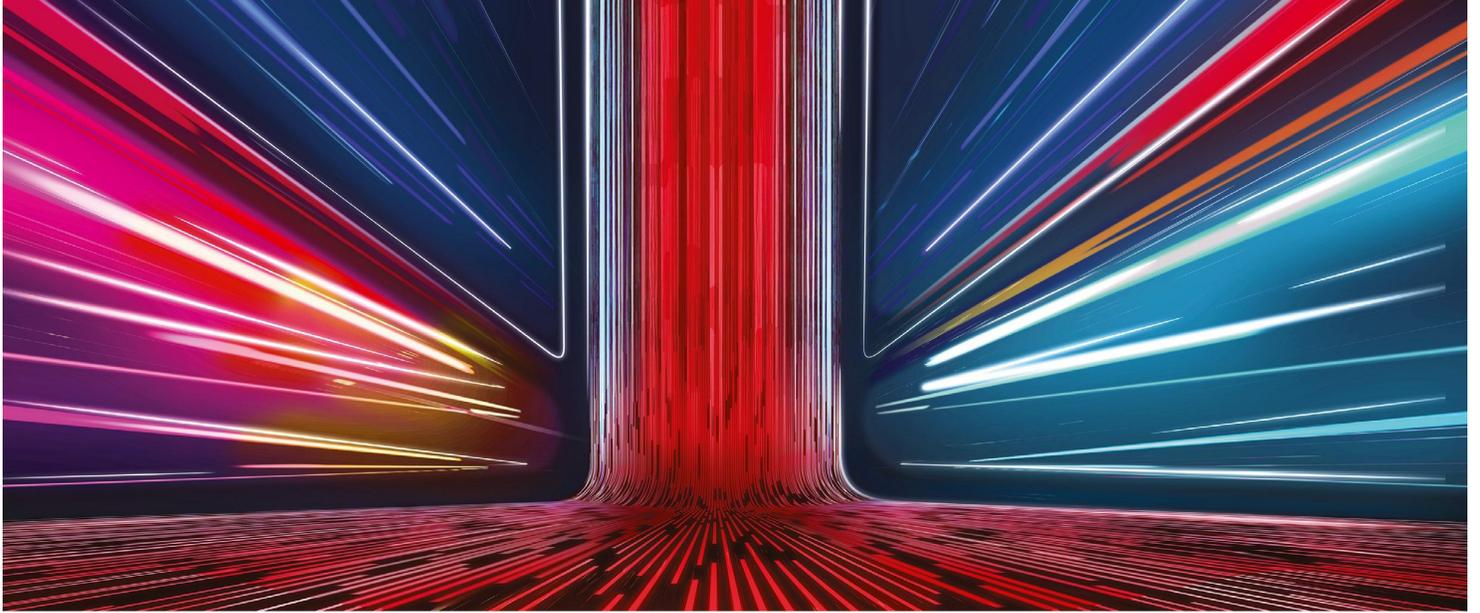
## ADVANCED MANUFACTURING

Sector Plan



# Contents

Ministerial Foreword	<b>4</b>
Executive summary	<b>7</b>
1. Ease, speed and long-term stability for doing business	<b>12</b>
2. Supporting our frontier industries	<b>28</b>
3. Supporting the UK's city regions and clusters	<b>53</b>
4. Creating an enduring partnership with business	<b>61</b>
Technical annex	<b>69</b>
Accountability table	<b>72</b>



# Ministerial Foreword



**Sarah Jones MP**  
Minister of State for Industry

**Advanced Manufacturing will drive our future economy in the UK. The Government will ensure the UK leads the world, delivering more good jobs, more innovation and more support for this crucial sector.**

Today, Advanced Manufacturing is the backbone of our economy, directly supporting around 760,000 jobs<sup>1</sup> and contributing more than £82 billion gross value added<sup>2</sup> to the UK economy every year. This is an industry that strengthens our national resilience, and drives prosperity across every region of our country.

But while we should take immense pride in our many strengths, including our vibrant research landscape and exemplar academic institutions, we must recognise the urgent need to maintain a competitive edge in an era of global competition and rapid technological change.

Our vision is bold. **By 2035, the United Kingdom will be recognised as the best place in the world to start, grow, and invest in Advanced Manufacturing.** To deliver this, we will make changes to the business environment, removing barriers to investment and innovation. We will support our small and medium sized manufacturers, who

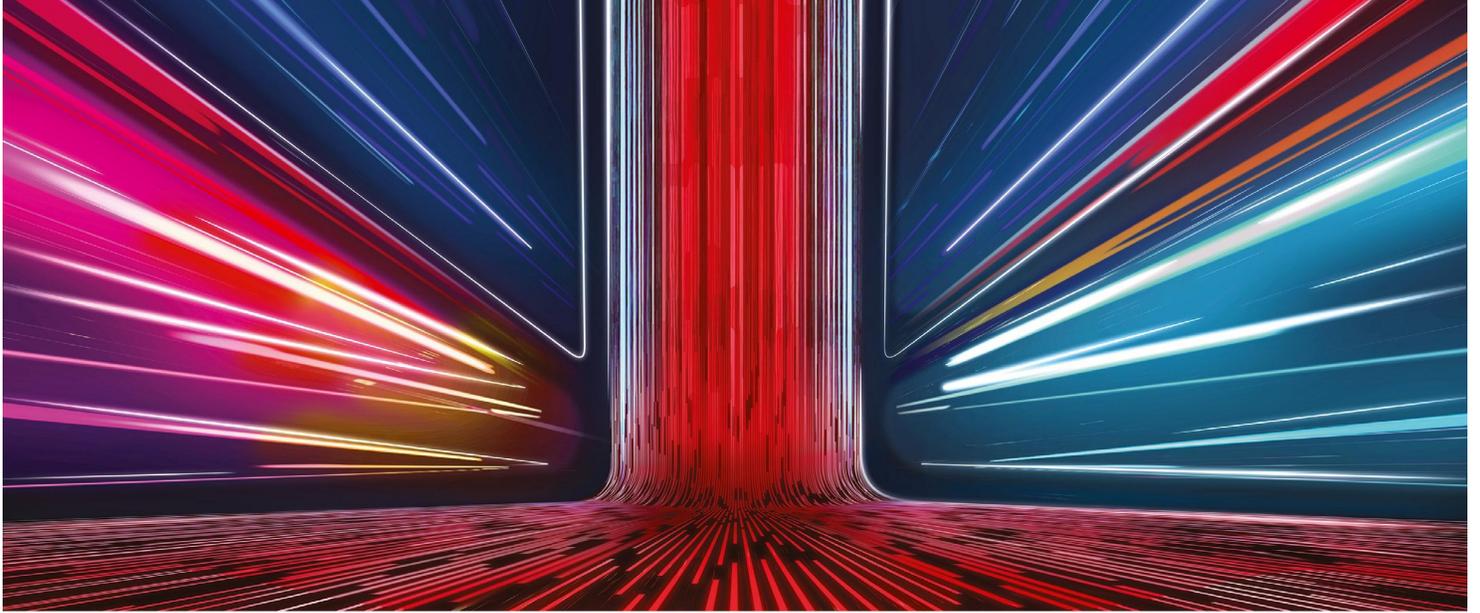
remain the backbone of the sector, by removing barriers to technology adoption. We will prioritise six frontier industries that will shape the future of manufacturing in the UK. Our priority sectors are:

- **Automotive**, building the next generation of Zero Emission and Connected Automated Vehicles.
- **Batteries**, powering the transition to net zero, backed by landmark investments such as Agratas' multibillion pound gigafactory project which will create up to 4,000 new jobs.<sup>3</sup>
- **Aerospace**, pioneering technologies such as Rolls-Royce's UltraFan™ engines and for Airbus' new narrow body aircraft, and supporting defence activities.
- **Space**, driven by increasing economic, national security, defence, and geopolitical interests.
- **Advanced materials**, with UK manufacturers leading the charge in next-generation components and sustainability.
- **Agri-tech**, pioneering revolutionary approaches to agricultural productivity and sustainable food production, supporting both domestic and global supply chains.

Building on the Plan for Change, this Advanced Manufacturing Sector Plan represents a bold commitment to good British jobs, innovation and investment in UK manufacturing, ensuring we seize the opportunities ahead and build a sector that thrives for generations to come.

## Endnotes

- 1 Office for National Statistics (2025) [Employee Jobs](#) and [Self Employed Jobs](#).
- 2 Office for National Statistics (2025) [GDP output approach – low-level aggregates](#).
- 3 Agratas (2024) [Britain's biggest battery factory will be built in the UK](#).



# Executive summary

**The invention and ingenuity of our Advanced Manufacturing sector has been the backbone of the UK's industrial strengths for the last three centuries. Just as the sector once pioneered the world's solutions to transportation and mass production and showcased its ability to adapt in times of war and pandemic, so it now sits at the forefront of the great challenges of this century.**

How societies decarbonise, digitise, and build more resilient economies will create unprecedented commercial opportunities for manufacturers to innovate – and the UK has deep pools of expertise. To maximise growth in the next decade and capitalise on Industry 4.0, we need to be the fastest to commercialise Advanced Manufacturing's frontiers – from innovative battery technologies, electric and self-driving vehicles and low-carbon aircraft fuels to tools for in-orbit satellite assembly and Internet of Things enabled farming sensors. And then we must be ready as competitors try to do it cheaper and better in an era of escalating security threats, unpredictable tariff changes, and intensifying technological rivalry. We must act fast to insulate the sector from global headwinds, help it build resilience, and enable it to capture new opportunities, as supply chains re-align and businesses look again at where they invest.

As a leader in key Advanced Manufacturing industries and technologies, the UK is well placed to meet this moment, backed by our world-leading manufacturers, small and medium sized innovators, and global commercial partnerships. The UK manufacturing sector accounts for around half of all business expenditure on research and development, driving investment in innovation.<sup>1</sup> We have a vibrant research ecosystem, with the world's best universities and researchers and a strong tradition of collaboration between academia and industry that drives the new ideas and companies of tomorrow. And we have global leaders today – from Rolls-Royce in aerospace engines and nuclear

technologies and BAE Systems in defence technologies, to Renishaw pioneering precision engineering and 3D printing and GKN Aerospace and McLaren Automotive pushing the boundaries in lightweight materials and automotive innovation.

**By 2035 the UK will be recognised as the best place in the world to start, grow, and invest in Advanced Manufacturing.** Our ambition is to near double the annual business investment in the sector from £21 billion to £39 billion in 2035, driving growth across the economy.<sup>2</sup> The UK is one of the most attractive destinations in the world for Advanced Manufacturing, but this vision necessitates a step change. We will deliver this in four ways:

- 1. Reforming the business environment, so that the Advanced Manufacturing sector has the long-term certainty, stability and ease to:**
  - **Build resilience, reducing supply-side barriers,** through competitive electricity prices for the most electricity-intensive Industrial Strategy manufacturing growth sectors and their supply chains, Steel and Critical Minerals Strategies and targeted support for the chemicals, construction and composites sectors. This will fortify the sector's foundational industries enabling us to proactively diversify and have a greater share of highest-value supply chains. This also means attracting major new investments and leveraging an enhanced UK Export Finance offer, helping the sector seize major export opportunities around the world, despite a challenging global backdrop.
  - **Be a global leader in scaling up innovation and automation,** by committing up to £4.3 billion in funding for the Advanced Manufacturing sector, including up to £2.8 billion in research and development funding programmes over the next 5 years<sup>3</sup> and strengthening industry's access to finance by unlocking the combined strength of our public finance institutions, including the British Business Bank's Industrial Strategy Growth Capital £4 billion available for priority sectors and the National Wealth Fund's £27.8 billion<sup>4</sup> to secure our future priorities. We will keep regulation at pace with innovation including through full implementation of the Automated Vehicles Act removing the need for a safety driver, enabling the self-driving car industry to thrive, and through upscaling proven interventions such as the Made Smarter Adoption programme with up to £99 million to support more SMEs to take up advanced technologies. The Government will also implement the AI Opportunities Action Plan in full, helping drive innovation and bring new frontier capabilities to market.
  - **Develop a digitally literate, skilled, and inclusive workforce,** through wider skills reforms, including shorter duration apprenticeships, alongside a targeted Upskilling and Reskilling programme, and a pilot Recruitment and Workforce Transition programme designed to support the sector to thrive while seizing transitional opportunities. We will ensure that there is a clear skills offer for the sector, not only to address existing skills gaps, but to upskill a new generation of technology adopters, including through Ministry of Defence-led skills initiatives maximising interdependencies across civil and defence all while supporting greater inclusivity targeting 35% representation of women in the sector by 2035.

## 2. **Prioritising frontier manufacturing industries with the greatest growth potential:**

- **Automotive** – the UK's record of innovation in cutting-edge propulsion, energy systems, power electronics, electrified and self-driving technologies, AI and software, gives us a competitive edge in the transition to Zero Emission Vehicles (ZEV) and Connected and Automated Mobility (CAM).
- **Batteries** – our thriving research and start-up ecosystem can drive the shift to meet global demand for batteries sustainably and securely, combating the risks of any overreliance on global supply chains for this strategically important technology.
- **Aerospace** – our expertise in producing jet engines, wings, and advanced systems for large commercial aircraft puts the UK industry in a strong position to capitalise on growth in demand for new technologies as the next generation of aircraft is developed.
- **Space** – as a leading spacefaring nation that pioneered the miniaturisation of satellite buses and payloads, we now need to industrialise innovative technologies into scaled products and services, working with international partners to secure global advantages in areas critical to economic development and defence.
- **Advanced Materials** – over 2,700 companies<sup>5</sup> active in materials innovation in the UK, from high performance composites and advanced metal manufacturing, to 2D materials, which will be the bedrock for Advanced Manufacturing, Life Sciences, Defence, Clean Energy Industries, and Digital Technologies.
- **Agri-tech** – our growing strengths in precision technologies will meet increasing global demand for farming solutions to boost the productivity of national food production, build climate resilience, and reduce emissions in agriculture.

3. **Realising the economic possibilities of Advanced Manufacturing clusters** with the greatest potential to drive growth in our frontier industries, and all around the country given 84% of manufacturing jobs are located outside of London and the South East.<sup>6</sup> Direct investments include £160 million funding for each of the Advanced Manufacturing-focused Investment Zones across the UK over 10 years<sup>7</sup> and the development of AI Growth Zones to further boost infrastructure investment within regions. We will increase collaboration with Mayoral Strategic Authorities (MSAs) and local authorities to cluster electric vehicle manufacturing across our regions. As part of this, we will explore the opportunity for a pilot initiative in partnership with the North East and West Midlands, with the aim of creating a blueprint for unlocking clusters of excellence in other key growth areas across the UK. We will work with MSAs and devolved governments in Scotland, Wales, and Northern Ireland to identify, develop, and deliver investible propositions, coordinating our industry offers to strengthen our clusters.

4. **Delivering joint commitments from both government and industry as partners.** Advanced Manufacturing's frontier industries, including in automotive and aerospace, have historically boasted long standing partnerships between government and industry. These relationships will be strengthened through

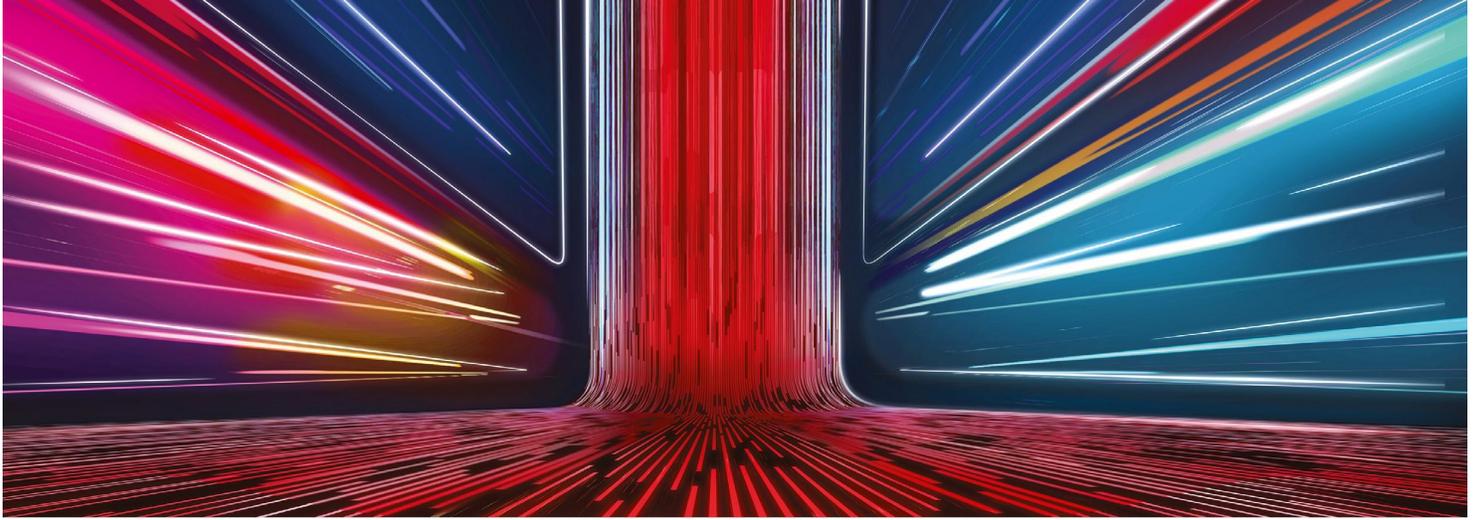
our sector councils that continue to be valuable delivery partners. In response, the private sector will support our Sector Plan by supplying private capital to bolster government funding for our flagship programmes and agree targets for employment, market share, and workforce representation. Greater collaboration will also support Government's efforts to strengthen our supply chain resilience.

Today and in the decade ahead our Growth Mission is clear. Advanced Manufacturing will be at the forefront of global economic competition and security, and will be critical to the Government's net zero and clean energy goals. Partnering together, industry and government will navigate the challenges and realise the commercial opportunities that emerge. This Sector Plan has that principle at its heart, a long-term ambitious vision, significant commitments and real prioritisation on where to collectively focus our efforts. In doing so, government and industry will raise business investment across all nations, commercialise our world-leading innovations, and continue to create the high-quality jobs of the future.



## Endnotes

- 1 Office for National Statistics (2023) [\*Business enterprise research and development\*](#).
- 2 Office for National Statistics (2025) [\*Gross Fixed Capital Formation in 2023\*](#); 2035 target is defined in real terms, 2023 prices see Industrial Strategy technical appendix.
- 3 Department of Business and Trade (2025) Analysis of funding data for Advanced Manufacturing programmes (Made Smarter Adoption, Made Smarter Innovation, Robotics Adoption Hubs Network, Upskilling and Reskilling Programme and Recruitment and Workforce Transition Programme, CAM Pathfinder, DRIVE35, Battery Innovation Programme, Aerospace Technology Institute, Future of Flight, Sustainable Aviation Fuel, Space Capabilities, NSIP, SCIF, Unlocking Space, Space Regulation Package, Space International Bilateral Funding, National Materials Innovation Programme, Farming Innovation Programme and the Agritech Export Accelerator).
- 4 His Majesty's Treasury (2024) [\*National Wealth Fund: Mobilising Private Investment\*](#).
- 5 Henry Royce Institute (2025) [\*National Materials Innovation Strategy\*](#).
- 6 Office for National Statistics (2025) [\*Workforce jobs by region and industry\*](#).
- 7 Department for Business and Trade (2023) [\*Advanced Manufacturing Plan\*](#).



# 1. Ease, speed and long-term stability for doing business

**Extensive engagement with industry, including responses to our Invest 2035 consultation, showed the need to address uncompetitive energy prices, increase access to finance to scale up innovations in the UK, accelerate the uptake of new technology to increase productivity, reduce regulatory uncertainty, address skills shortages, and shelter industry from the impact of global shocks.**

We will address these barriers to investment and growth by **reforming the business environment, so that the Advanced Manufacturing sector has the certainty, stability, and ease to:**

- **Build resilience, reducing supply-side barriers**, measured in terms of the UK's energy costs for the manufacturing industry, the number of firms facing supply chain disruptions, and an increase in major new investments.
- **Be a global leader in scaling up innovation and automation**, measured in terms of improved productivity, an increase in R&D expenditure, and the number of businesses classed as "innovation active".
- **Develop a digitally literate, skilled, and inclusive workforce**, measured in terms of increased business investment into the domestic skills pipeline, an increase in the number of relevant apprenticeships started and completed, and an increase in the participation of women in the sector.

# 1.1 Build resilience, reducing supply-side barriers

The international trading landscape is undergoing a rapid transformation which presents significant challenges for Advanced Manufacturing. The sector is vulnerable to global shocks because of its highly specialised supply chains, as well as being targeted by protectionism as countries seek to build up their own sovereign capability. Advanced Manufacturing is equally central to building national resilience against such global headwinds, especially given its role in the production of dual-use applications and intergration in defence supply chains. Jointly reinforcing our civil and military capabilities will be increasingly important for our global competitiveness, while partnerships with vital players, such as the High Value Manufacturing Catapult, will enable better domestic supply chain mapping, enhancing our overall resilience. We also need to go further to shore up the sector's critical inputs and foundational industries which anchor the Advanced Manufacturing supply chain.

For example, chemicals are at the core of Advanced Manufacturing, underpinning almost all domestic manufacturing. Critical minerals, such as lithium, cobalt, nickel, and graphite, are essential for electric vehicle batteries as well as low-energy technologies. Steel is crucial to almost all Advanced Manufacturing sectors, as demand for specialist lightweight and precision engineered steel products increases. Construction services are central to providing necessary infrastructure for Advanced Manufacturing, with the sector adopting automated processes to enhance the UK's manufacturing base. Composites such as carbon and glass fibre reinforced polymers are widely used, while materials such as ceramics and glass are critical for manufacturing machinery in automotive and aerospace production.



Beyond these foundational industries, the UK's Advanced Manufacturing sector is supported by a broader ecosystem, the strength of which impacts our overall resilience. Rail and maritime share many similar inputs to our frontier industries, from hybrid, hydrogen and electric propulsion systems, to robotics, and autonomous systems. Engineering biology can create new solutions for the sector through advanced biomaterials, biosensors, and plastic degradation. Finally, electronics and machinery underpin manufacturing supply chains; and electricity network infrastructure is essential to building and maintaining our networks supporting the decarbonisation of the sector.

## The approach

- Improve the financial resilience and international competitiveness of the sector, as well as for the foundational industries which are critical to its growth.
- Promote our strengths in strategic, dual-use technologies to increase the UK's defence industrial base.
- Reduce reliance on near-monopoly sources of critical inputs by strengthening UK capabilities and securing more diverse import resources with our international partners, ensuring better connected and agile supply chains.

## The interventions

### **A resilient and affordable energy system that works for the sector**

The Government will reduce electricity costs for IS-8 manufacturing industries and foundational industries and increase support for our most energy-intensive industries:

From 2027, a new British Industrial Competitiveness Scheme will reduce electricity costs by approximately £35-40/MWh up to 2030 and support thousands of businesses. The scheme will benefit manufacturing electricity-intensive frontier industries in the IS-8, such as automotive and aerospace, and foundational manufacturing industries in their supply chains, such as chemicals. Eligible businesses will be exempt from paying the costs of the Renewables Obligation, Feed-in Tariffs and the Capacity Market. The scheme will bring GB electricity costs more in line with other major economies in Europe, and level the playing field for British businesses. Eligibility will be determined following consultation, which will open shortly, with a review point in 2030.

We will also increase support for our most energy-intensive industries eligible for the British Industry Supercharger package, with an uplift of the Network Charging Compensation (NCC) scheme from 60% to 90%. This will provide additional price relief from 2026 for around 500 eligible businesses, further reducing the competitive gap with comparable neighbouring countries.

The Government will continue support for the Energy Intensive Industries Compensation Scheme to support energy efficiency, decarbonisation, and technological innovation. We will conduct a review of the scheme by the end of this year that will set out how we plan to continue supporting energy-intensive industries when the UK CBAM is implemented in 2027.

These measures will be funded by bearing down on levies and other costs in the energy system. The Government also intends to use additional funds from the strengthening of UK carbon pricing, including as a result of linking with the EU carbon market.

The Government will support the development of the Corporate Power Purchase Agreements (CPPA) market in the UK, as a potential route for energy consumers to secure more stable electricity prices for the long term. CPPAs also create alternative routes to market for low-carbon electricity generators. Government will call for evidence in due course on how the market for CPPAs can be developed and improved for industry, including where the UK can draw from international best practice to improve competitiveness.

To reduce grid connections times for strategically important projects, a new Connections Accelerator Service will be established to provide support for demand projects, including prioritising those that create high-quality jobs and bring the greatest economic value. We will work closely with representatives from the energy sector, local authorities, Welsh and Scottish Governments, trade unions, and industry to design this service, which we expect to begin operating at the end of 2025.

To support energy security while meeting our net zero ambitions, the Government will publish a revised Hydrogen Strategy in 2025. This will be key for fulfilling the deployment commitments as set out in the Clean Energy Sector Plan and realising the hydrogen sector's unique role in delivering our Clean Energy and Growth Missions.

## **Targeted support for foundational and wider ecosystem**

To reinforce our supply chains for the long term and support green industries of the future, the Government is publishing an upcoming 2025 Critical Minerals Strategy. The Critical Minerals Strategy aims to secure a steady supply of minerals, optimising domestic resources and enhancing international collaboration.

A future Steel Strategy will outline a full suite of measures, including addressing how the domestic industry can meet demand from downstream industries. The Government will continue to support energy intensive sectors, such as batteries and semiconductors, through the British Industry Supercharger, reducing high electricity costs. In addition, the Government will support electronics and machinery, providing strategic support for semiconductor and microelectronics innovation, including through UKRI and improved access to finance via the National Wealth Fund and British Business Bank. The Government is also bolstering UK glass and carbon fibre manufacturing, through R&D centres such as Glass Futures and the National Composites Centre.

Additionally, the Government is investing £625 million in construction skills to train thousands of new workers to deliver infrastructure in support of Advanced Manufacturing. At the same time, we continue to support UK rail and maritime sectors, critical enablers of

manufacturing, including through a further £30 million towards the development of clean maritime solutions through the UK Shipping Office for Reducing Emissions (UK SHORE) from 2025 to 2026, which will support the Government's Maritime Decarbonisation Strategy.<sup>1</sup>

## **Increased access to economic security and resilience finance**

Reinforcing national resilience, the Government has announced the suspension of the UK Global Tariff on 89 products until July 2027<sup>2</sup> including for specific products in the horticulture and agriculture, automotives, batteries, and construction sectors. In addition, we will consider economic security and resilience objectives in programme development, ensuring funding is directed at projects that strengthen supply chain resilience, support businesses to diversify imports and exports, and enhance business crisis readiness. Such commitments will also enable a greater nationwide understanding of supply chains themselves and allow for better cross sectoral coordination.

We will enhance business protections against direct threats, such as cyber-attacks through the Cyber Essentials accreditation scheme, and intellectual property theft through the National Cyber Security Centre and National Protective Security Authority's joint 'Secure Innovation' campaign. To further support supply chain resilience we will launch a new Supply Chain Centre that will conduct data-driven, industry-informed reviews of critical supply chains to inform government policy and develop metrics to monitor how programmes deliver against their resilience objectives.

Frontier industries will also benefit from our work to make resilience a key part of our public finance offer, including through the National Wealth Fund (NWF) and British Business Bank (BBB), which will support businesses by investing in our critical supply chains, national security capabilities and foundational industries.

To build a secure international trade base, UK Export Finance (UKEF), the Government's world-class export credit agency, has £80 billion of finance capacity to support UK exporters, including in the eight growth driving sectors of the Industrial Strategy.<sup>3</sup> UKEF is launching a new loan guarantee scheme for domestic suppliers selling critical minerals products to UK exporters. This will complement UKEF's existing critical minerals offering. This new initiative will help to protect UK exporters from geopolitical risks and bolster supply chain resilience. Over the next six months, we will also scope whether there is an economic case for further broadening UKEF's critical minerals products to cover a wider range of strategic supply chain inputs.

Through its comprehensive range of products, including loans, guarantees, and insurance, UKEF will support the sector to remain globally competitive. This includes the recent landmark investment guaranteed by UKEF and the NWF that will unlock up to £680 million in finance for the AESC Gigafactory.<sup>4</sup> Aerospace remains UKEF's most active sector, representing around a quarter of UKEF total net amount at risk<sup>5</sup> while automotive manufacturers have received £2.5 billion in loans since 2020.<sup>6</sup>

We will ensure information about our export support package is easily accessible by developing clearer, more customer-focused guidance and online advice for exporters, together with routes into UKEF support. This platform will be complemented by new initiatives to simplify and digitalise export processes, such as Digital Trade Corridors. This pilot initiative will explore ways to help businesses use electronic trade paperwork in international trade transactions to make trade faster, cheaper, and more secure.

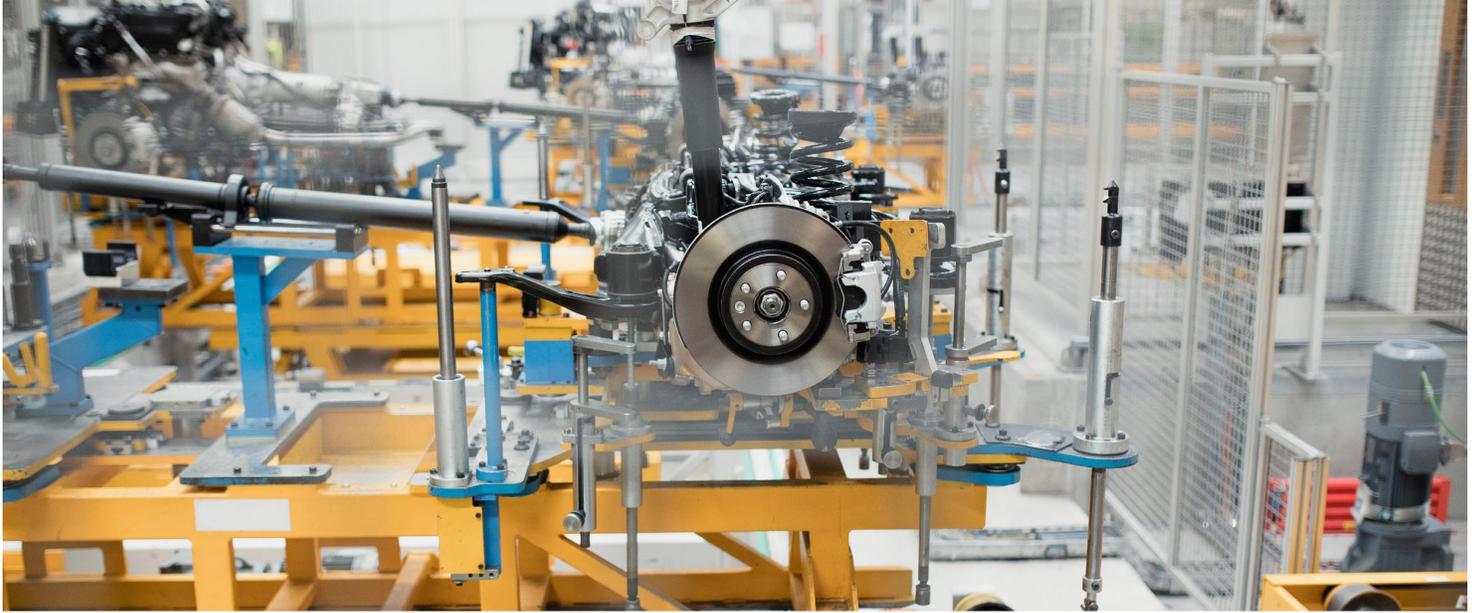
## **International trade and partnerships**

To counterbalance increasing protectionism, we will strengthen the UK's position globally, build resilience, and manage our supply chain vulnerabilities. The US and Germany, our largest export markets for frontier industries, have seen strong growth in demand for Advanced Manufacturing. The UK is primed to capitalise on this through the pursuit of a growth-driving trade agenda, as set out in the Trade Strategy.

For example, the landmark UK-US economic deal will support the sector, including through provision of a quota for 100,000 UK vehicle exports at a tariff rate reduced from 27.5% to 10%. This is set to save hundreds of millions a year for the automotive industry.<sup>7</sup> The US has also committed to preferential access for UK aerospace manufacturers, helping this world-class sector remain at the cutting-edge of innovation. We continue to negotiate in the national interest to ensure UK businesses can benefit from this deal and continue to thrive.

In addition, the recently concluded UK-India Free Trade Agreement is expected to save an estimated £400 million a year for UK producers, including for Advanced Manufacturing exports such as automobiles and electrical circuits.<sup>8</sup> The recently announced UK-EU agreement will explore linking Emissions Trading Systems between our countries, which could, if agreed, reduce the carbon leakage risk between the UK and EU and industry to be exempt over £7 billion of goods exports annually from the EU Carbon Border Adjustment Mechanism.<sup>9</sup>





## 1.2 Be a global leader in scaling up innovation and automation

The UK is a powerhouse of academic research, ranking third globally in total number of publications, just behind China and the US.<sup>10</sup> We are a leader in developing novel approaches, such as additive manufacturing, and have pioneered the use of digital technology enabling the digitisation of manufacturing.<sup>11</sup>

Despite our strengths, the sector finds it challenging accessing finance, particularly the “patient capital” required to bring innovation to life.<sup>12</sup> To bridge the scale up gap (known as the “valley of death”) and ensure commercialisation of our frontier manufacturing technologies, we will support co-investment with the private sector through a major uplift in the commercial finance available, and through investment in the UK institutions which support businesses to ‘translate’ technologies from ideas to deployment.

As we accelerate towards Industry 4.0, we will also support the sector through regulatory reform where possible to drive innovation and invest in technologies which are critical for improving productivity and competitiveness, including AI.

## How AI will impact the sector

AI holds immense potential to enhance Advanced Manufacturing by improving precision, adaptability, and efficiency. However, a 2024 Make UK report revealed that only 7% of UK manufacturers were well-versed in AI applications, and just 8% had successfully implemented AI and machine learning in their operations.<sup>13</sup> Reasons for slow uptake vary. Often end-users lack the knowledge of what technologies can bring, and the ability to test and integrate solutions into their operations.

Applications of AI within Advanced Manufacturing include:

- **Digital twin technology:** Digital twins, powered by AI and Internet of Things technologies, provide real-time virtual replicas of physical operations to optimise and predict performance.
- **Predictive maintenance:** leverages sensor data and digital twins to predict machinery failures, enabling early intervention and reducing downtime. This approach helps manufacturers optimise maintenance schedules and save costs by preventing disruptions to production.
- **Custom manufacturing:** AI is integrated into the design process so companies can tailor products to individual preferences while maintaining production efficiency, enhancing customer satisfaction.
- **Generative design:** uses generative AI to rapidly explore design options based on materials and manufacturing constraints, speeding up product development. Already applied in industries like aerospace and automotive to optimise parts, its potential in modern manufacturing continues to expand.

We are investing in a suite of specialist advisory services and organisations to increase robotics and technology adoption across Advanced Manufacturing, building on the findings of the Government Chief Scientific Adviser and National Technology Adviser's Technology Adoption Review, published in June 2025.

## The approach

- Drive research and innovation into commercial markets, including through regulatory reform.
- Increase the share of private investment available for strategic technologies and frontier industries.
- Increase the digital readiness levels of small and medium sized-enterprises (SMEs) in the UK, by addressing barriers to technology adoption through the Made Smarter Adoption programme.
- Create one-stop shops for businesses to gain expert guidance to facilitate successful technology adoption in robotics and autonomous systems.

## The interventions

### Regulatory reform

As set out in the Regulatory Action Plan, we want a regulatory system that not only protects consumers and supports competition, but also encourages new investment, innovation, and growth. Below, we set out the detail of reforms by each frontier industry supporting innovation and investment, including reforms to the Zero Emission Vehicle Mandate, implementing the Automated Vehicles Act (2024), and sandboxes to test novel space innovation including in-orbit servicing and manufacture. The latter is being spearheaded by the recently established Regulatory Innovation Office, working to address regulatory barriers holding back innovation.

Further, the Procurement Act (2023) and 2025 National Procurement Policy Statement champion transparency, ease administrative burdens, and drive innovation that benefits firms, specifically aerospace and space, who have often reported burdensome complexities navigating between civil, defence, and security government departments. Additionally, as set out in the upcoming procurement consultation, the Government proposes to go further by setting targets for direct spend with SMEs, and excluding suppliers if they do not pay their contractors on time.

### Made Smarter Innovation (MSI)

MSI delivers collaborative R&D projects and industry-focused research in the field of Industrial Digital Technologies (IDTs) – including AI, 3D printing, ‘smart factories’ and Robotics. This includes easily adoptable use cases for these cutting-edge technologies, including SMEs such as HAL Robotics, Deep.Meta, and Photocentric. Driving innovation throughout all four nations in the UK, MSI will develop novel digital solutions, increase productivity and resource efficiency, and enable better supply chain mapping to enhance resilience. Since 2020, this £129 million programme has yielded £202 million in private investment, and led to the development of over 350 industrial digital technology solutions

for manufacturers.<sup>14</sup> With a government investment of £29 million a year to 2030, we will go further, including to expand the UK's partnerships with countries such as Japan, Republic of Korea, Germany, Singapore, and the US, increasing the flow of knowledge around IDTs.

Further, MSI's Digital Supply Chain Hub (DSCH) provides a digital innovation ecosystem connecting innovators across manufacturing and technology. By improving the flow of data across the supply chain, incorporating digital tools and technologies, DSCH creates a comprehensive data system that can be leveraged to meet current and future supply chain challenges.

## **Made Smarter Adoption (MSA)**

MSA supports SMEs across all of our manufacturing sectors to adopt IDTs. Recognised as an exemplar support programme by the Technology Adoption Review, MSA offers trusted, tailored, holistic support that guides firms in their digital journey. Over the last three years it has provided over 1,600 businesses with digital roadmaps to help firms understand how best to introduce IDTs in their day-to-day operations, trained over 400 SME leaders to help integrate IDTs within their businesses and leveraged in over £16 million in private investment.<sup>15</sup>

Since April 2025, MSA has been expanded to all regions in England meaning more SMEs will be able to benefit from the programme's support. We have also introduced an enhanced digital skills offer, including digital internships. We stand ready to engage with counterparts in devolved governments and regions on learnings from the programme's success. From 2026, we will go further having secured up to £99 million to continue the rollout of this programme to reach more SMEs and enhance the support offered. For example through strengthened grant offers, extending digital internships, and greater support on AI and other cutting-edge technologies.

## **Robotics and Autonomous Systems (RAS)**

To drive technology adoption, we are launching a new RAS programme, with an initial investment of £40 million, which will create a new network of physical Robotics Adoption Hubs with the expertise, equipment, and connections to accelerate firms' take-up of robotics. These hubs will harness UK expertise, providing a one-stop-shop to help end-users invest in RAS technologies with confidence. This initiative is aligned with the Smart Machines 2035 Strategy of the Robotics Growth Partnership,<sup>16</sup> an external advisory group to government.

## **The High Value Manufacturing Catapult (HVMC)**

HVMC helps UK businesses develop and adopt engineering and manufacturing technology solutions to transform their manufacturing processes, enhancing their productivity and profitability. Since its establishment, HVMC has invested more than £1 billion in a nationwide network of R&D facilities and worked with more than 36,000 companies to pioneer groundbreaking innovations in frontier industries, such as clean energy, industrial sustainability, health tech and defence.<sup>17</sup> HVMC's capabilities and collaborative partnerships will be key to helping government and industry implement the Industrial Strategy for the Advanced Manufacturing sector at the right speed and scale and create thousands of new high value jobs over the next decade.

## **Data Sharing Infrastructure initiatives**

The Government is also investing up to £12 million in UK Data Sharing Infrastructure Initiatives from April 2026. Learning from international practices, including the Common European Data Spaces, these will promote effective and more coordinated approaches to governance, legal considerations, regulations, data interoperability, security, and trust. Businesses will be able to adopt these approaches and receive guidance, lowering costs and improving their ability to harness data from different sectors.

## **Deepen collaboration on dual-use Advanced Manufacturing and defence technologies**

To ensure we remain at the forefront of strategic and dual-use technologies, the Government has developed an ambitious new approach to defence innovation. UK Defence Innovation which will launch on 1 July, will turbocharge the Government's ability to support the "pull-through" of cutting edge innovative ideas and technologies into capabilities and commercial products with advanced manufacturers of defence and dual-use products standing to benefit .

## **British Business Bank (BBB)**

To support investment and growth in the Government's IS-8, the BBB is committing an additional £4 billion for the Industrial Strategy Growth Capital, set to catalyse investment in the IS-8 crowding in £12 billion of private sector capital. The BBB IS Growth Capital has been designed to ensure it provides the support that Advanced Manufacturing requires and increases the sector's economic resilience. This includes a significant scaling up of the capacity to make equity investments in Advanced Manufacturing scale-up businesses, including via funds. Additionally, the BBB will invest in and build capability of specialist deep tech and Advanced Manufacturing VC fund managers and invest in private debt funds providing firms with growth capital.

The BBB IS Growth Capital will also introduce tailored market approaches and offer large equity investments of £40-60 million to strategically important, capital-intensive businesses. These investments will flow from a rigorous process of identifying and addressing market gaps, drawing on relevant industry and Catapult resources. The process will be coupled with strong monitoring, reporting and governance mechanisms to ensure the sector is supported through the stages of the investment cycle. In addition, the BBB and the Intellectual Property Office (IPO) will explore how to best support lending to intellectual property (IP)-rich firms and encourage new IP-backed lending products. Government will also establish a new working group convening relevant departments and authorities, and also engage closely with industry, commercial banks and other financial institutions, to consider steps to address regulatory and non-regulatory barriers to lending to IP-rich SMEs. Government will publish an update on this work and next steps by the end of the year.

## National Wealth Fund (NWF)

The NWF is at the forefront of investing public money for our future, providing £27.8 billion to encourage investment and growth in sectors aligned to the Industrial Strategy, including Advanced Manufacturing.<sup>18</sup> The NWF finances investment in capital-intensive projects, making it an effective Public Finance Institution for investing in Advanced Manufacturing at varying levels of growth and development.

## Office for Investment (OfI)

The Government has expanded the OfI, which will be responsible for driving a strategic cross-government approach to investment aligning with the Industrial Strategy priorities, including Advanced Manufacturing. This expanded OfI will bring together expertise from industry and business to provide a bespoke service to support investors, land investment, and overcome barriers to growth. This will enable more successful investments such as the recent £250 million investment in semiconductor manufacturing by Vishay,<sup>19</sup> vital for the production of electrical vehicles and for jobs in Wales.



Source: Kevin Church, BBC.



## 1.3 Develop a digitally literate, skilled, and inclusive workforce

The UK is home to world-leading research institutions and innovation clusters, providing talent across the UK, and to some of the world's most successful and innovative manufacturing employers. Manufacturing is also regionally dispersed with 84% of jobs located outside London and the South East (compared to 69% for the overall economy)<sup>20</sup> However, serious skills shortages hold the manufacturing sector back – with around 49,000 total vacancies.<sup>21</sup> Make UK, the national industry body, has estimated that solving the skills gap could contribute up to £6 billion a year to the UK economy.<sup>22</sup>

To maximise growth and support long-term economic resilience, industry, government, and training providers must work together, with government support clearly accessible. In partnership with industry, we will invest in developing skills across the workforce, allowing it to keep pace with innovation and leverage the economy-wide skills offer including in adjacent areas like defence to the benefit of advanced manufacturers.

We have created Skills England, which will publish regular assessments of skills needs at a national, regional, and local level. It will also engage with partners to ensure that training meets the needs of employers, providers, and learners and secures good value for money. The Government has committed to widening the apprenticeships offer into a growth and skills offer to deliver flexibility for employers and learners, support meeting these needs, and more details will be set out in the forthcoming Post-16 Education and Skills White Paper. Skills England will also work in partnership with the devolved governments of Scotland, Wales and Northern Ireland to coordinate our plans for skills support, providing a clear and comprehensive overview of our support offer that meets business needs. We will also pursue industry-led solutions including recommendations for a potential sector-wide Skills Passport and other initiatives set out in the recent Make UK Skills Commission. All of this will be further reinforced by other initiatives designed to boost expertise, including Turing AI 'Global' fellowships, which will bring five of the world's best AI experts here, further leveraging our skills offer with impacts likely seen across sectors.

## The approach

- Develop a long-term government and business partnership to ensure the Advanced Manufacturing skills pipeline.
- Develop more flexible and shorter duration manufacturing apprenticeships by 2030, ensuring they support the needs of the Advanced Manufacturing sector.
- Work with industry to improve the appeal of the Advanced Manufacturing sector, particularly to young people, and to make it more diverse.

## The interventions

### Reforming the skills landscape to the benefit of Advanced Manufacturers

The Government will provide investment of over £100 million over three years to support engineering skills in England, working with Skills England to determine how this can increase the pipeline of skills through further and higher education and apprenticeships. With capital funding provided via the Skills Mission Fund, this will include launching Technical Excellence Colleges to address shortages in engineering, which is critical to the skills needed in priority sectors including Advanced Manufacturing, Clean Energy Industries and Digital Technologies. Skills England will ensure that training and qualifications remain aligned with shifting workforce needs, including looking at funding bands to ensure they reflect delivery (working with key partners like Make UK). We will also work with the sector to ensure the maximum impact of this package, including opportunities for industry co-investment or other contributions.

The Government will also introduce short courses in England, funded through the Growth and Skills Levy, in areas such as digital, artificial intelligence and engineering. These will support Industrial Strategy sectors such as in Advanced Manufacturing and Creative Industries from April 2026. We will work with Skills England to determine the courses which will be prioritised in the first wave of rollout and subsequent waves, and how those sit alongside apprenticeships and other training routes. We will also work with Skills England to introduce these short courses and consider how to prioritise investment across the programme.

Further, we will ensure there are sufficient courses to support an additional 65,000 16–19 year-olds in England by 2028-29, including providing key pathways into priority occupations in the IS-8. Through High Value Course Premia we will deliver funding uplifts to priority courses that support key IS sectors, such as engineering and digital. These areas address critical skills shortages that underpin multiple sectors in the Industrial Strategy.

### Upskilling and reskilling

We are establishing a new sectoral Upskilling and Reskilling Programme in England, which will address the need for short courses for the existing workforce. Funded by the Department for Business and Trade, the programme will partner with industry to identify

sector priorities and facilitate the development of tailored training courses on transformative technologies and SME training needs through an innovative online platform.

We will also work with the Ministry of Defence on skills initiatives to maximise interdependencies across the civil and defence sectors, including the supply chain, to ensure industry and government initiatives are appropriately aligned.

## **Pilot Recruitment and Workforce Transition Programme**

We are also piloting a Recruitment and Workforce Transition Programme that aims to address persistent vacancies in the sector and support those not well served by traditional recruitment approaches. Through the creation of targeted programmes, we will support those in stranded jobs to develop new skills and find future employment. We remain committed to sharing best practice with devolved governments and regions to see if similar approaches can be rolled out elsewhere.

## **Changing sector perceptions**

We will work with industry to change outdated perceptions of manufacturing, including upskilling careers advisers on this cutting-edge and exciting sector. In addition, through its over 600 Jobcentres,<sup>23</sup> the Department for Work and Pensions will offer support to recruit people into the wide range of high-skilled jobs available across the Industrial Strategy. We will also continue to promote manufacturing roles through the new Jobs and Careers Service and by outreach work within local communities and schools as part of National Manufacturing Day. The Jobs and Careers service will be locally embedded, designed to meet the different needs of local labour markets, local people, and local employers.

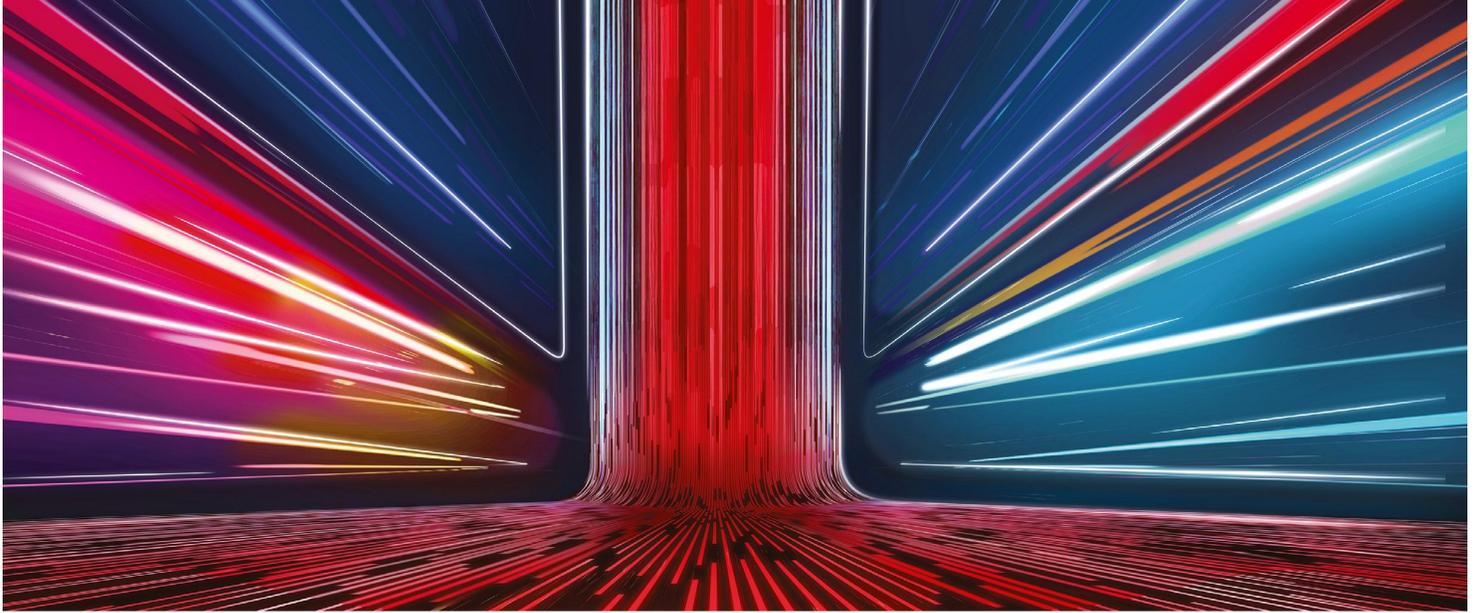
## **Equality Charter**

Greatly improving diversity in the workforce is critical to attracting and retaining talent in this sector. We will therefore sponsor an Equality Charter, co-created with industry and a dedicated task force led by Make UK, which will include public reporting of diversity data by firms. In partnership with industry, we have created the target of '35 by 35' to increase women's representation in the UK sector to 35% by 2035.



## Endnotes

- 1 Department for Transport (2025) [Maritime Decarbonisation Strategy](#).
- 2 His Majesty's Government (2025) [Government cuts price of everyday items and summer essentials](#).
- 3 His Majesty's Government (2025) [Government steps in to back British business in changing world](#).
- 4 His Majesty's Government (2025) [Another boost for British car industry as £1 billion secured for new Sunderland gigafactory](#).
- 5 UK Export Finance (2024) [Annual Report and Accounts 2023 to 2024](#) lists aerospace as responsible for 27% of UKEF total net amount at risk.
- 6 Analysis of UK Export Finance (2021) [Annual Report and Accounts 2020 to 2021](#), UK Export Finance (2022) [Annual Report and Accounts 2021 to 2022](#), UK Export Finance (2023) [Annual Report and Accounts 2022 to 2023](#) and UK Export Finance (2024) [Annual Report and Accounts 2023 to 2024](#).
- 7 His Majesty's Government (2025) [Landmark economic deal with United States saves thousands of jobs for British car makers and steel industry - GOV.UK](#).
- 8 Department for Business and Trade (2025) [UK-India trade deal: conclusion summary](#).
- 9 Cabinet Office (2025) [UK-EU Summit - Explainer](#).
- 10 His Majesty's Government (2022) [International comparison of the UK research base](#).
- 11 Cambridge Industrial Innovation Policy (2021) [International Benchmarking: Advanced Manufacturing and Materials](#).
- 12 His Majesty's Government (2017) [Patient Capital Review – Industry Panel Response](#).
- 13 Make UK (2024) [Future Factories Powered by AI](#).
- 14 UK Research and Innovation (2025) [ISCF Made Smarter Innovation Challenge Final Evaluation Report](#).
- 15 Made Smarter Adoption (2025) [Made Smarter Adoption KPI Statistics: FY 2022/23 - FY 2024/25](#).
- 16 Department for Science, Innovation and Technology (2025) [Smart Machines Strategy 2035](#).
- 17 Catapult High Value Manufacturing (2025) [Annual Report 2025](#).
- 18 His Majesty's Treasury (2024) [National Wealth Fund: Mobilising Private Investment](#).
- 19 His Majesty's Government (2025) [Hundreds of millions of pounds to turbocharge manufacturing sector in Wales](#).
- 20 Office for National Statistics (2025) [Workforce jobs by region and sector \(average for 2024\)](#).
- 21 Office for National Statistics (2025) [Vacancies by Industry \(data for Jan-Mar 2025\)](#).
- 22 Make UK (2025) Skills for Success: [The Reforms Essential to Our Economic Future](#).
- 23 Public Accounts Committee (2025) [Jobcentres Inquiry](#).



## 2. Supporting our frontier industries

**The UK's Advanced Manufacturing sector has extraordinary strengths, with a transformative future ahead of it in a world where the economic opportunities will be defined by automation, electrification, smart data, the new space race, and new physical materials, from metals to plastics engineered for the most cutting-edge applications in the human body or extreme climates.**

The Advanced Manufacturing sector is positioned to grow by £31 billion (37%) in GVA up to 2035, based on recent growth rates<sup>1</sup> with global Advanced Manufacturing imports having grown by 36% in the last decade alone to £7.4 trillion.<sup>2</sup> To put the UK in pole position to benefit from this revolution, we have prioritised six frontier industries with the highest growth potential and where UK businesses have a comparative advantage globally, which we will support with a range of targeted interventions.



## 2.1 Automotive

From our world-leading motorsport and F1 capabilities to the development of novel automated freight and passenger vehicles, the UK boasts a dynamic, diverse, and fast-developing automotive sector built on a rich industrial heritage. It is a significant driver of economic growth, contributing an impressive £21.4 billion GVA<sup>3</sup> to our economy in 2024 alone, from a turnover of £83 billion<sup>4</sup> and directly employing a workforce of 132,000.<sup>5</sup> Over 80% of the vehicles made in the UK are exported globally, with the EU making up our largest export market.<sup>6</sup> The UK also produces off-road machinery, including lifting equipment, agricultural, construction and mining equipment, which generated around £4 billion GVA<sup>7</sup> and directly supported 43,000 jobs in 2023.<sup>8</sup>

Despite our many well established strengths, automotive is under intense economic pressure due to widespread global instability, the rapid emergence of China as a major car manufacturer, the challenge of transitioning to zero-emission vehicle manufacturing and the complexity of commercialising automated vehicles, and high industrial energy costs. However, with these challenges comes a decade of opportunity. The UK is poised to build on its generational automotive leadership by pioneering technologies, including cutting-edge zero emission propulsion technologies, power electronics and energy systems. The transition to ZEVs and CAM are paving the way to a future-proof and sustainable sector with dual-use technology strengths.

## The approach

- Drive growth to increase the volume of vehicles made in the UK to over 1.3 million cars and commercial vehicles by 2035.
- Cement the UK's leadership in pioneering and strategic technologies, including ZEVs, leveraging a minimum of £6.6 billion in private investment.
- Lead the transition to ZEVs to continue the successful reduction of CO<sub>2</sub> emissions.
- Create the first European market for self-driving vehicles and services, and maximise investment in disruptive electric vehicle technologies such as vehicle-to-grid, AI, and software, as well as application of dual-use technologies to support the defence sector.
- Build on our globally competitive exporting prowess.

## The interventions

### **Cement the UK's leadership in pioneering and strategic technologies, including ZEV manufacturing**

The UK has long supported innovation in the automotive sector through the Advanced Propulsion Centre (APC) and Automotive Transformation Fund (ATF). Government and industry have jointly invested more than £1.65 billion in R&D funding via APC R&D competitions<sup>9</sup> supporting the creation and safeguarding of thousands of jobs and contributing to substantial CO<sub>2</sub> savings. The ATF capital programme has attracted significant investments from major companies, such as Ford, Johnson Matthey, Nissan, and Tata, as part of our developing electric vehicle supply chain. We are building on these achievements by announcing a brand-new offer for automotive investors, leveraging £2 billion in government funding to step up our support as we transition to net zero.

The 'Driving Research and Investment in Vehicle Electrification' (DRIVE35) initiative will ensure the UK remains at the forefront of zero-emission vehicle manufacturing. This ambitious package of interventions will support the latest R&D in strategic vehicle technologies, accelerate their commercial scale-up, and unlock investment across all aspects of automotive electrification, including cutting-edge developments in vehicle-to-grid technology and software-defined vehicles, enabling a holistic transition to next-generation electric vehicle technologies. As part of this ambitious programme, we are committing £2 billion of automotive capital and R&D funding to 2030, plus an additional boost of £500 million to extend the R&D support under DRIVE35. This will give innovators the confidence and scope to pursue the technological advancements we want to see in our automotive sector.

With the launch of the DRIVE35 programme, the National Wealth Fund (NWF) is working with Department for Business and Trade on how best to combine its suite of financial products, with grants and other policy instruments from the Government, to increase support across the electric vehicle supply chain. The NWF will seek to deploy significant capital across the whole of the electric vehicle supply chain over the course of this Parliament to support our growth ambitions, including a commitment to deploy at least £5.8 billion to five key areas: gigafactories and the electric vehicle supply chain, green hydrogen, carbon capture, ports, and green steel.

In addition to DRIVE35, the Government announced £15.6 billion for Transport for City Regions which will allow local leaders to play a more active role in the delivery of local bus services and allocate some of this funding toward decarbonising their local fleets, supporting UK-based manufacturers, and driving demand for zero emission buses. This will be further supported by the Bus Manufacturing Expert Panel bringing local leaders together to translate funding and reform plans into a steady and growing pipeline of manufacturing orders.

To further ensure the UK remains a leader in automotive innovation, the Government is working with industry to develop an Automotive Technology Strategy in 2026. This will shape the focus of our ambitious investment programmes, underpin our developing industrial policy, and provide long-term clarity on the UK's technology priorities.

## **Build the right regulatory environment for our automotive industry and the environment**

The Government has already responded to recent global shifts with reforms to the Zero-Emission Vehicle Mandate.<sup>10</sup> Announced in April 2025, these changes provided immediate relief and mean that manufacturers will have greater flexibility in complying with the regulations in the way most suitable to their business cycle and consumer demand. The Government has also confirmed that full and plug-in hybrid cars will be sold until 2035 to help ease the transition and give industry more time to prepare.

In line with our ambitious approach on zero emission vehicles, the Government will build on its significant £400 million investment to further roll out charging infrastructure, building on the more than 80,000 public chargers now installed (as of June 2025).<sup>11,12</sup> In parallel, the Government is investing £1.4 billion to support the continued take up of electric vehicles, including vans and HGVs. In addition, government will continue to provide generous capital allowances and benefit-in-kind tax incentives.<sup>13</sup> We will continue to listen to, and work in partnership with, industry to make the transition to zero emission vehicles a success.

We are also pursuing legislative reform for micromobility vehicles when parliamentary time allows, to provide a proportionate and more agile process for regulating Low-Speed Zero Emission Vehicles (LZEV) likely including pavement delivery robots, e-scooters, and last mile delivery vehicles. Creating a clear route to market will drive the investment and usage in these new vehicles, unleashing businesses from the current regulatory burdens and kickstarting economic growth.

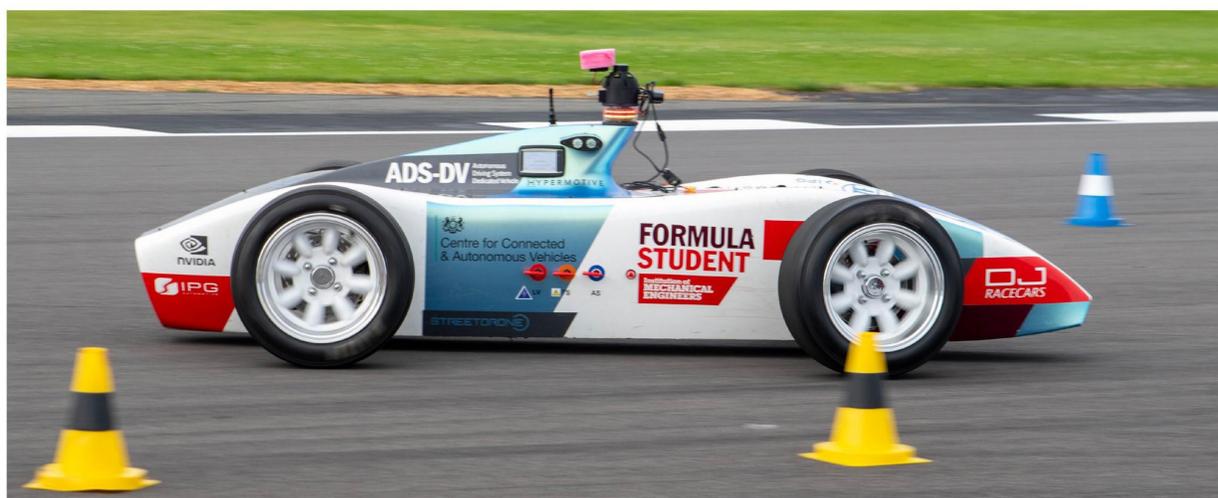
## Champion a commercial landscape fit for the future of Connected and Automated vehicles (CAM), including self-driving cars

To address the complexities in commercialising CAM vehicles, we will increase funding to our CAM Pathfinder programme with a further £150 million extending it until 2030, provided in partnership with Zenzic and Innovate UK. Working closely with government, these organisations deliver a globally unique offer, match-funding R&D grants to the UK CAM sector including for dual-use technologies, and connecting industry players with international opportunities.

This funding is underpinned by the world-leading Automated Vehicles Act 2024, which paves the way for self-driving vehicles to be used safely and securely on British roads by removing the need for a safety driver.<sup>14</sup> Alongside full implementation of the act by 2027, the Government is also enabling commercial pilots by Spring 2026. We are also playing a leading role in harmonising international regulations on self-driving, including through the United Nations Economic Commission for Europe.<sup>15</sup> This will enable our companies to compete and export globally.

**Born from research at the University of Cambridge, Wayve was founded in 2017 to reimagine automated mobility through embodied intelligence. Working with the Centre for Connected and Autonomous Vehicles, Wayve participated in £2 million pioneering research projects, grant-funded by government, developing novel safety assurance methods for the use of AI in advanced driving assistance and automation technologies.<sup>16</sup> In Summer 2024, Wayve secured over \$1 billion investment round led by Softbank Group, with contributions from NVIDIA, Microsoft, and Uber, in a deal representing the largest ever investment into a European AI company.<sup>17</sup>**

We are also reinforcing the future of the CAM industry with an additional £1.5 million between 2025 to 2030 to Formula Student AI, on top of the near £1 million in R&D grant funding already provided since 2018. Organised by the Institution of Mechanical Engineers, this will support university students to develop technical skills for automated driving systems, and the interdisciplinary skills to be successful engineers in Advanced Manufacturing.<sup>18</sup>



Source: Institute of Mechanical Engineers

## **Provide targeted support to boost exports and investment, and grow our international partnerships**

To further protect against global shocks and ensure the UK remains a top automotive exporter, we will support industry by implementing a new targeted export support programme. The programme will help automotive supply chain companies sell high-growth potential technology to key markets including North America, Japan, China, India, and Western Europe, notably Germany. A similar UK CAM industry programme will additionally support exports to markets in the Middle East. We will also explore the development of international technology partnerships between the UK and our main trading partners, with a view to boosting industry ties and maximising the opportunity for foreign direct investment. Alongside, export support, we are working directly with partner governments, including through the UK-Japan Strategic Economic Policy and Trade Dialogue which will be a platform to maximise commercial opportunities for both automotive sectors.

Trade with the EU remains vital to the sector which is why we remain in discussion with automotive manufacturers on their ability to trade with the EU, including compliance with rules of origin for electrified vehicles and their batteries under the UK-EU Trade and Cooperation Agreement. We will continue to support UK automotive manufacturers to develop their domestic electric vehicle supply chains and give the sector certainty.





## 2.2 Batteries

As we strive towards a more sustainable Advanced Manufacturing sector, battery manufacturing will only increase in importance, underpinning the UK's drive to our net zero goals. The sector provides vital resilience, with domestic supply insulating UK industry from potential economic shocks. Employing 10,500 individuals across the UK,<sup>19</sup> the battery sector is critical to driving innovation and job creation. There are significant battery hubs in the West Midlands and North East, showcasing the sector's ability to secure regional economic growth through the development of skills and manufacturing clusters.

Global demand for batteries, and battery technology is high, and is only increasing, however their inputs are often geographically concentrated. Benchmark Minerals' analysis from September 2024 predicts that China will hold nearly 70% of global battery production capacity by 2030, with the UK falling behind USA, Germany, Hungary, Canada, France, and South Korea.<sup>20</sup> It is critical for our economic security and competitiveness that the UK builds a resilient sector and diversifies critical mineral supply chains to proactively mitigate future supply chain shocks.

We will improve the UK's position in global battery manufacturing across automotive, aerospace, maritime, defence, robotics, rail, and stationary energy storage, increasing domestic production in line with demand, both in energy capacity (GWh per year) and also in diversity of cell format, chemistry, and application. As energy demand increases addressing the UK's high electricity costs compared to many other countries will be critical to delivering competitive battery manufacturing.

## The approach

- Build on existing UK strengths to ensure we maintain a globally competitive battery sector with domestic capability across the full breadth of the battery supply chain.
- Support UK industry to meet domestic battery demand, both in energy capacity and chemistry.
- Support the scale up and commercialisation of R&D for innovative battery technology, supporting our battery start-ups and SMEs to grow and remain in the UK.
- Increase the number and turnover of companies in the UK operating in the early stages of the battery supply chain from raw materials to cell components from the existing baseline of 72 companies.<sup>21</sup>
- Increase the combined turnover of companies involved in battery reuse, recycling, and end-of-life from a 2024 baseline of £560 million<sup>22</sup> and support UK industry to increase the recycled content of UK manufactured batteries over time.

## The interventions

### Make the UK a science superpower for batteries

To compete in a challenging global marketplace and meet domestic demand, we are supporting the Battery Innovation Programme, formerly known as the Faraday Battery Challenge,<sup>23</sup> which will drive innovation from lab to factory across the battery supply chain. To date, the programme has provided £130 million of grant funding for collaborative research unlocking over £800 million of further private investment and supported 118 high-tech projects across the battery chain, 80% of which were led by SMEs.<sup>24</sup>

Through government investment of £452 million to 2030, the Battery Innovation Programme will build on this, encouraging cross-sector innovation in emerging and next generation technologies through technology transfer funding that will connect academic researchers with UK industry and investor partnership funding. It will also fund R&D for battery safety to ensure that regulations and standards keep pace with scientific developments. Funding for industrial skills will build on the established success of Faraday to target technical skills gaps and develop engineers and scientists of the future.

### Shore up supply chains and improve UK economic resilience

Developing new battery materials will be vital to building supply chain resilience, by reducing dependencies on a limited number of supplier countries. That is why we have provided £12 million in funding since 2023 to the High Value Manufacturing Catapult (HVMC)<sup>25</sup> to be delivered by Warwick Manufacturing Group<sup>26</sup> and The Centre for Process Innovation,<sup>27</sup> to enable the synthesis, scale-up, formulation, and validation of novel active materials and solid-state electrolytes.

Expanding our commercial recycling capabilities is a significant opportunity to improve economic resilience by reducing demand for virgin inputs, key to delivering sustainable growth. From February 2027, all electric vehicle batteries and industrial batteries over 2 kWh sold into the EU market will require a unique Battery Passport. By the start of 2031, those batteries must meet recycled content targets for lithium, nickel, cobalt, and lead.<sup>28</sup> The UK will use these requirements as a basis to establish a competitive advantage in both recycling and the associated data and systems management. We are also reviewing regulatory levers to increase battery collection rates and encourage best practice in end-of-life management. The government has convened a Circular Economy Taskforce,<sup>29</sup> comprising experts from industry, academia, civil society, and beyond, to develop an evidence-driven and actionable Circular Economy Strategy for England. The Government has announced plans to publish proposals for the Strategy in Autumn 2025.

As well as supporting resilience within the battery supply chain, we are committed to using battery technology to increase resilience across the UK's power network. Battery energy storage systems (BESS) present a significant economic opportunity and will play a pivotal role in the transition to a clean power system. The Government outlined its plans for the deployment of battery storage in the Clean Power 2030 Action Plan, including that 23-27GW of grid scale batteries could be required to meet the decarbonisation goal in 2030.<sup>30</sup> We will work with industry, NESO, and Ofgem to build on those actions through the forthcoming Low Carbon Flexibility Roadmap.





Source: ZeroAvia

## 2.3 Aerospace

With our world-leading capabilities in the production of jet engines, wings, and advanced systems for large commercial aircraft, aerospace is a critical frontier industry in the UK. It is also globally recognised for other advanced technologies such as advanced air mobility as well as drones, which are estimated could contribute up to £45 billion to the UK economy by 2030.<sup>31</sup>

In 2024, the industry turned over £34 billion,<sup>32</sup> contributing £13.6 billion in GVA,<sup>33</sup> and directly supported 100,000 jobs<sup>34</sup> with salaries 36% above average pay levels<sup>35</sup> and indirectly supported a further 150,000 in the supply chain.<sup>36</sup> With 88% of employment located outside of London and the South East of England, aerospace contributes significantly to the UK's long-term economic and regional growth.<sup>37</sup>

While being part of a globally integrated supply chain, the UK aerospace sector faces intense global competition, with other nations providing substantial financial subsidies to attract manufacturers and develop their own capabilities. We must maintain pace with global innovation and investment to capitalise on global aerospace demand, anticipating growing demand for over 40,000 new large commercial aircrafts over the next 20 years.<sup>38</sup>

UK aerospace is poised to grasp this opportunity, especially through the anticipated introduction of new ultra-efficient narrow body aircraft and the development of disruptive zero-carbon aircraft technology, while also ensuring we capitalise on the synergies between commercial and defence sectors.

## The approach

- Secure at least £35 billion to 2050 of additional private investment to industrialise technologies.
- Increase the UK's share of the global market by value from 10%<sup>39</sup> to 15% by 2050 targeting greater UK content on next generation narrow body aircraft.
- Deploy more efficient technologies, reducing harmful emissions, and making air travel more sustainable.
- Increase coordination with the defence sector, enabling industry to deliver for both the civil and defence markets.

## The interventions

### Pioneer new, more efficient aerospace technologies

To ensure long-term R&D funding is matched with aircraft development cycles, Government will extend the Aerospace Technology Institute (ATI) Programme with up to £2.3 billion to 2035, continuing to partner and share innovation risk with the businesses it supports. Through its strategic, SME and Non-CO<sub>2</sub> funding streams, the ATI programme has already supported 451 companies from across the UK and enabled over 400 projects worth £3.6 billion in joint government-industry investment.<sup>40</sup>

The ATI will focus towards technologies that will drive growth, competitiveness and productivity for the next generation of more efficient and zero emissions aircraft, including Rolls-Royce's UltraFan™ engines and for Airbus' new narrow body aircraft, and for their supporting supply chains. This programme will deliver significant benefits to the UK civil and defence sectors, exploiting common technologies and capabilities. Government will work with industry to develop capabilities, digital adoption, and skills for the civil and defence markets, including the industry-led Supply Chain Solutions programme, which helps aerospace, defence, and space companies to assess and improve their competitive position.

The use of Sustainable Aviation Fuel (SAF) presents a growth opportunity for the UK through their critical role in decarbonising aviation. In 2050, up to 15,000 UK jobs and £5 billion GVA could be supported with future low-carbon fuel production, including SAF.<sup>41</sup> To seize this opportunity, we are building demand through the SAF Mandate,<sup>42</sup> which launched in January 2025. We have announced £63 million of funding for 2025 to 2026, available to all nations and regions of the UK to drive growth, via the Advanced Fuels

Fund.<sup>43</sup> This programme has also been extended until 2029-30. Additionally, we are helping to derisk SAF projects by introducing a revenue certainty mechanism that will provide a guaranteed price for SAF and attract investment into the UK.

Gas turbines are critical to UK national and economic security and our role and capabilities in the UK with companies like Rolls-Royce can lead to significant growth. The single biggest opportunity in aerospace over the next 50 years is to secure a UK engine position on next generation narrow body programmes.

### **Support a regulatory landscape which champions innovation**

The Government will support the development of safe, secure, and sustainable advanced air mobility aircraft, such as drones and electric vertical take-off and landing (eVTOLs) aircraft, through the Future of Flight programme, which will deliver the regulation, technologies, and infrastructure required for routine use. The Government has committed to scaling beyond visual line of sight (BVLOS) operations for drones<sup>44</sup> and supporting the introduction of eVTOLs. The standards roadmap developed through the BSI Group Future Flight Standards Programme sets out the priorities for future standardisation of drones.

The Regulatory Innovation Office, working with the Department for Transport and the Civil Aviation Authority, has already agreed six regulatory reforms that would support the scaling of the UK drone sector. These measures include a commitment to consult on an Electronic Conspicuity mandate, extending drone trial periods and considering exemptions to noise rules for drone trials, all of which are supported by over £20 million of additional funding for the Future of Flight over 2025 to 2026.



Source: Airbus



Source: Goonhilly Earth Station Limited

## 2.4 Space

Demand for space capabilities is growing, driven by increasing economic, national security, defence, and geopolitical interests.<sup>45</sup> In 2021 to 2022 it generated £7.2 billion GVA, with £1.2 billion GVA directly from manufacturing activities,<sup>46</sup> employing 52,000 people (10,600 in manufacturing) in highly-paid jobs with roles spread across the UK.<sup>47,48</sup> Globally, the space sector is forecast to grow to more than \$1.8 trillion in value.<sup>49</sup> The UK must be targeting a sizable share.

Space technologies are critical to national security and defence, and increasingly so as the domain becomes more contested by nation states globally. The space sector also plays a crucial role in understanding and mitigating the effects of our changing environment, with over 60% of the data used to monitor climate change exclusively or largely measured from space.<sup>50</sup>

However, the pace of innovation and number of technologies in the space sector can make it difficult to prioritise our focus. The UK has supported companies, universities, and institutions working across too many areas, which has limited our ability to ensure space companies are growing and scaling to commercially viable sizes. A greater focus on particular capabilities will ensure government, industry, and academia know where UK strengths lie and need to be in the future. This includes addressing the difficulty for space companies to access appropriate capital and financial solutions through concerted policy reform, taking advantage of our world-leading Financial Services sector.

The sector will have access to more capital and financing options than ever before; a business environment strategically reformed to incentivise the right workforce and company development, and an innovative regulatory environment that propels the UK to the forefront of the New Space Age. In doing so, the UK will cement its place as a leading spacefaring nation with industrialised capabilities delivered by strong and resilient companies in a diverse supply chain.

## The approach

- Grow the space sector by targeting specific capabilities, becoming a leading industrialised European exporter by 2030.
- Increase the revenue generation of the space sector by focusing efforts to create more industrialised companies with greater than £10 million revenue.
- Unlock greater access to capital for space companies to scale and industrialise through equity, debt financing, and other mechanisms.
- Create greater competition and diversity within the sector at the top of the supply chain, working more strategically with space companies that do or should play outsized roles in supply chain development.
- Enhance supply chain resilience to support national security and defence, in particular in highly assured technical areas and space Critical National Infrastructure.

## The interventions

### Develop industrialised dual-use satellite technologies, products and services

To ensure the sector can progress from innovation through to industrialisation we will focus and increase funding on the 5 priorities in the Space Industrial Plan and Launch, including through a targeted funding package of up to £80 million over five years. This will include Satellite Communications; Position, Navigation and Timing; In-orbit Servicing, Assembly and Manufacturing; Space Domain Awareness; Space Data Architecture.

As set out in the Digital and Technology Sector Plan, Advanced Connectivity Technologies will be developed which will include satellites. We will also encourage the development and mass manufacture of satellites from the UK to maximise our expertise in small satellite and payload manufacturing, and work with industry to develop capability to reliably and independently launch satellites from UK soil. This will position the UK as one of the only nations in Europe able to deliver end-to-end satellite manufacture and launch, within a single regulatory framework, delivering national security, defence and commercial benefits.

Government and industry recognise that securing such industrialised space capabilities will mean transforming our extended pipeline of small and micro-businesses into more consolidated and focussed companies with viable long-term commercialisation plans. This will unlock the export and growth potential of the sector, with more narrowly targeted interventions leading to industrial- scale, economically impactful technologies and services. Just as importantly, the UK's focus on these capabilities will provide the resilient supply chain and onshore capability needed to bolster our national security and defence, leveraging this dual-use industry to outfit the armed forces of tomorrow.

### **Crowd in and efficiently leverage public and private investment for space, positioning UK as global hub for financial solutions**

To maximise industry growth, we will provide public funding that incentivises private investment. The Private Investment Framework for Space will help government attract and channel private capital into capabilities, technologies, and companies of particular strategic, economic, or military value from appropriate sources.

The UK Space Agency will support companies from start-up to scale-up through a range of commercial mechanisms including grants, procurement, and co-investment. Longer-term, match-funding programmes such as the National Space Innovation Programme<sup>51</sup> and the Space Clusters Infrastructure Fund<sup>52</sup> will bolster R&D infrastructure and increase the number and diversity of companies operating within the UK space sector. The Unlocking Space programme<sup>53</sup> will deal with barriers related to access to finance and revenue generation across public, national security and defence, and private sector communities. To meet these ambitions, we're providing up to £135 million across these programmes. At scale up stage, greater access to the British Business Bank and National Wealth fund will enable more companies to industrialise and operationalise their innovations. Leveraging the combined strength of our Public Financial Institutions will transform the pipeline of start ups into commercialised and industrialised companies, making UK companies even more attractive investments.

Further, dual-use space capabilities require increased financing through various mechanisms, but this is disaggregated globally. The UK can move to concentrate this in one place. We will leverage our strengths in financial services, especially in the City of London, to position the UK as a global hub of financial solutions for space companies in the UK and amongst our partners, implementing policy reform where possible including through our new regular international summit to be launched in late 2025.

### **Create the conditions for a space sector fit for the future**

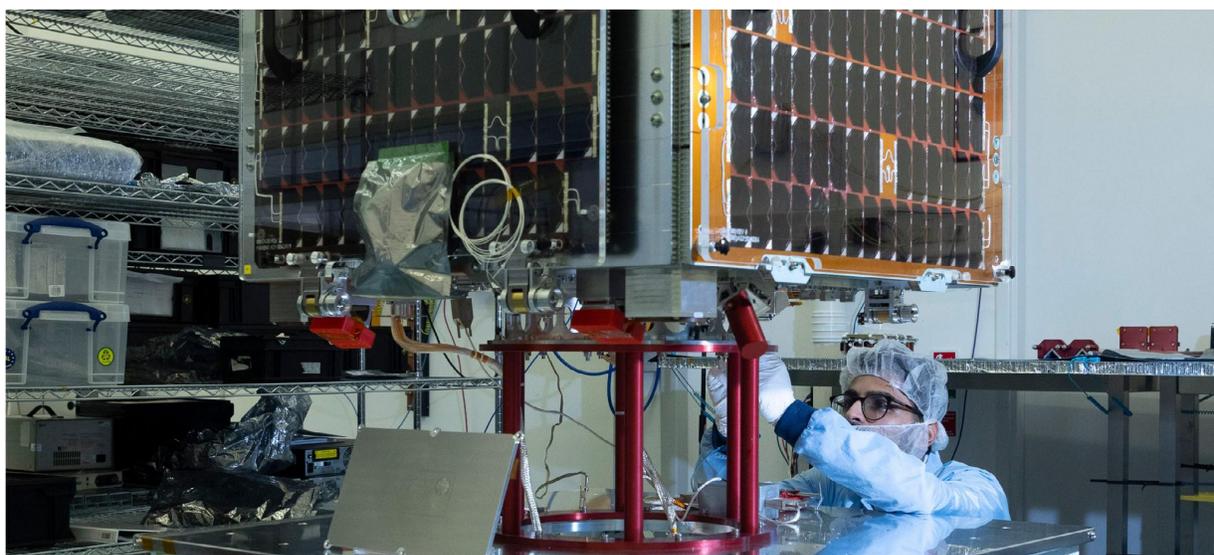
Alongside funding, we will focus on implementing the right conditions for the space sector to thrive long-term. Government will work strategically with companies that can play an outsized role across multiple interests, delivering industrialised capabilities, long-term workforce planning, policy, and regulatory development, and international engagement.

Working with Skills England, industry, and academia, we will support the development of technical and non-technical talent through the Space Education and Future Workforce programme. This will include developing training for key skills gaps that respond to sector developments and new technologies, such as AI, and exploring mechanisms for transitioning workers with relevant skills from adjacent sectors to the space sector.

Regulatory reform will be key to enabling UK businesses to design, build, launch, and operate their satellites under one modern industrial regulatory environment and, in time, service and upgrade them in-orbit as well. We will ensure our regulatory regime is fit for purpose by continuing to implement the recommendations of the 2024 Space Regulatory Review.<sup>54</sup> The UK is driving forward innovative reforms with international recognition and interest for being one of the first countries in the world to deliver a Space Regulatory Sandbox, which stress tested the regulatory framework for Rendezvous and Proximity Operations (RPO). Building on successful completion of Stage 1 of the RPO Regulatory Sandbox, we are now accelerating work to deliver Stage 2. We are also identifying other rapid growth areas to employ innovative regulatory testing tools and sandboxes, with up to £7 million in additional funding.

To ensure the sustainable expansion of our capabilities, UKSA has been supporting the British Standards Institution and industry to develop the first two ‘flex’ standards for orbital and sub-orbital space launch lifecycles. This will help identify and mitigate environmental impacts. Published for consultation in May 2025, these are the first of 10 planned Space Sustainability Standards being developed by the sector and cover both an overarching framework for sustainable space operations and sustainable launch operations.

The UK will ensure our companies and institutions remain international and export-focused by continuing to invest in strategically important missions with our allies and partners, including through the European Space Agency.<sup>55</sup> Outside of the European Space Agency, we will increase bilateral civil R&D funding between the UK and our partners to up to £75 million over five years. We will also work together on co-funding schemes with partners in strategically important markets to access international projects with UK interests.



Source: Hamilton Palmer, MOD



## 2.5 Advanced Materials

From next generation metallics to breakthroughs in bio-materials, advanced materials are vital for the future of Advanced Manufacturing, while also underscoring Energy, Digital Technologies, Defence and Life Sciences Industries. Materials, such as composites and carbon fibre, offer unique properties including light-weight, strength, and durability which increase design capability, improve speed and efficiency of vehicles and aircraft, and reduce fuel burn and emissions.

Advanced material businesses create significant opportunities. There are approximately 2,700 companies in the UK active in materials innovation, employing over 630,000 people, adding £45 billion to the economy every year, around 2% of the UK total. With 90% of them SMEs and 70% located outside London and the South East, advanced materials firms are offering valuable growth opportunities around the UK. In the last four years, UK companies active in advanced materials have secured more than £8 billion a year in private and public funding for innovation activity within the UK, meaning demand for materials-related jobs is also on the rise, expected to at least double by 2035.<sup>56</sup> This growth makes the UK advanced materials sector highly attractive to overseas investment.

However, the expansive and diverse nature of the sector can often lead to fragmentation and a lack of coordination, stifling the pull through of products and technologies, and ultimately slowing growth. We must promote a coordinated approach to advanced materials nationally, building on the Henry Royce Institute's National Materials Innovation Strategy, which identifies the key opportunities to be seized.

## The approach

- Coordinate a national approach to advanced materials with government, industry, and academia.
- Accelerate the development and adoption of new and improved strategically important materials.
- Maintain our world-class environment for R&D in advanced materials.
- Build international partnerships to set standards and strengthen innovation globally.

## The interventions

### Champion a national approach to advanced materials, bolstering defence capabilities

To address fragmentation in the sector and accelerate pull through of materials from R&D to manufacturing, the Government has dedicated an initial £50 million to deliver Phase 1 of a new, ambitious National Materials Innovation Programme (NMIP). Over the next five years, this investment will be directed to networks of key stakeholders from across the industry and academia who will coordinate activities across civil and defence manufacturing sectors. Additionally, the programme will initiate pilots that accelerate the development and adoption of strategically important materials. This will complement the government's investment of £42.5 million in a Defence Materials Centre of Excellence in Manchester, announced in 2024,<sup>57</sup> supporting the development of material innovation including more sustainable approaches.

To shorten the timeline and lower the costs associated with bringing advanced materials to market, we will dedicate part of the new NMIP funding to Materials 4.0 and testing and verification capabilities. Funding will help innovators accelerate the discovery, design, deployment, and testing of new Advanced Materials, supported by AI and machine learning tools. It will be used to create approximately 20 new verification services that will support the development of new or improved products and provide guidance on best practice to over 1000 companies.

To attract private investment, the NMIP will build on initiatives such as MATcelerate ZERO, as well as the Royce Hydrogen Accelerator which is aiming to unlock £150-200 million of private investment over its lifetime.<sup>58</sup> Providing a major step forward in securing UK sovereign supply chains, the National Composite Centre (Bristol) is housing its open access carbon fibre innovation facility at technology partner Cygnet Texkimp's facility in Northwich, Cheshire West.<sup>59</sup>

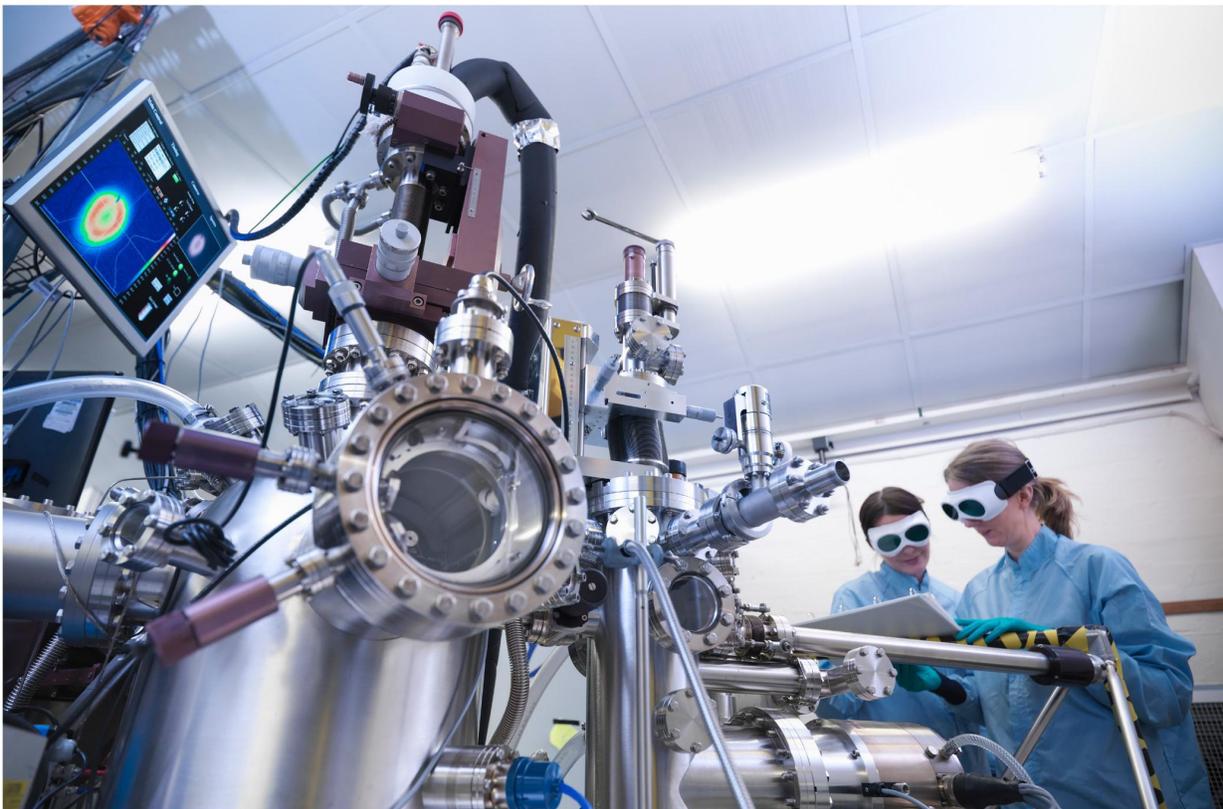
To inform the government's Circular Economy Strategy for England, which will be published in 2025, we will consider the evidence for regulatory circular interventions right across the economy, such as Materials Lifecycle Assessments and Materials Passports.

## Deepen our research and training offer, including through international partnerships

To support growth we must address the shortage of high-quality STEM skills and expertise required for advanced materials innovation. The Engineering and Physical Sciences Research Council (EPSRC)<sup>60</sup> is the primary investor into advanced materials expertise for the government. EPSRC, and industrial and academic partners, including QinetQ and Leonardo, are investing a combined £19.6 million in a 3D Nanoscale Metamaterials Hub for a sustainable future, led by the University of Exeter.<sup>61</sup>

The EPSRC has invested around £395 million into the Henry Royce Institute to 2027,<sup>62</sup> as the national materials institute to enable materials research co-operation and strategy, provide access to the latest equipment facilities and capabilities, encourage materials science skills development, innovation training, and outreach.

International partnerships are equally essential for developing our training and expertise. The UK-India Technology Security Initiative<sup>63</sup> will identify specific areas of co-operation for R&D and standards between the UK and India. The Initiative builds on existing work between our countries, including the £10 million partnership between Henry Royce Institute and Tata Steel.<sup>64</sup> As recently as 2024, EPSRC and the Japanese Science Partnership Fund (JSPF)<sup>65</sup> began a joint call for funding in advanced materials, worth £5 million.





Source: Garford Farm Machinery Limited

## 2.6 Agri-tech

Innovations in the agri-tech sector are vital to improving UK agricultural productivity and sustainability. The UK agri-food chain contributes £147 billion in GVA to the economy,<sup>66</sup> the number of agri-tech start-ups in the UK has increased approximately 40-fold in the last decade,<sup>67</sup> employing more than 30,000,<sup>68</sup> and the sector is expected to grow further with global demand increasing for the technologies that support economic resilience in agriculture. With agriculture contributing 11% to total UK greenhouse gas emissions,<sup>69</sup> many UK agri-tech businesses are seeking to develop net zero solutions, while also addressing food security challenges.

However, adoption of new technology can often be slow within the sector, hindering the scale and growth potential needed to achieve a more resilient and productive food system. To address this, we will support UK agri-tech to target precision technologies that champion the application of controlled environments, robotics and automation, advanced sensors, AI and data systems in both the domestic and global markets. Precision agri-tech will also mutually benefit from, and accelerate growth in, the application of engineering biology to agriculture.

Agri-tech and food and drink manufacturing have a strong, symbiotic relationship, where agri-tech improves the efficiency and productivity of food production, ultimately benefiting the food and drink manufacturing industry by ensuring a reliable supply of sustainable, high-quality products. Driving greater adoption of innovation and automation based on robust return on investment evidence, increasing investment in skills, and creating a predictable regulatory environment will enable the sector to reach its growth potential. In addition to driving growth across the UK, this will strengthen economic resilience, ensure food security, and lead the sector's transition to net zero.

## The approach

- Reduce sector dependency on public investment by crowding in at least £50 million in private investment by 2029, leading to a strong cohort of profitable businesses.
- Significantly increase the application of automation in priority farming sectors, such as horticulture, reducing the need for seasonal labour.
- Achieve an agri-tech sector turnover of at least £20 billion by 2035.

## The interventions

### Support agri-tech businesses drive global advances in agriculture

Government will allocate at least £200 million for the Farming Innovation Programme (FIP) to 2030, offering targeted funding to drive innovation in agriculture. This long-term investment will support increasing productivity in the sector, progress towards net zero and reduce the sector's reliance on seasonal migrant labour in horticulture.

Since 2021, the FIP has supported almost 300 projects with businesses and UK research organisations, benefitting farmers, growers, and foresters in England but with funding available to recipients in all four nations. FIP has committed more than £150 million of public funding and attracted over £54 million of private investment to date.<sup>70</sup>

In 2023, as part of FIP, the Government piloted its Farming Innovation Investor Partnerships competition, a blended finance initiative to turbocharge the development of high-potential agri-tech SMEs. The initiative has matched almost £4 million in public funding with more than £10 million in private investment to date.<sup>71</sup> A further £5 million of government funding is available in 2025, which we aim to match with at least £10 million of aligned private investment with further rounds of Investor Partnerships up to 2029 to 2030.

To support businesses to take their products from development to the global market, the government will deliver an Agri-Tech Export Accelerator Programme to match high-growth potential businesses with the most promising markets and upskill these companies to build resilient supply chains. The programme will focus on priority markets with UK companies pitching collaboratively to deliver agri-tech solutions in new markets. For example of the scale of the opportunity, one British agri-tech business is delivering a £140 million export to the Gulf Cooperation Council region and has developed a significant sales pipeline for further exports.

### Drive agricultural growth by supporting industry to adopt new technologies

To encourage technology adoption in the sector and drive growth, FIP funding will support key development such as the Accelerating Development of Practices and Technologies (ADOPT) Fund that will enable Agri-tech SMEs to work with farmers to trial new technologies and practices.<sup>72</sup> These grants will provide critical evidence of operational feasibility and return on investment, so farmers can have the confidence to invest.

The Government will continue to partner with institutions such as the Institute for Agriculture and Horticulture to support farmers and growers' access and develop the technical and business skills needed for their businesses to succeed, which includes futureproofing the Institute's Capability Framework.



Source: Intelligent Growth Solutions Limited

## Endnotes

- 1 Analysis of Office for National Statistics (2025) [GDP Low Level Aggregates](#). Nominal GVA projection based on the compound annual growth rate 2019 to 2023.
- 2 UNCTAD global import data, 2013-2023 (latest available years), mapped to industry sectors using sector definitions used in the [Global Trade Outlook](#). USD converted to GBP using year average exchange rates, drawn from the ONS. Aggregate growth was calculated keeping USD/GBP exchange rates constant.
- 3 Office for National Statistics (2025) [GDP output approach – low-level aggregates](#).
- 4 Office for National Statistics (2025) [Monthly Business Survey turnover in production industries](#).
- 5 Office for National Statistics (2025) [Employee Jobs](#) and Office for National Statistics (2025) [Self Employed Jobs](#).
- 6 Society of Motor Manufacturers & Traders (2024) [Motor Industry Facts 2024](#).
- 7 Office for National Statistics (2025) [Datasets: Non-financial business economy](#).
- 8 Office for National Statistics (2022) [Business Register and Employment Survey](#) and Northern Ireland Statistics and Research Agency (2022) [Business Register and Employment Survey](#).
- 9 Advanced Propulsion Centre (2025) Internal Management Data.
- 10 His Majesty's Government (2025) [Backing British business: Prime Minister unveils plan to support carmakers](#).
- 11 His Majesty's Government (2025) [Electrical vehicle charging infrastructure statistics](#).
- 12 HM Treasury (2025) [Spending Review 2025](#).
- 13 Department for Transport (2025) [Electric vehicle charging devices by local authority](#).
- 14 UK Parliament (2024) [Automated Vehicles Act 2024](#).
- 15 [United Nations Economic Commission for Europe](#).
- 16 UK Research and Innovation (2025) [DriveSafeAI](#).
- 17 His Majesty's Government (2024) [Vote of confidence in UK economy as British AI company Wayve secures over \\$1 billion to develop AI for self-driving vehicles](#).
- 18 [IMechE: Institution of Mechanical Engineers](#).
- 19 Department for Business and Trade (2025) Internal Battery Sector Mapping Research.
- 20 Benchmark Minerals (2024) [Lithium ion's leading producers in 2030: China to dominate as West ramps up](#).
- 21 Department for Business and Trade (2025) Internal Battery Sector Mapping Research.
- 22 Department for Business and Trade (2025) Internal Battery Sector Mapping Research. Note, this refers to combined turnover of all companies with operations in battery reuse, recycling and end-of-life. They may also be involved in other activities, to which some of this turnover could be allocated.
- 23 [Faraday Battery Challenge](#).
- 24 Faraday Battery Challenge (2023) [Funded projects](#).

- 25 High Value Manufacturing Catapult (2023) [£12 to deliver UK's national battery materials scale up facility.](#)
- 26 [Warwick Manufacturing Group.](#)
- 27 [The Centre for Process Innovation.](#)
- 28 [European Union Battery Regulation.](#)
- 29 [Circular Economy Taskforce.](#)
- 30 Department for Energy Security & Net Zero (2025) [Clean Power 2030 Action Plan.](#)
- 31 PwC (2022) [Skies Without Limits v2.0.](#)
- 32 Office for National Statistics (2025) [Monthly Business Survey turnover in production industries.](#)
- 33 Office for National Statistics (2025) [GDP output approach – low level aggregates.](#)
- 34 Department for Business and Trade (2025) Analysis of ONS [Employee jobs, Self-employed jobs](#) and [Business registers and employment data.](#)
- 35 Office for National Statistics (2025) [Annual survey of hours and earnings.](#)
- 36 Office for National Statistics (2024) [Employment multipliers, bespoke industries.](#)
- 37 Office for National Statistics (2025) [Business registers and employment survey \(NOMIS database\).](#)
- 38 Aerospace Manufacturing and Design (2024) [2024 Forecast.](#)
- 39 Aerospace Technology Institute (2025) Internal Assessment.
- 40 Aerospace Technology Institute (2025) [Projects.](#)
- 41 Department for Transport (2025) [Sustainable aviation fuel revenue certainty mechanism.](#)
- 42 Department for Transport (2024) [Sustainable Aviation Fuel Mandate.](#)
- 43 Department for Transport (2025) [Sustainable aviation fuel revenue certainty mechanism.](#)
- 44 UK Civil Aviation [Authority \(2024\) Delivering Scalable UAS BVLOS in the Specific Category.](#)
- 45 Department for Science, Innovation and Technology (2023) [The Case for Space.](#)
- 46 UK Space Agency (2024) [Size and Health of the UK Space Industry 2023.](#)
- 47 UK Space Agency (2024) [Size and Health of the UK Space Industry 2023.](#)
- 48 See the Satellite Applications Catapult (2025) [The UK Space Ecosystem Cluster Directory](#) and [Space Capabilities Catalogue](#) for further comprehensive, regularly updated information.
- 49 World Economic Forum (2024) [Space: The \\$1.8 Trillion Opportunity for Global Economic Growth.](#)
- 50 UK Space Agency (2024) [Why Space Matters.](#)
- 51 UK Space Agency (2021) [National Space Innovation Programme.](#)
- 52 UK Space Agency (2023) [£47 million investment to supercharge space infrastructure across the UK.](#)
- 53 UK Space Agency (2023) [Unlocking Space for Business.](#)

- 54 His Majesty's Government (2024) [Space Regulatory Review 2024.](#)
- 55 [The European Space Agency.](#)
- 56 Henry Royce Institute (2025) [National Materials Innovation Strategy.](#)
- 57 Henry Royce Institute (2024) [DSTL launch £42. million advanced materials Centre of Excellence.](#)
- 58 Henry Royce Institute (2023) [Hydrogen Accelerator launches with Government backing.](#)
- 59 National Composites Centre (2025) [Key milestone reached for UKs new carbon fibre development lines.](#)
- 60 [Engineering and Physical Sciences Research Council.](#)
- 61 His Majesty's Government (2025) [Fresh funding for Exeter research hub creating new medical sensors and healthier soft drinks.](#)
- 62 UK Research and Innovation (2025) Internal Analysis of Grant Funding Data.
- 63 His Majesty's Government (2024) [Uk-India Technology Security Initiative factsheet.](#)
- 64 Henry Royce Institute (2024) [Tata Steel and Henry Royce Institute Sign Collaboration Agreement for New Centre for Innovation in Advanced Materials.](#)
- 65 UK Research and Innovation (2024) [EPSRC UK-Japan collaboration in advanced materials.](#)
- 66 Department for Environment, Food & Rural Affairs (2025). [Food statistics in your pocket.](#)
- 67 UKRI (2024) [Announcement of Agri-Tech Centre.](#)
- 68 Data City (2025) [Agri-tech sector.](#)
- 69 Department for Environment, Food & Rural Affairs (2024) [Agri-climate report 2023.](#)
- 70 Department for Environment, Food & Rural Affairs (2025) [Competitions now open for precision breeding and low-emissions innovation.](#)
- 71 Department for Environment, Food & Rural Affairs (2025) [Competition to accelerate agri-tech investment: guidance out now.](#)
- 72 Department for Environment, Food & Rural Affairs (2025) [ADOPT Fund: apply now for innovation funding – Farming.](#)



Source: HORIBA MIRA

# 3. Supporting the UK's city regions and clusters

**Unleashing the full potential of our city regions and clusters is a core objective of our Industrial Strategy. Advanced Manufacturing businesses are concentrated in clusters across the UK, with 84% of direct Advanced Manufacturing jobs located outside London and the South East (compared to 69% for the overall economy).<sup>1</sup>**

The Industrial Strategy seeks to concentrate Government's efforts in places with the greatest potential for national prosperity and the growth-driving sectors: in our city regions and high potential clusters. We have identified places with the greatest potential for Advanced Manufacturing growth, as illustrated on the map, based on their capabilities across frontier industries, the presence of significant employers and investors, and the location of leading research and innovation institutions.

It is not sufficient to support individual city regions or clusters in isolation, we must also build networks and connections between them. The Industrial Strategy is connecting city regions and high potential clusters across the Oxford to Cambridge Growth Corridor and a corridor across our Northern city regions, making them globally competitive engines of the IS-8. The investments and partnerships set out within this Sector Plan support these corridors and go further to deepen Advanced Manufacturing networks across the whole of the UK, including through the establishment of the first AI Growth Zone in Culham. Partnership with the devolved governments, and strategic coordination between our policy plans, will also help strengthen networks across the four nations.



Source: National Manufacturing Institute Scotland (NMIS)

# Unleashing the potential of our city regions and clusters



## 1 Edinburgh and Glasgow City Regions

### Advanced Materials, Aerospace, Space, Agri-Tech

- Glasgow City Region is home to the Advanced Manufacturing District Scotland and the National Manufacturing Institute Scotland in Renfrewshire, and the Prestwick Aerospace Cluster.
- Edinburgh City Region houses the National Robotarium at Heriot-Watt University and the Roslin Institute, which is a leading Agri-Tech research institute.

## 2 North East

### Automotive, Batteries, Space

- Anchored by the world-leading automotive manufacturing hub at Nissan in Sunderland and the North East CA Investment Zone.
- Home to a growing space sector, with key assets including the materials and satellite clusters around NETPark in County Durham, and Northumbria University's North East Space Skills and Technology Centre, which is currently under construction.

## 3 Belfast City Region

### Advanced Materials, Aerospace, Automotive, Space

- The new Advanced Manufacturing Innovation District Centre at Queen's University Belfast, due to open in 2026, will continue to drive new sustainable polymers/composites and manufacturing technologies.
- Northern Ireland's high-performing, SC21 award-winning SME supply chain programme supports rapidly growing global aerospace and defence primes.

## 4 Yorkshire

### Advanced Materials, Aerospace, Agri-Tech

- The Advanced Manufacturing Research Centre in South Yorkshire CA has catalysed a cluster now including Rolls-Royce, Boeing, McLaren, and Sheffield Forgemasters.
- Innovative space capabilities in satellite technologies and radio frequency communications also exist across the region.
- York and North Yorkshire CA hosts leading Agri-Tech innovation institutions, including the University of York.

## 6 Wrexham and Flintshire

### Aerospace, Automotive, Advanced Materials, Agri-Tech

- Significant strengths in Aerospace, clustered around the Airbus Broughton site, and Automotive, including Toyota's Deeside plant.
- AMRC Cymru has provided a new regional centre for innovation, which will be complemented by the recently announced Advanced Manufacturing Investment Zone for Wrexham & Flintshire.

## 8 West Midlands

### Aerospace, Automotive, Batteries, Agri-Tech

- The West Midlands CA hosts key manufacturing companies, including Jaguar Land Rover, Collins Aerospace, with Aston Martin and JCB in the wider region.
- A third of the UK's autoworkers are based in the West Midlands, with growing electric and battery capabilities in the region.<sup>2</sup>
- Leading research institutions include Horiba Mira, MTC, Warwick Manufacturing Group, UK BIC and Harper Adams.

## 10 South West

### Advanced Materials, Aerospace, Agri-Tech, Batteries

- Home to the National Composites Centre in the West of England CA, and Somerset will be the future home of the Agratas Gigafactory.
- A significant Aerospace cluster featuring Airbus, BAE Systems, Boeing, GKN, Honeywell, and Leonardo Helicopters.
- Gloucestershire hosts leading Agri-Tech institutions in the Royal Agricultural University and Hartpury University & College.

## 5 North West

### Automotive, Advanced Materials, Aerospace

- Home to world-leading research facilities and manufacturing clusters, including Aerospace capabilities around BAE Warton and Samesbury in Lancashire.
- Greater Manchester CA's Advanced Materials and Manufacturing Investment Zone.
- Automotive clusters in Liverpool City Region and Cheshire, including production facilities for Bentley, Ford, JLR, and Stellantis, as well as Leyland Trucks in Lancashire.

## 7 East Midlands

### Advanced Materials, Aerospace, Agri-Tech, Automotive, Space

- Home to Rolls-Royce in East Midlands CA, Toyota in Burnaston, and East Midlands Freeport, offering vital capabilities.
- The West and East Midlands also offer shared capabilities including Horiba Mira, and trade bodies like the Midlands Aerospace Alliance.
- Lincolnshire also hosts leading Agri-Tech innovation institutions, including the University of Lincoln.

## 9 Oxford to Cambridge Growth Corridor

### Aerospace, Agri-Tech, Advanced Materials, Space

- Anchored by world-leading universities, Silverstone's automotive heritage and a leading hub of space companies at Harwell.
- The Cambridgeshire and Peterborough CA, Milton Keynes and Oxfordshire corridor comprises graphene and battery spinouts and home to BMW Mini, Bosch, Caterpillar, Airbus Defence & Space, Oxford Instruments, Fortescue Zero, Lockheed Martin, and Oxford Space Systems.

# 3.1 Realising the economic potential of Advanced Manufacturing city regions and clusters

We are already investing significantly to support regional growth in our high-potential city regions and clusters, including with our High Value Manufacturing Catapult which has cemented global regional leaders, such as the Advanced Manufacturing Park in South Yorkshire, and through the expansion of the exemplar Made Smarter Adoption Programme to all regions in England, which rolled out in April 2025.

Further examples of recent initiatives supported by government investment include the National Robotarium at Heriot Watt University in Edinburgh, the Advanced Manufacturing Innovation Centre (AMIC) led by Queens University Belfast/Ulster University at Global Point (Technology Park), ZeroAvia launching a major manufacturing facility for production of its hydrogen-electric powertrains at the Advanced Manufacturing Innovation District Scotland (AMIDS), close to Glasgow Airport in Renfrewshire, and the planned Agratas Gigafactory in Somerset, which will bring up to 4,000 highly skilled jobs to the region and significantly expand the UK's battery manufacturing capability.<sup>3</sup> The Government is also building AI Compute capability at specific locations to promote growth, and will introduce AI Growth Zones; areas designed to accelerate the development of AI infrastructure through improved access to power and streamlined planning support.

We will build on these existing regional strengths and reinforce our support by:

- **Increasing collaboration with Mayoral Strategic Authorities and local authorities to cluster electric vehicle manufacturing across our regions.** We will drive the development of a strong and resilient electric vehicle supply chain in the UK by exploring the opportunity for a pilot initiative in partnership with the North East and West Midlands. Our aim is to create a blueprint for unlocking clusters of excellence in other key growth areas across the rest of the UK, supporting SMEs and supply chain companies in those clusters. Prioritising support for our highest potential integrated manufacturing clusters will strategically boost growth, enhance UK resilience, and increase domestic content in the transition to zero emission technologies.
- Delivering a new **Advanced Manufacturing Regional Spend Map** recognising the importance of regional coordination to unlocking growth.
- Establishing a new **network of Robotics Adoption Hubs** in strategic locations around the UK with the expertise, equipment, and connections to accelerate firms' take-up of robotics.
- **Identifying and preparing new strategic sites, including for Advanced Manufacturing** through the Strategic Sites Accelerator which will fund interventions such as land remediation, leverage public and private investment, and accelerate delivery of high-impact projects.

- **Backing our network of Industrial Strategy Zones (Freeports and Investment Zones)** through our Industrial Strategy Zones Action Plan, launched today alongside the Industrial Strategy.
- **Providing our Investment Zones with £160 million each over 10 years, to stimulate growth in key manufacturing clusters.**<sup>4</sup> These include Advanced Manufacturing-focused zones in:
  - Glasgow City Region, with an emphasis on space, maritime, and semiconductors and sites centred around Renfrewshire’s Advanced Manufacturing Innovation District Scotland and Glasgow Airport; utilising world class facilities within the National Manufacturing Institute Scotland Group including the Advanced Forming Research Centre and the Lightweight Manufacturing Centre.
  - Greater Manchester, centred on Advanced Manufacturing and materials providing targeted support to unlock laboratory and manufacturing space in Manchester’s new innovation district ‘Sister’, Salford Crescent, and Atom Valley.
  - North East, focused on Advanced Manufacturing and Clean Energy Industries, including Blyth Energy Central and the River Tyne Corridor; the International Advanced Manufacturing Site in Sunderland and South Tyneside, with an emphasis on vehicle manufacturing and battery production.
  - South Yorkshire, centred on aerospace with co-investment funds for Advanced Manufacturing businesses; infrastructure and laboratory space in Sheffield city centre; and wider business and innovation support.
  - West Midlands, building on the region’s strengths in batteries; a multi-disciplinary innovation quarter with translational research and laboratory facilities in Birmingham; secure investment for a new gigafactory in Coventry-Warwick; and the Green Innovation Corridor in Wolverhampton.
  - East Midlands, which provides tax reliefs alongside grant funding for local infrastructure development bespoke skills and retraining programmes, R&D, and business support.
  - Wrexham and Flintshire, built around Deeside industrial estate, home to Tata Steel Toyota and JCB; sites around Hawarden Airport, where Airbus is based; the Llay Industrial Estate and the Wrexham Industrial Estate.
- **Maximising the impacts of our Freeports which have Advanced Manufacturing at their heart:** in particular in the East Midlands, Solent, Forth, Liverpool, Freeport East and Humber Freeports. These boast some of the premier industrial sites in the UK, offer substantial tax reliefs on capital investment and have attracted substantial investment into the sector to date.

## 3.2 How we are working with devolved governments and regional leaders

We are delivering this Sector Plan in partnership with regions and devolved governments (DGs). Mayoral Strategic Authorities (MSAs) in England will deliver ambitious 10-year Local Growth Plans (LGPs). These statutory, locally-owned, long-term plans will set how each MSA in England will use their powers and funding to drive growth in their region. Growing the Advanced Manufacturing sector will be central to several of these plans. We will work with the relevant MSAs to maximise the synergies between the initiatives set out in this Sector Plan and local action to create the right conditions for the sector to flourish.

We are working in partnership with the devolved governments to drive growth in Scotland, Wales, and Northern Ireland. This means working together to address barriers and realise opportunities in frontier industries and high-potential clusters, guided by the strong links between the Industrial Strategy and devolved government plans for manufacturing growth. This includes (but is not limited to) the Scottish Government's vision for manufacturing, with its broader National Innovation Strategy, the Welsh Government's Manufacturing Action Plan, and the Northern Ireland Executive's Advanced Manufacturing, Materials and Engineering Sectoral Action Plan.

This builds on existing joint working with devolved governments to support research, innovation and business growth in manufacturing. This includes:

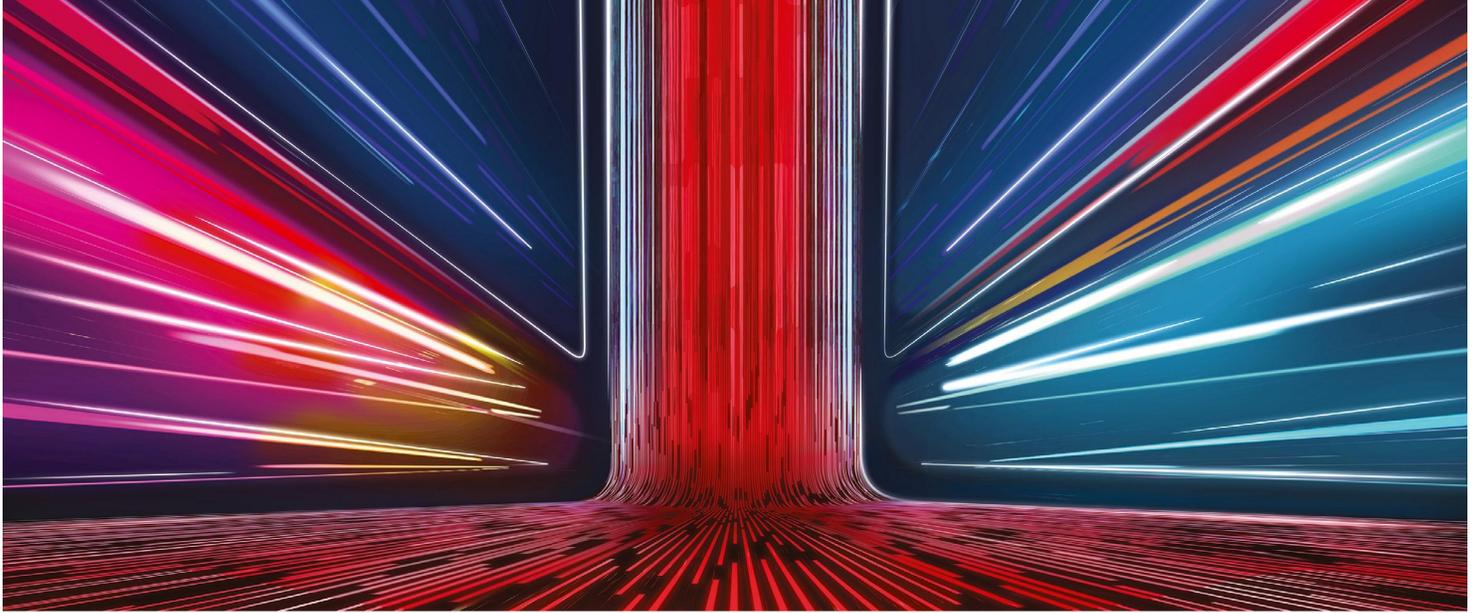
- UK Government grant funding of around £24 million<sup>5</sup> has been awarded through the Aerospace Technology Institute programme, to support R&D projects being carried out at Spirit AeroSystems' Aerospace Innovation Centre in Prestwick, creating the capability for future composite aerostructures manufacturing and advancing skills and knowledge between academia and industry.
- A £250 million investment into Vishay, Newport (UK's largest semiconductor facility), unlocked by the Automotive Transformation Fund (ATF), which will support hundreds of highly skilled jobs in Newport.<sup>6</sup>
- Seagate, based in Derry/Londonderry, is leading a cluster to improve Northern Ireland's capability around smart nano-manufacturing and world-leading knowledge in photonics to create a self-sustaining local industry backed by £42 million from UKRI's Strength in Places Fund.<sup>7</sup>

To deliver our objectives, we will hold regular Strategic Dialogues with each of our high potential city regions and clusters to identify, develop, and help deliver investible propositions in each place, including by better aligning national and local funding streams. These will explore how best to pursue regional ambitions while leveraging our national offer, including funding programmes such as the Aerospace Technology Institute and the new DRIVE35 auto initiative, to the benefit of each region.

We will also continue to engage with MSAs and local authorities outside of MSAs ensuring that companies across the UK can access national skills, technology, and funding programmes.

## Endnotes

- 1 Office for National Statistics (2025) [\*Workforce jobs by region and industry.\*](#)
- 2 Office for National Statistics (2023) [\*Business Register and Employment Survey.\*](#)
- 3 Agratas (2024) [\*Britain's biggest battery factory will be built in the UK.\*](#)
- 4 Department for Business and Trade (2023) [\*Advanced Manufacturing Plan.\*](#)
- 5 UK Research and Innovation (2025) [\*Innovate UK Funded Projects Since 2004.\*](#)
- 6 His Majesty's Government (2025) [\*Hundreds of millions of pounds to turbocharge manufacturing sector in Wales.\*](#)
- 7 UK Research and Innovation (2025) [\*Strength in Places Fund.\*](#)



# 4. Creating an enduring partnership with business

## How industry is supporting this plan

Alongside government initiatives, industry is also stepping up to support businesses across the Advanced Manufacturing sector. This includes core partners such as High Value Manufacturing Catapult (HVMC), which has already invested more than £1 billion nationwide into R&D facilities.<sup>1</sup> So far, Government and industry have jointly invested more than £1.65 billion in R&D funding in strategically important vehicle technologies via the Advanced Propulsion Centre,<sup>2</sup> including more than £600 million in R&D funding in Connected and Automated Mobility (CAM).<sup>3</sup> We intend to build on this partnership.

Industry will play a major role in delivering private investment to complement government funding for our flagship programmes, including the Battery Innovation Programme, Aerospace Technology Institute, National Space Innovation Programme, Space Clusters Infrastructure Fund, DRIVE35, CAM Pathfinder, and the Farming Innovation Investor Partnerships competition. The British Business Bank is also committing an additional £4 billion for the Industrial Strategy Growth Capital, set to catalyse investment in the IS-8 crowding in £12 billion of private sector capital.

On skills and people, we are working closely with industry to ensure a long-term domestic pipeline in manufacturing occupations that creates opportunities for new joiners and the current workforce. This includes industry offering more placements and encouraging staff to use their skills and experience to teach courses at Further Education colleges. Industry will actively engage with Skills England in its analysis of skills needs and development of solutions as well as driving Local Skills Improvement Plans with Mayoral Strategic Authorities, and supporting the introduction of Technical Excellence Colleges to deliver specialist skills directly aligned to employer needs. Skills England will also partner with devolved governments across the nations to improve the UK-wide skills base of our growth-driving sectors.

In addition, industry is also creating future-facing targets for employment and market share, which complement the ambition of our Sector Plan. For example, the aerospace sector has agreed a target to increase direct jobs from 100,000 to 127,000 by 2050 as well as starting 40,000 apprenticeships between 2025 to 2035. This is alongside a target to increase the UK's market share from 10% to 15%. Industries across Advanced Manufacturing have acknowledged the need for a diverse, inclusive and sustainable workforce and we will work with them through a co-led Equality Charter, including the target to increase women's representation in the sector to 35% by 2035. This demonstrates the sector's commitment to embracing the opportunities of a more diverse workforce.





## How we have worked with industry

Government has been working in partnership with businesses, trade associations, civil society, trade unions, devolved governments, and local and regional leaders to inform the creation of this Sector Plan, including the initial consultation following the publication of Invest 2035 and a specific call for evidence launched on Access to Finance. Responses have been carefully considered to inform our policy making. We also held a series of roundtables and meetings with business and trade body leaders to discuss their vision for the sector, confirm understandings of barriers to growth, and test possible solutions.

## How we will work with industry over the next 10 years to implement this plan

Implementation matters and we have set out our approach on metrics to measure progress throughout this plan, working with the Industrial Strategy Council, which will oversee the monitoring and evaluation for the overall Industrial Strategy. The impact of this Sector Plan will be monitored assessing the delivery progress of individual policies and with reference to six core metrics which will be measured across all growth-driving sectors:

- (1) Exports
- (2) Business investment
- (3) Gross Value Added (GVA)
- (4) Productivity growth
- (5) Labour market earnings
- (6) Number of new, large, “home-grown” businesses

These metrics create a robust set of indicators that will capture the multi-facteted impact of the policies within this Sector Plan. In addition to this, the following metrics will be measured across the Advanced Manufacturing Sector Plan:

**By 2035, we will have built business resilience in the Advanced Manufacturing sector.**

This will be assessed by tracking:

- (1) UK energy costs for the manufacturing industry,
- (2) Number of firms facing supply chain disruptions,
- (3) Number of major new investments in the UK.

**By 2035, we will be a global leader in scaling up innovation and automation in the Advanced Manufacturing sector.**

This will be assessed by tracking:

- (1) Productivity,
- (2) R&D expenditure by UK businesses,
- (3) Number of businesses classed as “innovation active”.

**By 2035, we will have developed a digitally literate, skilled, and inclusive workforce in the Advanced Manufacturing sector.**

This will be assessed by tracking:

- (1) Business investment in the domestic skills pipeline,
- (2) Number of apprenticeships started and completed,
- (3) Participation of women in the sector.

We will continue to engage with manufacturing-focused research organisations and trade associations to help develop policy. Trade associations in particular provide a valuable connection to SME manufacturers who represent the majority of the sector. Government will also continue to work with industry through our existing sector councils and taskforces, which have been vital to the sector’s success. This includes:

- The **Hydrogen Propulsion Manufacturing Taskforce** comprised of senior industry leaders which will help set out an ambitious industrial policy for the UK manufacturing of hydrogen propulsion technologies across all transport modes, attracting and maximising investment opportunities in UK-made hydrogen systems.

- The **Automotive Council** and its working groups which are comprised of important OEMs and supply chain companies, as well as CAM innovators. The Council will focus collaboratively on the major challenges and opportunities facing the sector, including attracting investment to transition to zero emission vehicles, deploying connected and automated mobility technologies and decarbonising manufacturing and the supply chain.
- The **Aerospace Growth Partnership** co-chaired by Department for Business and Trade (DBT) Ministers with senior industry representatives will serve as a vehicle to address barriers to growth, boost competitiveness of the supply chain and exports and grow the number of high value jobs in the UK.
- The **Agricultural Productivity Group** chaired by the National Farmers Union Deputy President includes members from numerous industry bodies including Agri-Tech E and the Agriculture and Horticulture Development Board, the Institute for Agriculture and Horticulture, and Innovate UK. The Group will focus on supporting industry-led action to accelerate agri-tech adoption.
- The **UK Battery Strategy Taskforce** composed of senior industry representatives and academics who will advise on risks to supply chain resilience, and opportunities for Government to improve the UK's competitive position in a global context. We are also working with industry, academia, and investors to support the **Faraday Institution's Policy Commission** exploring how Gigafactories can support the UK's ambitions for economic growth and sustainable industries.
- A new formal **Space Industry Advisory Group** to be created comprised of government and industry representatives that will advise on the Government's decision-making, strategy development, and delivery of the UK's industrial space ambitions.
- A refreshed **Materials Innovation Leadership Group**, composed of senior representatives from across the UK Advanced Materials community, with strong industry representation.
- We are also exploring how best to capitalise on the opportunities of AI including through the potential appointment of an industry **AI Champion**. We will consider the best recruitment approach to ensure the breadth and depth of the sector is appropriately represented.
- Finally, we will put the **Industrial Strategy Council** on a permanent statutory footing, so leaders from industry and academia can hold us to account on delivery of the Strategy and inject the boldest ideas into our policy-making.

# PLAN THROUGH TO 2035

## 2025

- Space: June 2025: Stage 2 of Rendezvous, Proximity Operations Regulatory Sandbox for technology adoption safety
- Automotive: July 2025: Driving Research and Investment in Vehicle Electrification (DRIVE35) Competitions Launch
  - Foundational: Summer 2025: Publication of Critical Minerals strategy
  - Aerospace: September 2025: Aerospace Technology Institute next Competition Launch
- Advanced Materials: October 2025: Completion of new carbon fibre development line for carbon fibre innovation
  - Agri-tech: Publication of Farming Roadmap and Land Use Framework
  - Foundational: Publication of Steel strategy
- Launch Strategic Sites Accelerator: Accelerating acquiring project sites

## 2027

- Automotive: By 2027: Full implementation of Automated Vehicles Act

## 2030

- Advanced Materials: Q4 2029/30: Completion of EPSRC Hub for 3D Nanoscale Metamaterials Hub for a Sustainable Future

## 2031

- Batteries: August 2025: Products must meet recycled content targets for lithium, nickel, cobalt, and lead

## 2026

- Batteries: April 2025: Rebrand of the Battery Innovation Programme, increasing R&D funding and SME support
- April 2025 Made Smarter Innovation expansion
- April 2025: Made Smarter Adoption expansion
- Automotive: By end of year: Publication of Hydrogen Propulsion Manufacturing Taskforce recommendations
- Advanced Materials: Q3 2025/26: Launch of the MetaHub, a public-private partnerships (£19.6 million secured to date) for metamaterial innovation
- Agri-tech: In 2026: Further rounds of Investor Partnerships announcement, up until 2029
- Advanced Materials: To be completed 2029/30: Launch of National Materials Innovation Programme Phase I
- Automotive: Publication of Automotive Technology Strategy
- Publication of High Value Manufacturing Catapult Technology Strategy

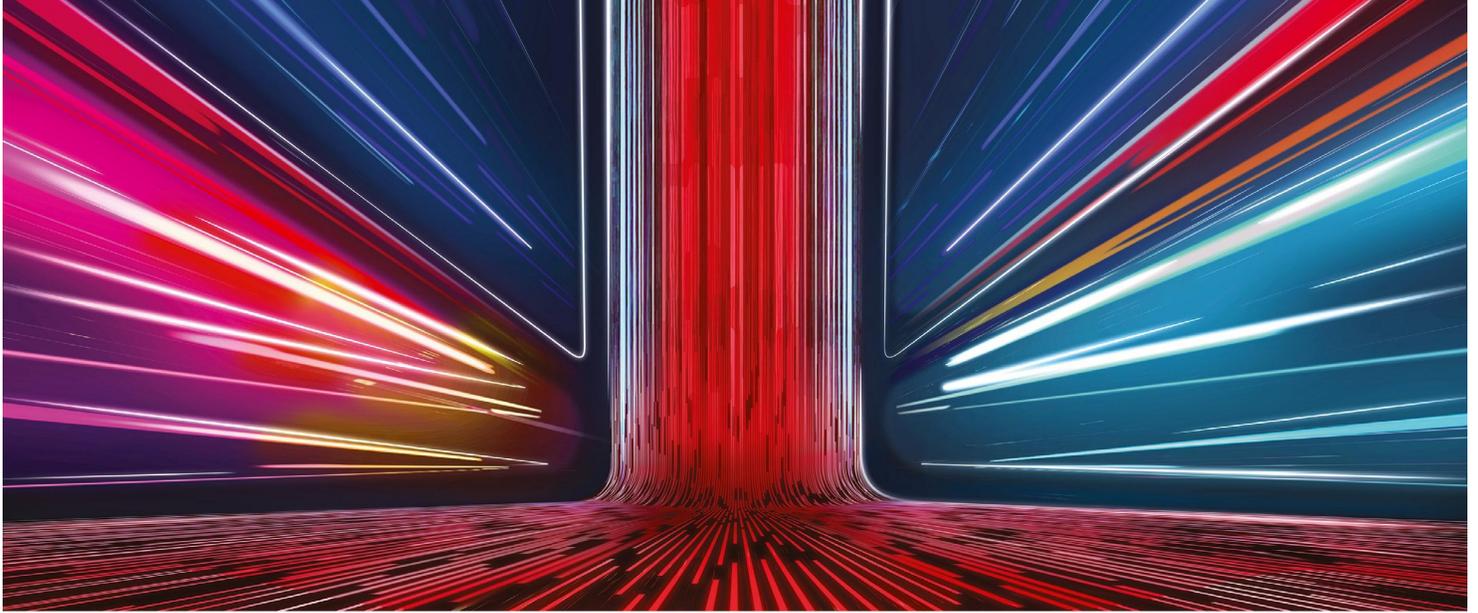
## 2035

- Advanced Manufacturing: Women's participation in the manufacturing sector at least 35%



## Endnotes

- 1 High Value Manufacturing Catapult (2025) [Annual Report 2025](#).
- 2 Advanced Propulsion Centre (2025) [Internal Management Data](#).
- 3 Centre for Connected and Autonomous Vehicles (2025) Analysis of Innovate UK Internal Management Data.



# Technical annex

## Measurement of the Advanced Manufacturing Sector

We consider ‘Advanced Manufacturing’ to be production processes that integrate advanced science and technology, including digital and automation, to manufacturing. These processes rely on R&D, innovation, specialised knowledge, our extensive knowledge networks, and a highly skilled workforce. These processes help UK manufacturers to create products and product-service solutions that meet future technological demands and enable the UK to drive national and regional growth, improve our economic resilience, and lead on the transitions of net zero, artificial intelligence (AI) and digitalisation.

While examples of these activities can be found across the range of manufacturing, they are far more prevalent in the higher technology frontier industries of manufacturing. Therefore, as a more tangible, measurable proxy for Advanced Manufacturing we have adopted a version of the Eurostat and UN definition of high and medium-high technology manufacturing<sup>1</sup>, excluding the manufacture of Pharmaceuticals which will be cover under the umbrella of Life Sciences. These correspond to the following Standard Industrial Classification Codes and contribute to the UK economy in the following ways:

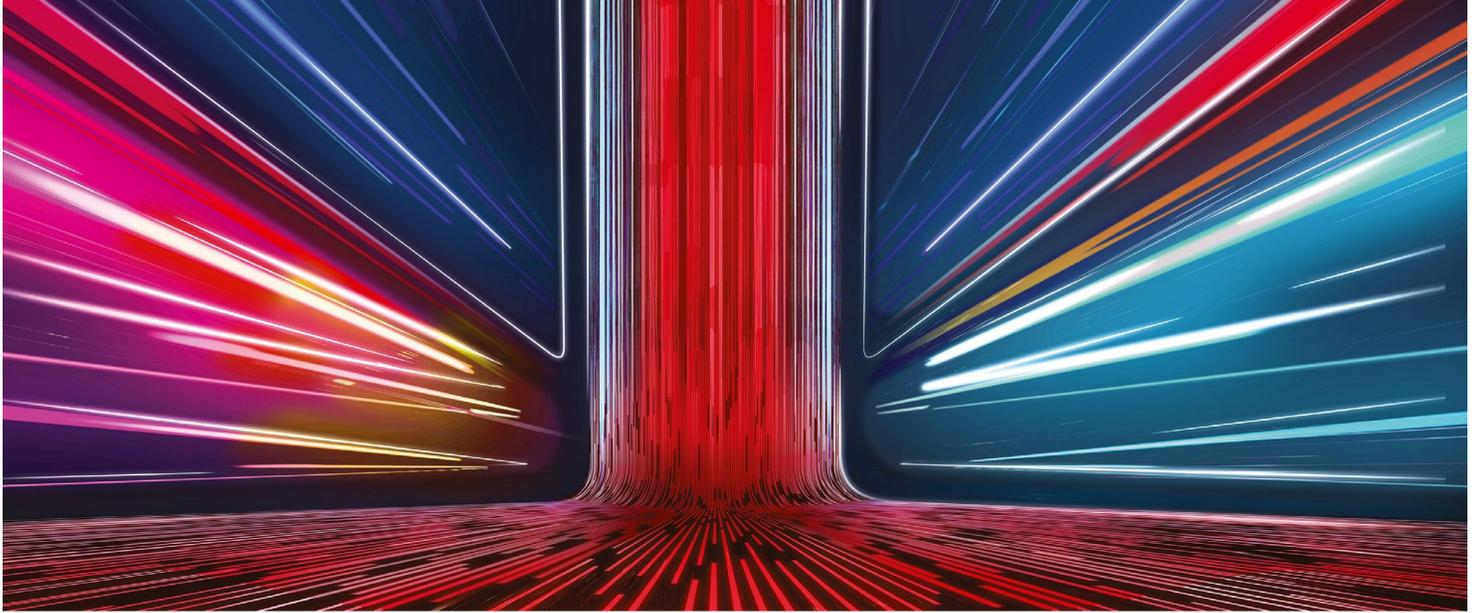
- **20** Chemicals
- **26** Computer, electronic and optical products
- **27** Electrical equipment
- **28** Machinery
- **29** Motor vehicles
- **30** Other transport equipment

## Advanced Manufacturing in the UK Economy

	Advanced Manufacturing	Manufacturing (% of which AM)	UK Economy (% of which AM)
Gross Value Added (2024 £billion) <sup>2</sup>	82	220 (37.5%)	2,473 (3.3%)
Jobs (2024) <sup>3</sup>	760,000	2.6 million (29%)	36.6 million (2.1%)
Business R&D (2023 £billion) <sup>4</sup>	12.9	24.0 (55.7%)	50 (25.7%)
Exports (2024 £billion) <sup>5</sup>	198	326 (61%)	873 (23%)
Market Sector Business Investment (2023 £billion) <sup>6</sup>	21.2	44.1 (48.1%)	233.5 (9.1%)
Output per hour (2024 £) <sup>7</sup>	58.04	48.23	39.87
Real Growth in output per hour (1997-2024) (%) <sup>8</sup>	202	154	33

## Endnotes

- 1 Eurostat (2025) [\*Glossary: High-tech classification of manufacturing industries.\*](#)
- 2 Office for National Statistics (2025) [\*GDP output approach – low-level aggregates.\*](#)
- 3 Office for National Statistics (2025) [\*Employee Jobs\*](#) and [\*Self Employed Jobs.\*](#)
- 4 Office for National Statistics (2024) [\*Business enterprise research and development.\*](#)
- 5 Office for National Statistics (2025) [\*Trade in goods by CPA\*](#) and [\*UK Trade.\*](#)
- 6 Office for National Statistics (2024) [\*Volume Index Capital Services \(VICS\), annual, UK.\*](#)
- 7 Office for National Statistics (2025) [\*Output per hour by division.\*](#)
- 8 Department for Business and Trade (2025) Analysis of [\*ONS Output per hour by division.\*](#)



# Accountability table

Policy Measure(s)	HMG Senior Responsible Officer
<p><b>Build resilience: To improve the sector’s resilience and international competitiveness, to bolster the foundational industries which are critical to the sector’s growth, and to reduce reliance on near-monopoly sources of critical inputs.</b></p>	
<p>The Government will publish a new Critical Minerals Strategy in the Summer of 2025. The Strategy will refine our approach to domestic production, the circular economy, the UK’s future demand, international partnerships, and responsible and transparent supply chains.</p>	<p>Director Materials, Business Group, Department for Business and Trade</p>
<p>The Government will be publishing a new Steel Strategy setting out measures to build resilience and support domestic industry.</p>	<p>Director Materials, Business Group, Department for Business and Trade</p>
<p>The Government will be developing a new programme for semiconductors and microelectronics to support innovation.</p>	<p>Director, International and Economic Security Directorate, Department for Science, Innovation and Technology</p>
<p>The Government will be bolstering UK glass and carbon fibre manufacturing through R&amp;D centres such as Glass Futures and the National Composites Centre.</p>	<p>Director Materials, Business Group, Department for Business and Trade</p>
<p>The Government will be funding a £625 million construction skills programmes to train thousands of new workers.</p>	<p>Director, Infrastructure and Technology, Department for Business and Trade</p>

Policy Measure(s)	HMG Senior Responsible Officer
The Government will be supporting the UK maritime and rail sectors including through funding focused on the development of clean maritime solutions in line with the Government's Maritime Decarbonisation Strategy.	Director, Maritime, Department for Transport
The Government will be revising its Hydrogen Strategy in 2025.	Director, Hydrogen Directorate, Department for Energy Security and Net Zero.
Giving sector grant programmes explicit economic and resilience objectives.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will be enhancing business protections against direct threats such as cyber-attacks and Intellectual Property theft through the Cyber Governance Code of Practice, Cyber Essentials accreditation scheme, the National Cyber Security Centre and National Protective Security Authority's joint 'Secure Innovation' campaign.	Head of National Protective Security Authority Director, National Resilience Directorate, National Cyber Security Centre
The Government will be launching a new Supply Chain Centre to inform government policy and develop metrics to monitor how programmes deliver against their resilience objectives.	Director, Imports and Investment Security, Economic Security and Trade Relations, Department for Business and Trade
The 2023 Procurement Act and 2025 National Policy Statement will ease administrative burdens and drive innovation, benefiting Advanced Manufacturing firms, specifically in the aerospace and space sectors.	Director, Commercial Policy Team, Cabinet Office
The Government is publishing a Trade Strategy setting out its approach to pursuing a growth-driving trade agenda.	Director, European Regions, Information Economy and Delivery, Trade Group, Department for Business and Trade
The Government is expanding its support for UK Export Finance ensuring UK exporters, including manufacturers, remain globally competitive.	CEO, UK Export Finance
<b>Scale up innovation: We will ensure the commercialisation of our frontier manufacturing technologies, support the sector to drive innovation, and invest in technologies critical for improving productivity and competitiveness.</b>	

Policy Measure(s)	HMG Senior Responsible Officer
The Government is expanding Made Smarter Adoption, a support programme for manufacturing SMEs, to more businesses, offering enhanced support. We will explore enhanced grant offers, extending digital internships, and increased support on AI adoption.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is expanding the Made Smarter Innovation programme.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is launching a new Robotics and Automation programme to create a new network of physical Robotics Adoption Hubs to accelerate industry uptake.	Director, Technology Strategy and Security, Department for Science, Innovation and Technology
The Government will continue to support the High Value Manufacturing Catapult (HVMC) to help UK businesses develop and adopt engineering and manufacturing technology solutions.	Director, Science, Research, and Innovation, Department for Science, Innovation and Technology Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will invest up to £12 million in UK Data Sharing Infrastructure Initiatives from April 2026.	Director of Digital Economy and Data Policy, Digital, Technology and Telecoms Group, Department for Science, Innovation and Technology
The Government is launching the new UK Defence Innovation organisation to enable better pull through of cutting-edge innovative ideas and technologies into capabilities and commercial products including in Advanced Manufacturing.	Director Defence Innovation, NAD Group, Ministry of Defence
The Government will increase the amount of debt and equity finance accessed by advanced manufacturing firms through the British Business Bank	Director, Small Business Growth, Department for Business and Trade
The BBB and the Intellectual Property Office (IPO) will explore how to best support lending to IP-rich firms and encourage new IP-backed lending products. Government will publish an update on this work and next steps by the end of the year.	Director Strategy, Policy, Economics, British Business Bank Director Enforcement, Business, and International, Intellectual Property Office
The Government will provide a service to support high-value investors and land investment into the sector through the expanded Office for Investment.	Chief Investment Adviser, Office for Investment

Policy Measure(s)	HMG Senior Responsible Officer
<b>Skills: We will partner with industry to invest in developing skills across the workforce, allowing it to keep pace with innovation.</b>	
The Government is establishing a new Upskilling and Reskilling Programme to address the need for short courses.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is supporting industry through a pilot Approaches to Recruitment programme, which aims to address persistent vacancies and support those not well served by traditional recruitment approaches.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will work with industry to change outdated perceptions of manufacturing, including by upskilling advisers; and offering support through DWP's Jobcentres and Jobs and Careers Service.	Director, Labour Market Strategy, Policy and Analysis Directorate, Department for Work and Pensions
The Government is supporting an Equality Charter, co-created with industry and a dedicated Taskforce which includes public reporting by firms of diversity data.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is reforming the Growth and Skills offer, creating more flexible and shorter apprenticeships in partnership with Skills England.	Director, Work Based Skills Directorate, Department for Education
<b>Automotive</b>	
The Government is launching the 'Driving Research and Investment in Vehicle Electrification' (DRIVE35) to ensure the UK remains at the forefront of zero-emission vehicle manufacturing.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is developing an Automotive Technology Strategy in 2026 to further shape the focus of our ambitious investment programmes, underpin our developing industrial policy, and provide long-term clarity on the UK's technology priorities.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government has updated the Zero Emission Vehicle Mandate so that manufacturers have greater flexibility in complying and confirming that full and plug-in hybrid cars will be sold till 2035 to ease the transition.	Director, Office for Zero Emission Vehicles, Department for Transport and Department for Energy Security and Net Zero, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is investing in the Connected and Automated vehicles Pathfinder programme until 2030.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade

Policy Measure(s)	HMG Senior Responsible Officer
The Government is providing additional funding to Formula Student AI, which supports university students to develop technical skills for automated driving systems.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is implementing a targeted export support programme help automotive supply chain companies sell high-growth potential technology to key markets, including North America, Japan, China, India, and Western Europe; alongside a similar UK CAM industry programme supporting exports to markets in the Middle East.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will explore the development of international technology partnerships between the UK and our main trading partners to boost industry ties and maximise the opportunity for foreign direct investment.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will implement the world-leading Automated Vehicles Act by 2027 to pave the way for self-driving vehicles to be used safely and securely on British roads.	Director, Future Transport Systems, Road Transport Group, Department for Transport
The Government will pursue legislative reform for micromobility vehicles, to provide a proportionate and more agile process for regulating Low-Speed Zero Emission Vehicles (LZEV) likely including pavement delivery robots, e-scooters and last mile delivery vehicles	Director, Roads Strategy, Department for Transport
<b>Batteries</b>	
The Government is investing in the Battery Innovation Programme (formerly Faraday Battery Challenge) encouraging innovation in emerging battery technologies.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government is investing in the Energy Innovation Centre at Warwick Manufacturing Group and The Centre for Process Innovation.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government, in partnership with the devolved governments, will assess the options for implementing Battery Passports.	Director, Circular Economy Directorate, Department for Environment, Food and Rural Affairs
The Government has established the Circular Economy Taskforce which is working to develop a Circular Economy Strategy for England, proposals for which will be published in Autumn 2025.	Director, Circular Economy Directorate, Department for Environment, Food and Rural Affairs

Policy Measure(s)	HMG Senior Responsible Officer
<b>Aerospace</b>	
The Government is extending funding for the Aerospace Technology Institute (ATI) until 2035 to support aerospace R&D.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will deliver the Future of Flight programme to support the development of safe, secure sustainable advanced air mobility, such as drones and eVTOL.	Director, Aviation, Department for Transport
The Government launched the Sustainable Aviation Fuel Mandate on 1 <sup>st</sup> January 2025, which will secure demand for SAF by setting targets for the supply of an increasing amount of SAF in the overall UK aviation fuel mix. We are also supporting UK SAF production through the Advanced Fuels Fund, which provides grants to support the development of advanced fuels and the Revenue Certainty Mechanism which will unlock investment in UK SAF plants.	Director, Environment Strategy, Department for Transport
<b>Space</b>	
The Government will focus and increase funding on the five priority space capabilities set out in the Space Industrial Plan and Launch.	CEO, UK Space Agency
The Government will deliver the Private Investment Framework for Space.	Director, Advanced Manufacturing Directorate, Department for Business and Trade
The Government is creating, with Skills England, the Future Workforce in Space programme, to develop a sustainable pipeline of talent.	CEO, UK Space Agency
The UK Space Agency will support companies from start-up to scale-up, through a range of commercial mechanisms including grants, procurement, and co-investment of relevant programmes.	CEO, UK Space Agency
The Government will accelerate the Rendezvous and Proximity Operations Regulatory Sandbox, as well as exploring new areas to employ innovative regulatory tools and sandboxes.	Director, Space Directorate, Department for Science, Innovation and Technology
The Government will continue UK membership to the European Space Agency.	CEO, UK Space Agency
The Government will increase bilateral R&D funding between the UK and our international allies.	CEO, UK Space Agency

Policy Measure(s)	HMG Senior Responsible Officer
<b>Advanced materials</b>	
The Government will launch a new National Materials Innovation Programme (NMIP) targeting high-growth application-focused opportunity areas, create networks of key stakeholders and a number of pilots, targeting investment in the NMIP for Materials 4.0, and Testing & Verification.	Director, Technologies, Growth and Security, Department for Science, Innovation and Technology
The Government invested in a Defence Materials Centre of Excellence in Manchester, announced in 2024, to support capabilities across civil and defence manufacturing sectors.	Chief Executive, Defence Science and Technology Laboratory, Ministry of Defence
<b>Agri-tech</b>	
The Government will deliver the Farming Innovation Programme, including its Farming Innovation Investor Partnerships, to drive innovation and technology adoption across the sector.	Director, Agri-Food Chain, Department for Environment, Food and Rural Affairs
The Government will establish the Agri-Tech Export Accelerator programme to support the sector to seize global commercial opportunities.	Director, Services, Business Group, Department for Business and Trade
The Government will deliver the ADOPT fund grants to support farmer led demonstrations of new technologies, supporting the sector to adopt at a faster rate.	Director, Agri-Food Chain, Department for Environment, Food and Rural Affairs
<b>Supporting the UK's city regions and clusters</b>	
The Government will leverage interventions like Industrial Strategy Zones (made up of Freeports and Investment Zones) whilst building proposals for specific projects to attract future investment.	Director, Local Growth and Devolution Ministry of Housing, Communities & Local Government
The Government will explore delivering pilot programmes in the North East and West Midlands to deliver fully integrated electric vehicle supply chain clusters, in partnership with North East and West Midlands mayoral combined authorities.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will build Strategic Partnerships with priority regional clusters and deliver regular bilateral dialogues with devolved governments moving forwards to deliver mutually identified priority projects.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade

Policy Measure(s)	HMG Senior Responsible Officer
The Government will build a tool to map inward HMG investment into high growth city regions and clusters to support onward supply chains.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will identify and prepare new strategic sites, including for Advanced Manufacturing, and create the condition to accelerate their readiness for use.	Director, Office for Investment, Department for Business and Trade
<b>Working with industry</b>	
The Government will continue to engage with manufacturing-focused research organisations and trade associations to help develop policy. Trade associations in particular provide a valuable connection to SME manufacturers who represent the majority of the sector.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade
The Government will track the metrics included in the Sector Plan.	Director, Advanced Manufacturing, Business Group, Department for Business and Trade, and the Industrial Strategy Council









