



UK Government

Invest 2035:

The UK's Modern Industrial Strategy

October 2024



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Green Paper

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Foreword

Growth is the number one mission of this government. Our new Industrial Strategy is central to that Growth Mission.

This Green Paper sets out our vision for a modern Industrial Strategy a credible, 10-year plan to deliver the certainty and stability businesses need to invest in the high growth sectors that will drive our growth mission.

There is rapid change in the global economy, and the case for governments to roll up their sleeves and shape markets rather than step back in the face of these challenges is stronger than ever. To capture the growth the UK so desperately needs, we need a modern Industrial Strategy to share in the next decade's growth opportunities.

This Industrial Strategy will provide a launchpad for businesses. It provides the firm foundation for investment businesses have told us they need. This government believes it is our role to provide the certainty that inspires confidence, allowing businesses to plan not just for the next year, but for the next 10 years and beyond.

We will not repeat the mistakes of the past, with policy changing as fast as decision-makers. To put an end to the policy merry-go-round, we are going to establish a statutory Industrial Strategy Council, hardwiring stability and long-termism into our plan from the start.

In its drive for growth, the Industrial Strategy will take advantage of the UK's unique strengths and untapped potential, enabling our already world-leading services and manufacturing sectors to adapt and grow, and seizing opportunities to lead in new and emerging sectors.

Jobs will be at the heart of our modern Industrial Strategy, supporting growth sectors to create high-quality, well-paid jobs across the country, backed by employment rights fit for a modern economy.

It plays to our strengths. Over the last 25 years, a third of our highest productivity industries were responsible for generating nearly two thirds of our economy's entire productivity growth.¹

That is why our Industrial Strategy will channel support to eight growth-driving sectors – those in which the UK excels today and will propel us tomorrow. They include the services and manufacturing industries that present the greatest opportunity for output and productivity growth over the long-term.

Our Strategy is unreservedly pro-business, engaging on complex issues that are barriers to investment, like skills, recruitment of international talent, data, R&D, technology adoption, access to finance, competition, regulation, energy prices, grid connections, infrastructure, and planning – all through the lens of promoting investment.

It will be international from the start: learning and applying what works in other countries and deepening our multilateral and bilateral economic partnerships in support of growth and the growth-driving sectors.

¹ Department for Business and Trade analysis of [Office for National Statistics \(2023\) Output per Hour Worked, UK](#).

This includes our Trade Strategy, renewing our commitment to free and open trade, where we're forging a closer relationship with the European Union – ensuring smoother trade and simpler processes for doing business. But we're also striking new, market-opening trade deals with powerhouse economies across the globe. Our accession to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is just one example.

Most importantly, our Industrial Strategy will be driven by what business needs to succeed.

That is what this Green Paper is for. An Industrial Strategy developed in a vacuum, detached from practical realities, is no strategy at all. It is essential that this Strategy is informed by the experiences of the individuals, businesses, and local communities it will support. We need the input of mayors and multinationals, councils and CEOs, trade unions, devolved governments, and experts to deliver prosperity through partnership.

That is why we are asking for your input now to shape what will be a shared endeavour between private enterprise and public good. We are enormously grateful for any time you can give to answering the questions in this Green Paper, so that we can be steered not by abstracts, but by experience and evidence.

Your insights will be invaluable to creating an Industrial Strategy that cultivates the right pro-business, pro-worker environment for the UK to soar. And it is a Strategy backed by a government that respects business, wants to partner with business, and is open for business.

The Industrial Strategy, alongside Sector Plans for the growth-driving sectors, will be published in Spring 2025, aligned with the multi-year Spending Review.



The Rt Hon Rachel Reeves MP
Chancellor of the Exchequer

A handwritten signature in blue ink that reads "Rachel Reeves".

The Rt Hon Jonathan Reynolds MP
Secretary of State for Business and
Trade and President of the Board of
Trade

A handwritten signature in blue ink that reads "J. Reynolds".

Executive Summary

The new modern Industrial Strategy “Invest 2035” is the UK government’s credible 10-year plan to deliver the certainty and stability businesses need to invest in the high growth sectors that will drive our growth mission.

The Strategy will focus on tackling barriers to growth in our highest potential growth-driving sectors and places, creating the right conditions for increased investment, high-quality jobs and ensuring tangible impact in communities right across the UK.

The Strategy’s goal is to capture a greater share of internationally mobile investment in strategic sectors and spur domestic businesses to boost their investment and scale up their growth – an essential step in achieving, sustainable, inclusive and resilient growth.

This Green Paper sets out the Government’s approach and asks for your views and evidence to help develop a successful, modern Industrial Strategy to be launched in Spring 2025.

UK context

The UK has major strengths to celebrate and build on, such as high-quality research institutions and innovative firms, its status as a global trading nation, a recognised set of regulatory and competition institutions, the pro-entrepreneurial environment, a highly skilled workforce, and investment opportunities across the country. But the UK also faces significant challenges. The UK economy has faced significant shocks in recent years and has had a poor productivity record over the past decade and a half, consistently investing less than its international peers, and lagging on the performance of city regions outside London and the South-East. There is room for improvement in the adoption and diffusion of technology and ideas, as well as improving market dynamism.

Our approach

The Industrial Strategy will be ambitious and targeted. Its primary objective is to drive growth, by taking advantage of the UK’s unique strengths and untapped potential, enabling the UK’s world-leading sectors to adapt and grow, and seizing opportunities to lead in new sectors, with high quality, well-paid jobs. It will shape the type of growth being pursued: the Government will also seek to support Net Zero, regional growth, and economic security and resilience. It will be grounded in long-term stability, a renewed commitment to free and fair trade, and a pro-business approach focused on reducing barriers to investment in the UK.

Growth-driving sectors

The Industrial Strategy will focus on the sectors which offer the highest growth opportunity for the economy and business. Eight growth-driving sectors have been identified: Advanced Manufacturing, Clean Energy Industries, Creative Industries, Defence, Digital and Technologies, Financial Services, Life Sciences, and Professional and Business Services. In the next stage of development of the Industrial Strategy, the Government will prioritise subsectors within these broad sectors that meet our objectives and where there is evidence that policy can address barriers to growth. Ambitious and targeted Sector Plans will be designed in partnership with business, devolved governments, regions, experts, and other stakeholders, through bespoke arrangements tailored to each sector.

Pro-business environment

Our Industrial Strategy will bring forward coordinated sector-specific and cross-cutting policies that support businesses to overcome barriers and invest. By considering and listening to businesses and experts, the Government can identify the most effective levers for our sectors and geographical clusters across the country. These policy areas include people and skills, innovation, energy and infrastructure, the regulatory environment, crowding in investment, and international partnerships and trade.

Place

A core objective of the Industrial Strategy is unleashing the full potential of our cities and regions. The Industrial Strategy will concentrate efforts on places with the greatest potential for our growth sectors: city regions, high-potential clusters, and strategic industrial sites. The Government is committed to devolving significant powers to Mayoral Combined Authorities across England, giving them the tools they need to grow their sectoral clusters and improve the local business environment through ambitious Local Growth Plans. Partnership with devolved governments will make this a UK-wide effort and support the considerable sectoral strengths of Scotland, Wales, and Northern Ireland.

Partnership

The ambitions set out in this document can only be realised in partnership. The Government will engage widely through the development of this Strategy: engaging businesses, trade unions, local and devolved leaders, experts, and international partners. A statutory, permanent, and independent Industrial Strategy Council will be established so that the Strategy is informed by a broad and high-quality evidence base.

The Industrial Strategy and growth-driving Sector Plans will be published alongside the Spending Review in Spring 2025.

The Government wants to hear from you and collaborate on the development of this modern, ambitious Industrial Strategy.

Context

The new, modern Industrial Strategy will be the Government's 10-year plan, with a primary objective of long-term sustainable growth in our highest potential growth-driving sectors – growth that is supportive of Net Zero, regional growth, and economic security and resilience. The Strategy will be a significant driver of national renewal and a central pillar of the Growth Mission.

The UK has significant strengths

We should be clear-eyed about the UK's strengths, which create huge opportunities for stronger and better growth. Working in partnership with businesses,² the Government will aim to establish the right economic conditions and remove the barriers to growth, creating a platform for economic renewal based on the UK's fundamental strengths.

The UK has high quality research institutions and innovative firms. The UK produced 57% more academic publications than the US and six times more than China, in per capita terms, in 2020, and is a world leader in field-weighted citation impact (FWCI),³ a benchmark for research quality.⁴

The UK is one of the world's largest trading countries, the second biggest services exporter in the world,⁵ and one of the most globally connected economies in the world.⁶ It has excellent international transport links, is the home of the global language for business, and is at the centre of the world's time zones. The UK has established comparative advantages in parts of services sectors such as financial services and professional and business services, as well as in parts of growing goods sectors such as life sciences and advanced manufacturing.⁷

The UK has a world-leading track record of decarbonisation. Underpinned by the world-leading Climate Change Act, the UK was the first major economy to halve its emissions, cutting them by 50% between 1990 and 2022, while also growing the economy by 79%.⁸ The Institute for Public Policy Research suggests that the UK is already world-leading in making one in three products vital to the Net Zero transition,⁹ and there is evidence that clean technology specialisms are spread across the UK.¹⁰ The Clean Energy Mission will

² This Green Paper will use 'businesses', 'firms', and 'industry' interchangeably.

³ An indicator of how the number of citations received by an article compares to the average or expected number of citations received by other similar publications.

⁴ [University of Cambridge \(2024\) UK Innovation Report.](#)

⁵ [UN Trade and Development \(2024\) Services \(BPM6\): Exports by Service Category, Trade Partner World, 2023.](#)

⁶ [DHL \(2024\) Global Connectedness Report.](#)

⁷ [Resolution Foundation \(2022\) Enduring strengths: Analysing the UK's Current and Potential Economic Strengths, and What They Mean for its Economic Strategy, at the Start of the Decisive Decade.](#)

⁸ [Department for Energy Security and Net Zero \(2024\) UK first major economy to halve emissions.](#)

⁹ [Institute for Public Policy Research \(2024\) Manufacturing matters: The Cornerstone of a Competitive Green Economy.](#)

¹⁰ [Resolution Foundation \(2022\) Growing Clean.](#)

enable the UK to achieve clean power by 2030 and accelerate the Net Zero transition across the economy.

The UK has a strong pro-entrepreneurial environment, with several of the most successful start-up hubs in Europe¹¹ and the world's third largest venture capital market.¹²

The UK has a strong, diverse and highly-skilled workforce – fourth in Europe and seventh in the Organisation for Economic Cooperation and Development (OECD) for tertiary education.¹³ Our people are supported by an immigration system that attracts the brightest and best, with the UK being the second most attractive country in the G20 for young people.¹⁴

The UK has a recognised set of regulatory and competition institutions. According to the Competition and Markets Authority (CMA) State of Competition report 2022¹⁵, UK markets remain relatively competitive despite modest deterioration in performance over the last two decades.

The UK has a global, urban powerhouse in London. Our capital is a magnet for global talent and hosts Europe's most competitive financial centre,¹⁶ with long-standing expertise across the markets ecosystem from asset management to insurance and exchange markets, and in growing areas such as financial technologies (fintech)¹⁷ and green finance.¹⁸

There is huge potential in our cities, regions, and nations, with sector strengths spread across the country. City regions like Greater Manchester, West Yorkshire, and the West Midlands are burgeoning centres of modern industry. Edinburgh hosts a major global financial centre with expertise in asset management, and approximately two thirds of Financial Services sector employment is outside of London.¹⁹ Manchester, Leeds, Cardiff, and Belfast are home to diverse and successful creative industries clusters. Clean Energy industries are flourishing in Scotland, Wales, the North-West, and the North-East, while Advanced Manufacturing is thriving in South Yorkshire, the West of England, and beyond.

The UK leads Europe in attracting Foreign Direct Investment (FDI) and is one of the top destinations for FDI stock in the world.²⁰ Recent FDI growth has been driven by a resurgence in digital investment, with the UK securing over a quarter (27%) of all European technology projects last year.²¹

¹¹ [Financial Times \(2024\): Europe's Leading Start-Up Hubs.](#)

¹² [Dealroom, Guides: United Kingdom.](#)

¹³ [Organisation for Economic Cooperation and Development \(2022\) - Population with Tertiary Education - 25–34-year-olds, %, 2022.](#)

¹⁴ [IPSOS \(2023\) Global Perceptions: How 18–34-Year-olds See the UK and the World.](#)

¹⁵ [CMA \(2022\) The State of UK Competition Report.](#)

¹⁶ [Z/Yen & CDI \(2024\) The Global Financial Centres Index 36.](#)

¹⁷ [Findexable \(2021\) Global Fintech Rankings Report.](#)

¹⁸ [Z/Yen \(2021\) The Global Green Finance Index 8.](#)

¹⁹ DBT analysis of [Nomis data](#).

²⁰ [United Nations Trade and Development \(2024\) World Investment Report.](#)

²¹ [EY \(2024\) Foreign Direct Investment in UK Grows as Europe Declines.](#)

However, the UK economy has faced a turbulent past decade and a half

In recent years, the UK economy has faced significant shocks, including the Covid-19 pandemic, high levels of economic uncertainty following the UK's exit from the European Union (which is estimated to have reduced investment by about 11% over the three years following the 2016 referendum relative to trend),^{22, 23} and the energy price shock following Russia's invasion of Ukraine. This followed the impact of the Global Financial Crisis (GFC), subsequent slow economic recovery, and relative stagnation in household incomes.

The UK is recovering from an environment of global macroeconomic uncertainty and a cost-of-living crisis. These conditions have led to lower consumer spending, depressed business investment, and lower job security.²⁴ While the recovery has started, the economy still faces several challenges, including rising worker inactivity, and falling goods trade.

The fundamental and longer-term challenge is that the UK has experienced a slowdown in productivity growth over the last decade and a half, which is the ultimate driver of people's living standards (Chart 1). Although this productivity slowdown is not unique to the UK, it appears to have had a larger slowdown than many other advanced economies.²⁵ This has contributed to a period of exceptionally weak real wage growth, with average real wages only 0.5% higher in July 2024 than they were in December 2007, just prior to the GFC.²⁶

²² [Bank of England \(2019\) In Focus, Uncertainty and Brexit.](#)

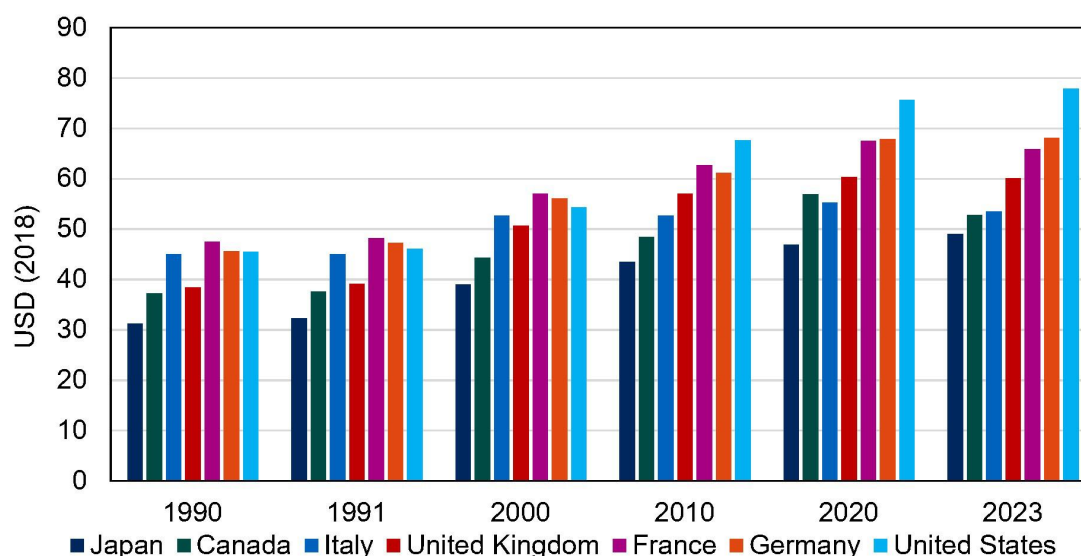
²³ [Bloom et al \(2019\) The Impact of Brexit on UK Firms.](#)

²⁴ [Economics Observatory \(2020\) Why is Uncertainty so Damaging for the Economy?](#)

²⁵ [Resolution Foundation \(2023\) Ending Stagnation: A New Economic Strategy for Britain, Organisation for Economic Cooperation and Development Economic Surveys: United Kingdom and, Organisation for Economic Cooperation and Development Going for Growth.](#)

²⁶ [Department for Business and Trade calculations based on Office for National Statistics \(2024\): Real average weekly earnings using consumer price inflation \(seasonally adjusted\).](#)

Chart 1: Output per hour worked, UK vs G7 countries, 1990 – 2023



Source: [Organisation for Economic Cooperation and Development Productivity Database](#)

These economic challenges have occurred against a backdrop of broader and longer-term trends in the UK and wider global economy. These include the opportunity presented from our transition to Net Zero; continuing geopolitical uncertainties; the rapid development of artificial intelligence (AI), digitalisation, and increased automation; and changing patterns of demand and demographics. These trends will shape the UK's economic future, which means that Government needs to help capture the benefits and mitigate the costs for the Industrial Strategy to be successful.

The causes of the UK's productivity weakness are structural, longstanding, and inter-related with a broad consensus that there is no single driving factor.²⁷ There are many drivers such as macroeconomic conditions, trade policy, and migration policy. These will be addressed within the Growth Mission more broadly, and other Missions where relevant. The UK has closed productivity gaps before; and can do so again.²⁸ To that end, we have prioritised four central factors that the Industrial Strategy can particularly address:

Persistently low levels of investment

The UK has routinely ranked in the bottom 10% of OECD countries for overall investment intensity.²⁹ Since at least the 1990s, the UK has frequently had the lowest share of investment in GDP in the G7. This weakness has primarily been driven by low levels of

²⁷ [The Productivity Institute \(2023\) The Productivity Agenda](#), [Resolution Foundation \(2023\) Ending Stagnation: A New Economic Strategy for Britain](#), [Organisation for Economic Cooperation and Development Economic Surveys: United Kingdom](#) and, [Organisation for Economic Cooperation and Development Going for Growth](#).

²⁸ DBT analysis of [Organisation for Economic Cooperation and Development Productivity Database](#).

²⁹ Although estimates of the size of the contribution of investment to our poor productivity vary, it is typically identified as the largest individual component. See for example [Programme on Innovation Diffusion \(2024\) Cracking the Productivity Code: An International Comparison of UK Productivity](#).

private sector investment, though public sector investment has tended to be relatively low by G7 standards as well.³⁰ Private sector investment varies significantly across industries, firm sizes, and regions.³¹ Despite FDI being an economic strength, conversely UK business investment is weak, with around 40% of firms in any given year doing no investment at all.³²

Major city regions

The UK's economic performance is skewed towards London and the South-East, while other city regions have historically underperformed relative to both the national economy and their international counterparts.³³ Tackling this underperformance is key to raising economic growth and reducing inequality. For the eight largest cities outside London combined, the gap between actual and potential productivity could be worth £47 billion.³⁴ With 69% of the UK population living in cities and their surrounding areas, reversing this underperformance can raise the living standards of millions.³⁵

Weak diffusion and adoption of technologies, ideas, and processes

Better diffusion and adoption of both established and novel technologies, ideas, and processes is a critical part of how UK's 'follower firms' can improve their productivity. While the UK ranked fifth out of 133 countries in the World Intellectual Property Organisation (WIPO) 2024 global innovation index, it ranked only 31st in knowledge absorption.^{36, 37} In particular, UK firms lag in adoption of intermediate digital technologies. According to the World Digital Competitiveness Ranking, the UK ranked 20th out of 64 economies in 2023.³⁸

Slowing market dynamism

The UK has seen declining market dynamism³⁹ in recent decades. Market dynamism is the process by which markets increase the productivity of the overall economy by moving labour and capital from less productive firms to more productive ones over time. Historically, this has been the largest component of overall productivity growth, compared to innovation or efficiency improvements within firms.⁴⁰ The job creation rate was 2.6 percentage points

³⁰ Department for Business and Trade calculations based on Organisation for Economic Cooperation and Development Data. See also [The Productivity Institute \(2023\) The Productivity Agenda](#), [Resolution Foundation \(2023\) Beyond Boosterism](#).

³¹ [Resolution Foundation \(2023\) Beyond Boosterism](#).

³² For more details on this research see [Department for Business and Trade \(2024\) Business Investment Analysis](#).

³³ Usually taken to include Manchester, Birmingham, Leeds, Glasgow, Liverpool, Sheffield, Newcastle, Bristol, Nottingham, Cardiff, Leicester.

³⁴ [Centre for Cities \(2021\) So You Want to Level Up?](#)

³⁵ [Resolution Foundation \(2023\) Ending Stagnation: A New Economic Strategy for Britain](#).

³⁶ In this context this Green Paper defines 'diffusion' as the process by which new ideas spread across the economy, while 'adoption' speaks to the implementation of these ideas by firms.

³⁷ [World Intellectual Property Organisation \(2024\) Global Innovation Index 2024](#).

³⁸ [International Institute for Management Development \(2023\) World Digital Competitiveness Ranking](#).

³⁹ This Green Paper will use 'market dynamism' and 'business dynamism' interchangeably.

⁴⁰ [Office for National Statistics \(2022\) Firm-Level Labour Productivity Measures from the Annual Business Survey, UK](#).

lower in 2011-2019 compared with 2001-2007, and the job destruction rate 2.7 percentage points lower.⁴¹

The Industrial Strategy will need to increase market dynamism to allow labour and capital to flow more freely towards growth-driving sectors. However, economic change can create ‘losers’ as well as ‘winners’ – at least in the short term. Government needs to consider these impacts and provide the right transition mechanisms to ensure that people, places, and businesses are not left behind.

⁴¹ [Office for National Statistics \(2023\) Firm-Level Business Dynamism Estimates from the Longitudinal Business Database: Summary Statistics, UK.](#)

The Rationale for an Industrial Strategy

The Government's Growth Mission will lead the way in delivering growth for all.

Reforms are already underway to address planning barriers to growth, channel finance towards growth priorities, and accelerate the transition to Net Zero. These will be supported by a modern Industrial Strategy which will implement targeted policy interventions⁴² to drive growth where the UK has, or could develop, a comparative advantage, or to unlock barriers essential for delivering long-term, sustainable, inclusive, and resilient growth.

There is a strong case for governments to more actively direct the structure of the economy, which is gaining traction across the world in the wake of major shocks and long-term trends, such as Covid-19, re-orientated global supply chains, the global productivity slowdown, the digital transformation, and climate change.

The historic debate on industrial strategies has been characterised by advocates of extensive state planning on the one hand, and equally vehement supporters of the private market on the other. While governments pursuing both approaches can point to some successes, through the experiences of countries around the world, a new perspective on industrial strategies has emerged in recent years that takes a more practical and pragmatic view.

This approach is one that seeks to place private business, entrepreneurship, and innovation at its heart, supported by governments playing a strategic and coordinating role beyond the fundamentals of upholding the rule of law and macroeconomic stability. It is an approach of partnership between government, businesses, and workers, working together to create the conditions for sustained and long-term growth across the economy.

The UK is no exception. Since the last Industrial Strategy in 2017 and the Plan for Growth in 2021, global shocks and trends, alongside stagnant UK output and productivity growth and persistent regional and income inequality, have strengthened the case for a more targeted approach.

As an open, mid-sized economy, there is a need to prioritise and target policy interventions carefully in areas that will deliver the largest growth benefit. Some government policies can make greater contributions to overall economic growth when they are focused on specific sectors, places, and types of economic activity. By improving the targeting of some cross-cutting policy levers⁴³, governments can deliver better economic outcomes for the same inputs.

The Government is also building the institutional capabilities necessary to set the foundations for long-term and agile policy implementation. Past industrial strategies have often not achieved their objectives because they have been too short lived – the UK has had around 10 industrial strategies, growth plans, or similar since 2011.⁴⁴ This is why the Government is going to establish a statutory and independent Industrial Strategy Council and new partnership structures to provide stability and ensure longevity.

⁴² This Green Paper will use 'policies', 'levers', and 'interventions' interchangeably.

⁴³ This Green Paper will use 'cross-cutting', 'pro-business environment', 'horizontal', and 'cross-economy' interchangeably.

⁴⁴ [Institute for Public Policy Research \(2023\) Making Markets in Practice.](#)

Actively shaping and directing the economy in this targeted way means that the Government has to choose what to do – and importantly what not to do. Even when governments do not have explicit industrial strategies, they still take decisions that impact specific sectors – an Industrial Strategy creates a framework for systematic prioritisation to maximise growth and broader benefits.

Targeting the Industrial Strategy

There are a variety of ways to approach Industrial Strategy. The Government will take a deliberate and targeted approach towards growth-driving sectors and places - addressing barriers to growth. This should look across the economy – from services to manufacturing, from existing to emerging sectors. The need for this type of approach is clear from the views of experts and businesses. Different sectors face different economic conditions and market failures, and hence different policy solutions. Each sector will also benefit from reforms to economy-wide policies, which can raise the overall productive capacity of the economy and help address market barriers and opportunities specific to a given sector.⁴⁵

First, this approach to Industrial Strategy supports the need in parts of the economy for temporary catalytic government support to scale up industries, particularly those with potential for global competitiveness. This support addresses dynamic effects, external economies of scale, and information failures in emerging sectors and in capital-intensive industries, where high uncertainty can deter private investment.⁴⁶ Government intervention can reduce uncertainty and support the development of critical sector-specific knowledge, and crowd in private capital to growth-driving sectors.

Second, this approach encourages competitive and innovative business ecosystems, particularly in industries with low market dynamism and high barriers to entry. It also identifies the importance of strong supply chain linkages between sectors, as supporting upstream sectors can enhance the productivity of downstream sectors. By providing targeted support, Government can foster competitive markets to improve efficiency and improve the performance of interconnected value chains, ultimately benefiting consumers through better prices, quality, and choice.

Third, this approach allows government intervention where markets are insufficiently coordinated, due to the need for simultaneous investments or complex value chains. Projects requiring extensive supplier networks or multiple production steps may necessitate government coordination through information sharing or facilitating stakeholder cooperation.

Finally, this approach allows targeted policy where certain economic activities or sectors produce positive or negative spillovers for the rest of the economy. This can lead to issues such as under-investment in new technologies where the direct ('private') benefits accruing to firms are lower than the collective benefits to society as a whole (e.g. technologies which reduce carbon emissions), or activity in one sector generates benefits for

⁴⁵ See [Organisation for Economic Cooperation and Development \(2022\) An Industrial Policy Framework for OECD Countries: Old Debates, New Perspectives](#) for a useful discussion of the issues.

⁴⁶ For example, as a sector grows it becomes more productive due to 'learning by doing' and experimentation, but also because certain fixed costs such as key infrastructure or institutions are spread over a larger output.

others (e.g. knowledge ‘spillovers’). Government policy can address undesirable costs (‘internalise externalities’) or stimulate activity to generate desirable benefits.

From a practical perspective, a targeted approach also helps in terms of building a partnership with business. Businesses organise, compete, and recognise themselves in terms of sectors – even if these do not always align with standard statistical definitions. Firms in these sectors are more likely to face similar barriers and opportunities to growth, making it easier to target them together.

Objectives for the Industrial Strategy

The Industrial Strategy is a central part of the Growth Mission. The purpose of the Growth Mission is to fix the foundations of the UK economy and to kickstart a decade of national renewal in order to drive growth and to deliver on the mandate to rebuild Britain, support good jobs, unlock investment, and improve living standards across the country. This includes promoting productivity and growth in small businesses across our economy, particularly in supply chains across our growth-driving sectors.

In its drive for growth, the Industrial Strategy will shape the economy, taking advantage of the UK’s unique strengths and untapped potential, enabling already world-leading industries to adapt and grow, and seizing opportunities to lead in new and emerging industries. It is essential to consider the type of growth that the Industrial Strategy will deliver: growth that supports high quality jobs and ensures that the benefits are shared across people, places, and generations. To that end, it will also support Net Zero, regional growth, and economic security and resilience.

Net Zero: The UK is committed to sustainable growth – growth that is aligned with our Net Zero and environmental objectives. The UK approach will demonstrate global climate leadership, including focusing on supporting the Clean Energy Mission. It will build a strong domestic industrial base across services and manufacturing to gain strategic economic advantage – creating good, well-paid jobs in the green sectors of today and of the future. This includes opportunities presented by the circular economy.

The Net Zero objectives for the Industrial Strategy will be to:

- a. Capture the growth opportunities of the Clean Energy Mission and Net Zero transition.
- b. Identify and support Clean Energy industrial sectors with the greatest growth potential.
- c. Align sector plans with Net Zero and environmental objectives.

Regional growth: Higher national growth must involve unlocking the economic potential of the UK’s cities and regions, by tailoring policy to specific place-based constraints and opportunities. There are enormous growth opportunities in city regions and clusters across the UK. Businesses co-locate in specific clusters, with their own place-based opportunities and barriers to growth. The success of the Industrial Strategy’s growth-driving sectors can only be achieved if these clusters reach their full potential, supported through a place-based approach to policy.

The regional growth objectives for the Industrial Strategy will be to:

- a. Unleash the potential of UK cities and regions, taking into account regional growth when considering growth-driving sectors.

- b. Consider where sectors and relevant capabilities are located to identify clusters that can drive growth.

Economic security and resilience: Geopolitical shifts, Covid-19, and Russia's invasion of Ukraine have exposed vulnerabilities and dependencies within the global trading environment. Tackling these challenges and building a strong economy are complementary objectives – the UK's long-term growth needs to be secure and resilient, including by building a secure supply of critical goods. Building on the UK's existing strengths in areas such as emerging technologies (e.g. AI), life sciences and renewables, the UK can grow the economy and project strategic leadership at the forefront of geopolitical competition, while being better placed to respond to future shocks.

Our economic security objectives for the Industrial Strategy will be to:

- a. Promote key sectors in the economy which drive growth and strengthen economic security.
- b. Reduce supply chain and other vulnerabilities in growth-driving sectors which could harm their long-term growth or ability to deliver critical outputs.
- c. Ensure national security risks inform the approach to driving growth in these sectors.

Our Industrial Strategy, including our partnership with the Industrial Strategy Council, will help us think strategically about how we prioritise in support of these objectives. Decisions that Government and business make in the short term will have lasting impacts, and there will be choices to make. Our Industrial Strategy will help us balance short- and long-term considerations to deliver growth that is sustainable, inclusive, and resilient.

Partnership with business, local leaders, and unions

National, regional, and local leaders understand the strengths and opportunities of their communities and know where business can thrive with the right support. For those areas where responsibility is devolved to Scotland, Wales, and Northern Ireland, the Government will respect devolved arrangements, while also working to ensure that the Industrial Strategy helps to cohere national efforts so that industrial policies work in concert. To ensure collaboration and success, the Government has established the Council of the Nations and Regions, led by the Prime Minister with the First Ministers of Scotland and Wales, the First and deputy First Minister of Northern Ireland, and Mayors. The Government will also partner on developing and delivering the Industrial Strategy with national and regional leaders through the Inter-Ministerial Group on Business and Industry and the Mayoral Council.

The Industrial Strategy's Sector Plans and business environment interventions will be designed and implemented in lockstep with local and devolved leaders. The Strategy will give Mayors in England the tools they need to grow their economies and develop ambitious 10-year Local Growth Plans. The Government will work in partnership with the devolved governments to make this strategy a UK-wide effort.

Our Approach: A Modern Industrial Strategy

To maximise its impact on growth, the Industrial Strategy will focus on stimulating investment and activity in sectors with the highest growth potential. The top 30% of sectors ranked by productivity⁴⁷ in 1997 accounted for roughly 60% of all productivity growth from 1997 to 2022.⁴⁸ Overall growth has slowed as our growth-driving sectors have slowed.⁴⁹ As set out in the objectives, the Strategy will also target growth that is long-term, sustainable, inclusive, and resilient.

Based on this, eight growth-driving sectors will be prioritised across services and manufacturing, based on both existing and emerging strengths:

- Advanced Manufacturing
- Clean Energy Industries
- Creative Industries
- Defence
- Digital and Technologies
- Financial Services
- Life Sciences
- Professional and Business Services

In the next stage of development of the Industrial Strategy, the Government will identify subsectors within these broad sectors that meet our objectives and for which there is evidence that policy can address barriers to growth. This includes their contribution to Net Zero, regional growth, and economic security and resilience. It includes an assessment of the capabilities that Government should build on and the barriers and market failures that Government should address. The Government will use the responses to this Green Paper to inform this programme of analysis.

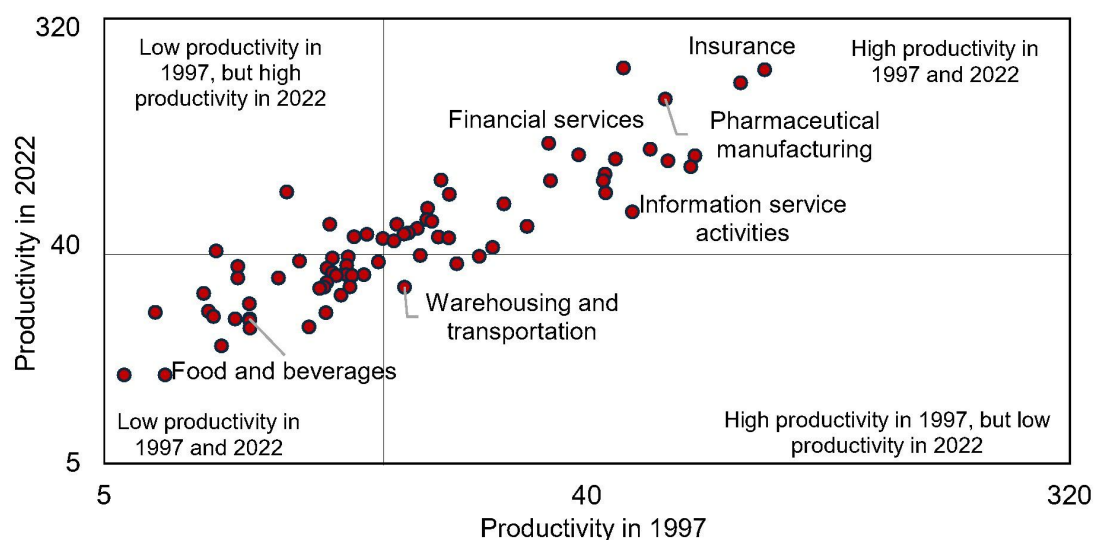
The Industrial Strategy will build from the UK's current sectoral strengths. Path dependency is critical; few sectors have moved from below average productivity in 1997 to above average productivity in 2022 and vice versa (Chart 2). Therefore, the Industrial Strategy should focus on innovating and capturing opportunities in those sectors where we have strengths and capabilities, or where there is evidence that these can be built.

⁴⁷ This excludes the real estate sector, which is not comparable due to the nature of how output is generated in this sector. Telecommunications growth accounts for a disproportionate share of productivity growth in this group, representing the rise of the digital economy – but other high productivity sectors are nonetheless key growth drivers.

⁴⁸ Department for Business and Trade analysis of [Office for National Statistics \(2023\) Output per Hour Worked, UK](#).

⁴⁹ [The Productivity Institute \(2023\) The Productivity Agenda](#).

Chart 2: Output per hour worked, 1997 vs 2022 £, current prices, log scale



Source: [Office for National Statistics \(2023\) Output per Hour Worked, UK](#).

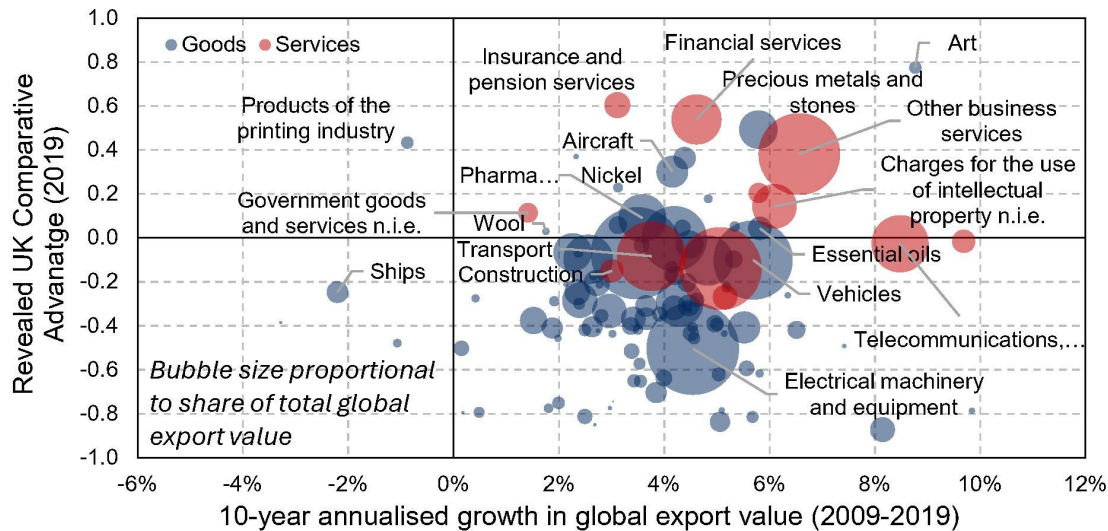
The UK has strengths within services and manufacturing. The UK is the second biggest services exporter in the world,⁵⁰ with established advantages in financial services, creative industries, and other business services. The UK also has revealed comparative advantage in growing advanced manufacturing markets, such as pharmaceuticals and aerospace,⁵¹ (Chart 3).

⁵⁰ [UN Trade and Development \(2024\) Services \(BPM6\): Exports by Service Category, Trade Partner World, 2023](#).

⁵¹ [Resolution Foundation \(2023\) Ending Stagnation: A New Economic Strategy for Britain](#).

Chart 3: Sector analysis of UK revealed comparative advantage

10-year annualised growth in global export value, by product category: 2019⁵²



Source: [Resolution Foundation \(2023\) Analysis of Harvard Growth Lab, Atlas of Economic Complexity \(HS version\) and Organisation for Economic Cooperation and Development-WTO, Balanced Trade in Services](#)

The UK also has emerging strengths in new technologies, systems, and processes. The UK's strengths in R&D, innovation, and skills mean that it is well placed to capitalise upon emerging technologies, processes, and ideas. For example, the UK has existing specialisms in over one third of technologies needed for Net Zero, such as environmental monitoring technologies and carbon capture utilisation and storage.^{53, 54, 55} Interventions in emerging technologies may differ to those for existing sectors, for example, focusing more on helping firms to commercialise innovations, scale up, and access finance.

Methodology

The Government has undertaken initial analysis to help determine the eight growth-driving sectors. This is set out at high level in this section. Future work will build on this analysis to determine the key subsectors within these broad sectors, using evidence collected from this Green Paper as well as further evidence-gathering and use of wider methodologies.

There is no single agreed analytical methodology to identify highest growth potential sectors due to longstanding measurement challenges, such as data quality and sector

⁵² [Resolution Foundation \(2023\) Ending Stagnation: A New Economic Strategy for Britain.](#)

⁵³ [Resolution Foundation \(2022\) Growing Clean.](#)

⁵⁴ [Andres et al \(2021\) Seizing Sustainable Growth Opportunities from Carbon Capture, Usage and Storage in the UK.](#)

⁵⁵ [Institute for Public Policy Research \(2024\) Manufacturing Matters: The Cornerstone of a Competitive Green Economy.](#)

definitions, and the inherent uncertainty around economic growth.⁵⁶ Any sector is broad and heterogeneous, comprising a range of varied subsectors, some of which have greater growth opportunities than others. Therefore, identifying sectors which meet the Industrial Strategy's objectives must be based a combination of evidence and judgements, including deciding which metrics, data, and methodologies to use.

This initial analysis considers the different characteristics and needs of existing and emerging sectors in order to identify:

- A. **Current strengths:** The UK's highest productivity and most internationally competitive sectors and key drivers of growth within the economy.
- B. **Emerging strengths:** Sectors in which the UK could feasibly develop a comparative advantage, often because of their proximity to the UK's current strengths. This analysis considers forecast growth, the future importance of the sector, and the UK's global position now and in the future.

It uses a multi-indicator assessment to identify UK subsector strengths:

- **Output growth:** The size and growth rate of the subsector.
- **Productivity:** To see where opportunities are to boost national productivity.
- **International position:** To see where the UK is, or could be, good, relative to other countries, including comparative advantage in tradeable sectors.

This approach was used to identify potential growth subsectors in existing sectors.

Initial analysis was conducted at the SIC-2 level (or equivalent) because less granular data is too aggregated to identify strengths. (This selection of subsectors should be regarded as indicative and not the final key subsectors, as further analysis will be conducted.)

Where necessary, different metrics were used for emerging subsectors and technologies, as these are less well captured by traditional SIC sector data.⁵⁷

Measuring emerging technologies is also challenging as they are not linear and predictable, and they interact with each other. To mitigate data challenges, evidence was triangulated from academic evidence, market intelligence, industry reports, and relevant datasets.

These subsectors were then aggregated to identify the eight growth-driving sectors:

Advanced Manufacturing, Clean Energy Industries, Creative Industries, Defence, Digital and Technologies, Financial Services, Life Sciences, and Professional and Business Services.

Next steps

In the next stage of development of the Industrial Strategy, the Government will design ambitious and targeted Sector Plans for each of the eight growth-driving

⁵⁶ Standard Industrial Classification (SIC) codes are updated infrequently and therefore often fail to effectively capture emerging sectors. Since traditional sector data is backwards looking there may also be an incumbency bias. There is overlap between sectors and some companies may be misclassified in SIC codes.

⁵⁷ Moreover, traditional metrics such as Gross Value Added (GVA) are problematic for prioritising nascent sectors in early stages of development (e.g. sectors with a large number of firms in the start-up phase could have very low or even negative GVA as their costs exceed their revenues).

sectors in partnership with business, devolved governments, regions, experts, and other stakeholders, through bespoke arrangements tailored to each sector.

To do this, the Government will prioritise subsectors within these eight broad sectors that meet its objectives and where there is evidence that policy can address barriers to growth. We will also consider the overlap and interdependencies across the growth-driving sectors.

The Sector Plans will also include policies for those subsectors on which the growth-driving sectors have critical dependencies. To that end, value chain analysis is being progressed, to identify subsectors within:

- A. **‘Foundational’ sectors:** These are the sectors which provide critical inputs and infrastructure to our growth-driving sectors.
- B. **Technologies:** These are the technologies which are a critical or emerging part of a growth-driving sector’s value chain.

Questions

1. How should the UK government identify the most important subsectors for delivering our objectives?
2. How should the UK government account for emerging sectors and technologies for which conventional data sources are less appropriate?
3. How should the UK government incorporate foundational sectors and value chains into this analysis?

Our growth-driving sectors

For each of the growth-driving sectors, we set out below how they link to the Industrial Strategy objectives, their strengths, and outline where Government can – in partnership with business and others – go further to support growth. As we have not yet prioritised the key subsectors, these descriptions are illustrated using *indicative* examples of subsectors and policy interventions.

Advanced Manufacturing

Manufacturing spreads opportunity across the country, delivering high value jobs attracting a higher-than-average hourly wage.⁵⁸ The majority of manufacturing jobs lie outside of London and the South-East, 84% compared to 69% for the economy as a whole.⁵⁹ Our industrial base plays an important role in our future economic resilience, as a significant dependency for many of our services sectors and as a driver of innovation. It is also critical to achieving the Clean Energy Mission, which will bring opportunities for the sector: it is estimated that additional capital investment averaging £50-60 billion per year is needed through the late-2020s and 2030s, across the whole economy.⁶⁰

UK manufacturers produce many of the essential goods, parts, and components needed to sustain and protect citizens in the UK and across the world. The UK's manufacturing strengths are broad and built on our world-class innovation expertise. For example, up to 56GWh of electric vehicle battery capacity is planned for the UK so far, and the UK is on its way to reaching the 2030 capacity requirements expected by the sector,⁶¹ helping it to remain a globally competitive investment destination. The South-West and Wales has one of the largest aerospace clusters in the world, producing around half of the world's large civil aircraft wings. The UK manufacturing supply chain is world renowned for its specialist strengths in high quality and innovative products.

The UK is entering a major investment cycle, where the Net Zero and digital transformations present considerable opportunities for UK manufacturing investment. However, many countries offer sizable subsidies and incentives to secure this internationally mobile investment. To compete, Government will need to ensure that the UK has a competitive offer across all the factors that influence investment, removing barriers and building on UK strengths, including world-class network of universities, research institutions, Catapults, deep venture capital pool, and trade openness.

Clean Energy Industries

Clean energy industries are a major driver of global growth. Over 90% of global GDP is now covered by Net Zero targets.⁶² There is rapid growth in global demand for low-carbon products, with McKinsey estimating a global market opportunity of £1 trillion for British

⁵⁸ [Office for National Statistics \(2024\) Employee Earnings in the UK.](#)

⁵⁹ [Office for National Statistics \(2023\) Workforce Jobs by Industry and Region \(annualised quarterly data based on average of the four quarters of 2022\).](#)

⁶⁰ [Department for Energy Security and Net Zero / Department for Business, Energy & Industrial Strategy \(2021\) Net Zero Strategy: Build Back Greener.](#)

⁶¹ [House of Commons Committee \(2023\) Batteries for Electric Vehicle Manufacturing Batteries for Electric Vehicle Manufacturing.](#)

⁶² [Climate Action Tracker](#), as of 31st May 2024.

businesses in the period to 2030.⁶³ An additional £50-60 billion of capital investment will be required each year through the late 2020s and 2030s to achieve our Net Zero ambitions⁶⁴ – it will be money well spent, as the ‘size of the prize’ is significant. An IMF study suggested that growth multipliers associated with clean energy investment (1.1-1.5) are larger than those associated with fossil fuels.⁶⁵

The UK is well placed to capture these opportunities – the Industrial Strategy and the Clean Energy Mission will help drive the UK towards becoming a clean energy superpower. The UK has a comparative advantage in established and emerging clean energy industries, and a developed services sector.^{66, 67} Our support has already delivered significant clean investment into the UK, including Sumitomo Electric’s recent commitment to a subsea cable manufacturing plant at the Port of Nigg, Scotland, which will bring over £350 million in investment.⁶⁸

While we have successfully delivered some of the largest clean energy infrastructure projects in the world, we can go further. Barriers often cited include high capital investment requirements, significant international competition, and skills shortages. More can be done to build the resilient supply chains and manufacturing base to secure the jobs that accompany them. Germany has almost twice as many renewable jobs per capita as the UK; Sweden almost three times; Denmark almost four times as many.⁶⁹ With the right policy, the Government can stimulate investment to grow the clean energy industries to deliver across all areas of the country – including in the UK’s industrial heartlands. The Climate Change Committee estimates that by 2030, up to 725,000 jobs could be created in low carbon sectors⁷⁰ and that moving to clean homegrown sources of electricity will reduce the UK’s dependence on volatile fossil fuel imports, improving energy security and helping to protect billpayers from rising and volatile energy prices.

Creative Industries

The UK’s creative industries are world-leading, showcasing the best of its creativity and culture to the world. According to UN Trade and Development, the UK is the third largest creative services exporter behind the US and Ireland, worth \$87 billion in 2022.⁷¹ Globally, one in 10 songs streamed are from the UK.⁷² The UK is a global centre for screen production, with £4.23 billion in production spend in 2023, of which 78% was from inward

⁶³ [McKinsey \(2021\) Opportunities for UK Businesses in the Net-Zero Transition.](#)

⁶⁴ [Department for Energy Security and Net Zero / Department for Business, Energy & Industrial Strategy \(2021\) Net Zero Strategy: Build Back Greener.](#)

⁶⁵ [International Monetary Fund \(2021\) Building Back Better: How Big Are Green Spending Multipliers?.](#)

⁶⁶ [Institute for Public Policy Research \(2024\) Manufacturing Matters: The Cornerstone of a Competitive Green Economy.](#)

⁶⁷ [Resolution Foundation \(2022\) Growing Clean.](#)

⁶⁸ [Sumitomo Electric \(2024\) Sumitomo Electric Commences Construction Work for its New Subsea Cable Factory in Scotland.](#)

⁶⁹ [International Renewable Energy Agency Renewable Energy Employment by Country.](#)

⁷⁰ [Climate Change Committee \(2023\) A Net Zero Workforce.](#)

⁷¹ [United Nations Trade and Development \(2024\) Creative Economy Outlook 2024.](#)

⁷² [British Phonographic Industry \(2020\).](#)

investment.⁷³ According to the Creative Industries Policy and Evidence Centre, the creative industries accounted for 67% of the UK's digital exports in 2021.⁷⁴

The sector is expected to grow worldwide, creating further growth opportunities. The sector is highly innovative, attracting significant inward investment and producing goods and services that are world renowned. PwC estimates that the global Entertainment and Media sector will grow to \$3.4 trillion by 2028.⁷⁵ Half of global trade is expected to be digital by 2050.⁷⁶

To enable growth in the sector, the Government will leverage UK creative industries' global comparative advantages by unlocking private investment, boosting exports, and developing its highly skilled workforce. The Government needs to ensure that the UK sector remains globally competitive as a home for world class talent while maximising access to important markets to tour and collaborate. The sector plays an important role in driving growth across regions and nations, through creative clusters and corridors across the country that spread opportunity and prosperity in communities, as well as driving growth by enhancing access to skills, spillovers, and knowledge sharing.

Defence

The UK's defence sector is a global leader. The Government will set out the pathway to spending 2.5% of GDP on defence. Defence and national security are foundational for economic growth across the UK and the defence sector provides good, well-paid jobs. Government defence spending supports around 434,000 jobs across the UK, equivalent to 1 in 60 UK jobs.⁷⁷ The majority (67%) of defence spend with UK industry and commerce goes outside of London and the South-East⁷⁸ – with local areas benefitting from defence exports. Defence drives innovation through investment in research and development – including developing and applying new technologies such as AI, quantum, and space capabilities, which drive positive spillovers across the economy.

Alongside the UK's significant defence budget (at £53.9 billion, with £25 billion of that spent with the UK industry and commerce on a range of key industrial capabilities),⁷⁹ **the UK is an exporter of leading defence capabilities to its allies and partners.** However, with threats increasing, the Government needs to address issues that inhibit or prevent growth in the defence sector. There has been a lack of UK government strategy on its defence industrial base in recent years. The Defence Industrial Strategy will ensure that the Government can improve the UK's performance on defence exports and get more defence output for every defence pound spent.

The Government's manifesto committed to “bringing forward a Defence Industrial Strategy aligning our security and economic priorities”. This will be commissioned by

⁷³ [British Film Institute \(2023\).](#)

⁷⁴ [Creative Industries Policy and Evidence Centre \(2024\) International Trade and the UK Creative Industries.](#)

⁷⁵ [PwC \(2024\) Global Entertainment and Media Outlook.](#)

⁷⁶ [UK Government \(2023\) Global Trade Outlook February 2023.](#)

⁷⁷ [Ministry of Defence \(2024\) Ministry of Defence Supported Employment Estimates: 2022/23.](#)

⁷⁸ [Ministry of Defence \(2024\) Ministry of Defence Regional Expenditure Statistics with Industry: 2022/23.](#)

⁷⁹ [Ministry of Defence \(2024\) Annual Report and Accounts 2023 – 24.](#)

the Secretary of State for Defence and will be the Sector Plan for defence in the Industrial Strategy. Defence Industrial Strategy will make sure the imperatives of national security and a high-growth economy are aligned. Strengthening the UK's defence sector will boost the prosperity of its people. With a better, more innovative and more resilient defence sector, the UK can innovate at speed to help Ukraine defeat Russia and restock its Armed Forces; deter its adversaries; seize opportunities presented by the technologies of the future; as well as creating new partnerships and promoting defence exports.

Digital and Technologies

The economy is fundamentally different to where it was a decade ago, transformed by digital sectors and increasingly by advances in AI and other technologies. This sector is at the forefront of geopolitical competition, so developing its strengths can enhance the UK's security and prosperity. In ten years, the economy will be radically different again. Digital and technology businesses have been responsible for transformative shifts in productivity in recent years. Strategic technologies that industry can point to now will be disrupting existing sectors and markets, and creating entirely new ones with high growth potential. The most valuable businesses in the world are digital and technology companies – eight of the top 10 by market capitalisation.⁸⁰

The UK already has a strong story to tell, as only the third country in the world (alongside the US and China) to have a tech ecosystem valued at over \$1 trillion. Our track record in creating over \$1 billion start-ups – over 165 to date and the highest in Europe – continues to attract investors.⁸¹ In 2023, UK start-ups raised the most venture capital in Europe – more than France and Germany (who hold second and third place respectively) combined – making the UK the third largest tech ecosystem globally by investment.⁸²

To deliver growth in this sector the Government will focus on a range of technologies and their commercialisation, with a portfolio approach that backs smaller, less proven, and more disruptive businesses alongside larger, well-established businesses in existing sectors. With its world-leading research, strong culture of innovation, and thriving start-up ecosystem, backed by a deep talent pool and the investment required to grow and scale sustainable businesses globally, the UK is well positioned to build on its success and develop the next wave of groundbreaking digital and technology companies.

Financial Services

The UK's financial services sector is one of its greatest assets as an economy. The international nature of the sector means it could attract global investment and take advantage of the potential of a new decade. The sector is also unique in driving growth through providing growing businesses with the finance they need to expand, supporting consumers with mortgages, and driving capital into productive investment. The sector will play a core role in providing the tens of billions needed to finance the Net Zero transition,⁸³ alongside providing thousands of jobs in every region of the UK, with emerging hubs in

⁸⁰ [Largest Companies by Market Cap](#), as of 8th October 2024.

⁸¹ [Tech Nation Report \(2024\) UK Tech in the Age of AI.](#)

⁸² [Dealroom \(2024\) UK Tech: A Forward Look to 2024.](#)

⁸³ [House of Commons \(2023\) The Financial Sector and the UK's Net Zero Transition.](#)

Belfast, Leeds, Cardiff, and Glasgow, and a global centre in Edinburgh, driving regional growth.

The UK's financial services sector has a unique, core role to play in delivering growth across the whole economy. The UK is one of two truly global financial centres – a vibrant hub, employment rich and export-focused. London, Edinburgh and Glasgow all rank within the top 40 most competitive, globally significant financial centres.⁸⁴ The financial services sector also has significant export potential, with 41% of the firms headquartered within the UK in 2019 having operations outside of the country.⁸⁵ The UK is also home to fast-growing, new areas such as fintech and sustainable finance. London is ranked top in the Global Green Finance Index⁸⁶ and the 2021 Kalifa Review noted that the UK accounts for around 10% of global market share for fintech, with revenues forecast to more than triple between 2020 and 2030 (assuming that this market share is maintained).⁸⁷

The Government will partner with the financial services sector to pivot to export to new and growing markets, make the UK the location of choice for green business to finance the Net Zero transition, and take advantage of trends in digitisation, to attract the firms of the future and increase productivity across the economy.

Life Sciences

Over the next decade, the life sciences sector holds enormous potential to drive economic growth and productivity while significantly improving health outcomes for thousands of patients across the country. This sector delivers goods that are critical to the functioning of our economy and society and increases the UK's resilience, for example, to epidemics. Recent breakthroughs, such as the development of promising new vaccines targeting cancer, underscore the transformative impact of the sector. The UK's life sciences sector offers unparalleled opportunities for future economic growth, propelled by new discoveries, data availability, AI, groundbreaking treatments, personalised healthcare, and innovative manufacturing processes.

Crucially, the UK's life sciences sector is built on a strong foundation, with over 6,800 businesses in 2021/22 that generated over £100 billion in turnover.⁸⁸ The UK is also home to four of the top 10 global universities for life sciences and medicine, and with the expertise of the NHS, the UK is a global hub for innovation.⁸⁹

There is an opportunity to renew the UK's leadership in life sciences, strengthening and supporting the areas where the UK is already effective alongside bold innovation and collective partnership, with business, academia, and the health system to drive economic growth and build an NHS fit for the future. The sector sits at the intersection of healthcare innovation and cutting-edge technologies offering immense potential to transform public

⁸⁴ [Z/Yen The Global Financial Centres Index.](#)

⁸⁵ [UK Government \(2021\) The Kalifa Review of UK FinTech.](#)

⁸⁶ [Z/Yen The Global Green Finance Index.](#)

⁸⁷ [UK Government \(2021\) The Kalifa Review of UK FinTech.](#)

⁸⁸ [Department for Health and Social Care / Department for Science, Innovation and Technology \(2024\) Bioscience and Health Technology Sector Statistics 2021 to 2022.](#)

⁸⁹ [QS \(2024\) QS World University Rankings by Subject 2024: Life Sciences & Medicine.](#)

health, enabling people to live longer and healthier lives, and boosting productivity, while driving high-value job creation and attracting significant investment.

Professional and Business Services

The UK's professional and business services operates with a comparative advantage in a market with global demand of \$1.9 trillion.⁹⁰ Through provision of essential business sectors and trusted business advisers, it is also an enabler of growth across the economy, helping businesses to raise finance, scale up, export, and invest.

The UK's professional and business services sector has a global reputation for quality and innovation, with its expertise, qualifications and standards used worldwide, underpinned by our world-renowned institutions and legal system.

The bulk of sector performance is driven by a relatively small number of firms, mainly concentrated in London and the South-East. There are clear opportunities to raise the performance of the sector as a whole, both at national and local level, by improving sector productivity. Opportunities cited by business include: improving management skills, exploring the use of data and AI, expanding into overseas markets and exploiting new opportunities in supporting the climate transition and digital transformation of their business clients. The Government, with industry, will also look to expand the global market for the UK's professional and business services, for example, by capitalising on emerging strengths in accounting and law-tech, promoting the UK's regional professional and business services strengths overseas, and unlocking barriers to trade in services.

Questions

4. What are the most important subsectors and technologies that the UK government should focus on and why?
5. What are the UK's strengths and capabilities in these subsectors?
6. What are the key enablers and barriers to growth in these subsectors and how could the UK government address them?

⁹⁰ [United Nations Trade and Development \(2024\) Services \(BPM6\): Exports by Service Category, Trade Partner World, 2023.](#)

Creating a Pro-Business Environment

The Government will work in partnership with businesses, trade unions, mayors, devolved governments, experts, and other stakeholders to help address the biggest challenges to unlocking business investment, focusing on the eight growth-driving sectors and clusters across the country.

The Industrial Strategy and its Sector Plans will explain how Government will help address those challenges when published in Spring 2025, having been designed in partnership with stakeholders, through bespoke arrangements tailored to each sector. We welcome views on the questions set out in this Green Paper, which forms an important part of this engagement.

Based on initial feedback from businesses and cross-economy business intelligence,⁹¹ there are several policy areas that are important for growth-driving sectors and the pro-business environment:

- People and skills
- Innovation
- Energy and infrastructure
- Regulatory environment
- Crowding in investment
- International partnerships and trade

The Industrial Strategy will consider the effectiveness of both cross-cutting policies and targeted solutions, for growth-driving sectors. In doing so, the Industrial Strategy will help ensure a pro-business environment, as set out in the Government's manifesto. To support that policy development, and to underpin a robust monitoring and evaluation framework, the Government is developing a Theory of Change for the Industrial Strategy (see Annex).

Addressing sector-specific and cross-cutting challenges together will underpin long-term growth, helping overcome coordination issues that have hindered past strategies.^{92, 93} The Industrial Strategy will be a central pillar of the Growth Mission, through which the Government is working to fix the foundations of the economy and to kickstart a decade of national renewal. The Industrial Strategy will also complement and benefit other priorities, such as the Clean Energy and Opportunity Missions. At the same time, those Missions will also support the Industrial Strategy.

⁹¹ For example: [Deloitte \(2024\) Deloitte CFO Survey Q2 2024.](#)

⁹² [Coyle and Muhtar \(2021\) UK's Industrial Policy Learning from the Past.](#)

⁹³ [Coyle and Muhtar \(2022\) You're Not Speaking my Language.](#)

Questions

7. What are the most significant barriers to investment? Do they vary across the growth-driving sectors? What evidence can you share to illustrate this?

To develop the Industrial Strategy, the Government is prepared to tackle the issues head on and listen to the needs of business. The aim is to provide the certainty and simplicity for businesses to confidently invest in the UK. To do this, Government policy will be guided by four principles: building long term stability; using the power of strategic government; a commitment to free and fair trade; and easing the investor journey.

Principles for the Industrial Strategy

Building long-term stability

The Government will not repeat the mistakes of the past. Too often, the impact of industrial strategies has been concentrated in certain regions and not shared across communities. Businesses say that past plans have been short-lived and often been felt as being done *to* rather than *with* them.

To succeed, all of Government will need to work in unison, with every action taken considering how to spur investment and growth. The Industrial Strategy will be developed and delivered in partnership with business, unions, local and devolved governments, experts, and other stakeholders, working as one to identify barriers to investment, build long-term confidence, and kick-start growth. As part of this, the Government will promote stable regulatory frameworks to give businesses the certainty they need to invest.

Renewing commitment to free and fair trade

The Government will ensure that the Industrial Strategy is international from the start and aligned with the Trade Strategy, to attract quality investment from abroad and expand markets for the growth-driving sectors, as well as across the wider economy.

The coming year is critical for going further with trading and wider economic relationships. Firstly, the Government will build on the UK's trade and investment relationship with the EU, with strengthened cooperation in areas such as the economy, energy, security, and resilience.

The Government will also seek economic partnership opportunities internationally to build future markets, address shared challenges, and respond to the risks and opportunities of the changing geopolitical context.

Easing the investor journey

The Government will ensure that the Industrial Strategy is pro-business and focused on reducing barriers to investment in the UK. To do this, policy must make it simpler and cheaper for companies to scale up and invest in the UK.

The first steps in a fundamental shift towards backing growth have already been taken, including through planning reform announced in the summer. The Government will focus its efforts on carrying this reform through to policy change, having heard the feedback from businesses that it must go further. The Industrial Strategy will consider how the Government can address issues that are critical for driving investment such as skills, recruitment of international talent, data, innovation, technology adoption and diffusion, business finance, competition, regulation, energy prices, grid connections, planning, and infrastructure.

Being a strategic, growth-focussed state

The Government is committed to using the power of the state strategically to support and shape the UK's economy and future growth. Through the Industrial Strategy, the Government will harness the UK's strengths to create an economy that produces high yields for investors and highly paid jobs for working people.

For the Industrial Strategy to have the greatest impact, the Government must be clear-eyed about the sectors which offer the highest growth opportunity for the economy and businesses, including where the UK has existing and emerging strengths. The Government will also seek to foster a more dynamic scale-up environment offering high returns. The UK can compete on quality and generate high growth, in the services, technologies and supply chains of the future.

People and skills

The people that create and work in businesses will be central to the success of the growth-driving sectors and clusters, supporting the Government's Growth, Opportunity, and Clean Energy Missions in particular. Workforce skills are a key area raised by businesses, for example, with Deloitte's CFO survey highlighting it as an area that Government should prioritise.⁹⁴ Ensuring the UK has a healthy population whose skills meet the needs of employers will bring people into the labour market and support their shift into high-skilled, high-wage jobs. The OBR estimates that improving health outcomes among the working-age population, by reducing incidence of work-limiting ill-health by a quarter, would increase the size of the economy by 0.8% over the longer-term.⁹⁵ Skilled workers are more productive, drive innovation, and facilitate the adoption of new technology – ultimately boosting growth.⁹⁶ Around one third of average annual UK productivity growth was attributable to an expansion of skills available in the workforce between 2001 and 2019.⁹⁷

While the UK has many strengths, including first-class universities and a relatively flexible labour market, alongside employers the Government need to address several barriers raised by businesses. The UK has a skills mismatch greater than many peer

⁹⁴ [Deloitte \(2024\) Deloitte CFO Survey Q2 2024.](#)

⁹⁵ [Office for Budget Responsibility \(2024\) Fiscal Risks and Sustainability Report.](#)

⁹⁶ [Organisation for Economic Cooperation and Development \(2022\) Value for Money in School Education, Chapter on The Importance of Human Capital for Economic Outcomes](#)

⁹⁷ [Department for Education \(2024\) Skills England: Driving Growth and Widening Opportunities.](#)

economies,⁹⁸ with 10% of businesses reporting at least one skill shortage vacancy.⁹⁹ The UK has a lack of technical skills – such as in electrical, mechanical, and welding trades, key to the advanced manufacturing and clean energy industries – as well as basic skills in English and Maths.^{100, 101}

What employers need will vary according to their sector and geography, and the skills system must be more flexible and address those disparities.¹⁰² For example, the creative industries sector, which is clustered across the UK, has reported needing workers with skills in digital, design and data. There are weaknesses in management and leadership skills, particularly in small businesses;¹⁰³ workforce participation is falling; and employer investment in skills lags behind many comparator countries, with UK employers investing half as much per employee than the EU average.^{104, 105} With over 80% of the 2030 workforce already in work,¹⁰⁶ the Government needs to address the impact that changing technologies and demographics will have on skills needs and job numbers in the growth-driving sectors. These barriers will require targeted interventions across different sectors and places.

Government has already taken steps to tackle some of these issues, including by establishing Skills England which will improve the skills system so that it is simpler, more data driven, and responsive. The Government will transform Jobcentres into a national jobs and careers service that will help employers find the talent they need. The new Growth and Skills Levy, which replaces the existing Apprenticeships Levy, will enable employers to access a broader range of high-quality training offers. Skills England will play a crucial role in determining which training will be eligible for the expanded Levy, in line with its assessment of skills needs and future demand, and through extensive engagement with its partners in the skills system. To improve coordination for investors, the Office for Investment and Skills England will implement a skills triage service, providing bespoke guidance for strategically important investments.

In the coming months, the Government will set out a detailed plan to support getting people back into work in the Get Britain Working White Paper, reducing inactivity. The Government has also introduced new legislation that will ensure employment rights are fit for a modern economy as part of its plan to Make Work Pay. The Industrial Strategy Advisory Council will work in partnership with Skills England, the Migration Advisory Committee, the

⁹⁸ [Organisation for Economic Cooperation and Development \(2022\) Skills for Jobs.](#)

⁹⁹ [Department for Education \(2023\) Employer Skills Survey, 2022.](#)

¹⁰⁰ [Department for Education \(2019\) Higher Technical Education: The Current System and the Case for Change.](#)

¹⁰¹ [Organisation for Economic Cooperation and Development \(2020\) Raising the Basic Skills of Workers in England.](#)

¹⁰² [UK Government \(2024\) Analysis of Geographical Disparities.](#)

¹⁰³ [Chartered Institute of Personnel and Development \(2023\) Improving UK Management Capability.](#)

¹⁰⁴ [Office for National Statistics \(2024\) Economically Inactive: UK.](#)

¹⁰⁵ [Learning and Work Institute \(2024\) Why 2024 Should be a Year for Employer Investment in Training.](#)

¹⁰⁶ [The Prince's Responsible Business Network \(2022\) Rebooting Lifelong Learning for a Skilled Workforce.](#)

Department for Work and Pensions, Mayors, and wider government as part of a new framework to support a coherent approach to skills, migration, and labour market policy.

Questions

8. Where you identified barriers in response to Question 7 which relate to people and skills (including issues such as delivery of employment support, careers, and skills provision), what UK government policy solutions could best address these?
9. What more could be done to achieve a step change in employer investment in training in the growth-driving sectors?

Innovation

Accelerating the rate of innovation and increasing the adoption and diffusion of those ideas, technologies, and processes is an essential step for growing the productivity of our growth-driving sectors. This must include ensuring that data is created, handled, and shared in a way that both unlocks economic opportunities and is safe and ethical across the economy. The UK's innovation system needs to operate holistically to achieve the ambitions of its Industrial Strategy.

Research, development, and innovation

Research, Development, and Innovation (RDI) are essential to developing the UK's growth-driving sectors. The UK has a world-class research base, with four of the world's top ten universities,¹⁰⁷ which include specialisms in many of the growth-driving sectors, such as life sciences. UK universities also create globally competitive spinout companies, which raised £1.66 billion in equity funding in 2023,¹⁰⁸ 9.5% of all equity funding raised by UK companies, and are second only to the US in total investment in spinouts.¹⁰⁹ The UK has considerable strengths in RDI; however, we can struggle to translate these into commercial goods and services domestically.

The UK would experience significant productivity gains if we improved the adoption and diffusion, particularly beyond our frontier firms, as shown in Chart 4. The UK ranked fifth out of 133 countries in the WIPO 2024 global innovation index but only 31st in knowledge absorption.¹¹⁰ The proportion of UK firms adopting a range of intermediate digital

¹⁰⁷ [QS \(2025\) World University Rankings 2025: Top Global Universities.](#)

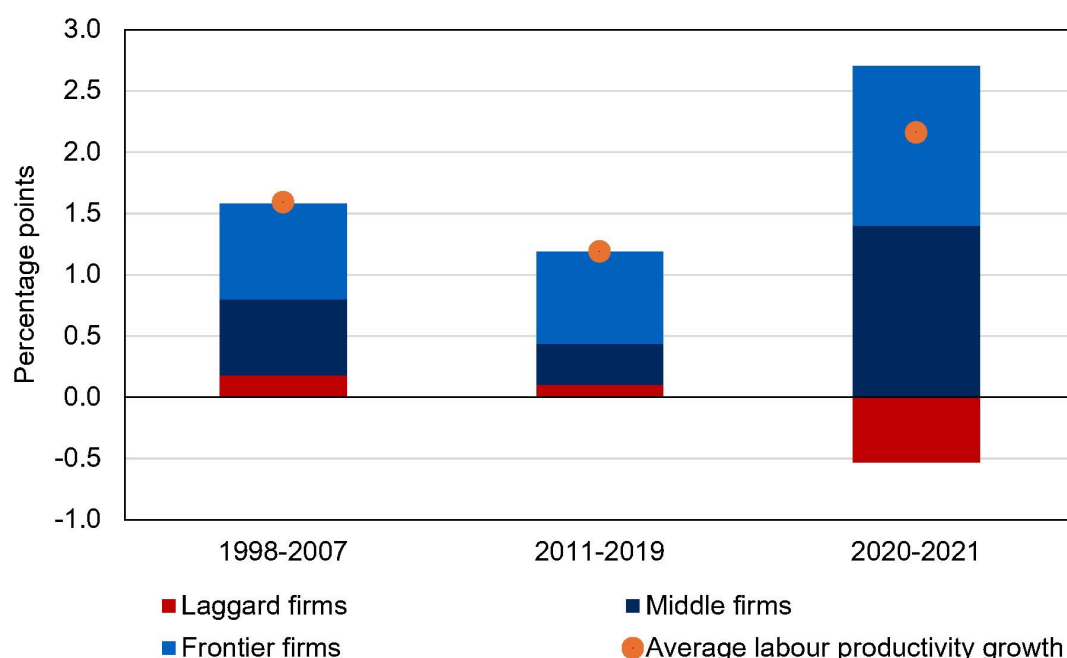
¹⁰⁸ [Beauhurst / Royal Academy of Engineering \(2024\) Spotlight on Spinouts 2024.](#)

¹⁰⁹ [Global University Venturing \(2023\).](#)

¹¹⁰ [World Intellectual Property Organisation \(2024\) Global Innovation Index 2024.](#)

technologies is significantly below OECD leaders¹¹¹ and UK SMEs were ranked sixth in the G7 on technology adoption.^{112, 113}

Chart 4: Contribution to UK labour productivity growth, 1998-2021



Note: Average annual contribution to growth in output per job, non-financial business economy.

Source: [Office for National Statistics \(2023\) Trends in UK Business Dynamism and Productivity](#)

Note: Average annual contribution to growth in output per job, non-financial business economy.

There are a range of barriers to increasing RDI and adoption and diffusion (including access to finance, skills, and regulation) which vary widely by firm sector, size, and region, requiring tailored policy solutions.¹¹⁴ The UK has successful policies such as the Made Smarter Programme, which supports adoption in the manufacturing sector, and the Innovate UK Catapult network, which supports the commercialisation of RDI in areas closely aligned to several growth-driving sectors.

We have many strengths from which to build, for example, the Ventilator Challenge led by the High Value Manufacturing Catapult in 2020, which combined the knowledge and skills

¹¹¹ [Organisation for Economic Cooperation and Development \(2024\) ICT Access and Usage by Businesses.](#)

¹¹² [Be the Business \(2023\) G7 Productive Business Index.](#)

¹¹³ [Organisation for Economic Cooperation and Development \(2024\) ICT Access and Usage by Businesses.](#)

¹¹⁴ [Organisation for Economic Cooperation and Development \(2020\) Laggard firms, Technology Diffusion and its Structural and Policy Determinants.](#)

of 33 UK technology and engineering businesses to deliver 13,437 ventilators to the NHS in response to the anticipated escalation in Covid-19 cases, implementing an end-to-end supply chain in 1.5 weeks.¹¹⁵

There is further to go. The newly established Skills England will help ensure that the domestic workforce has technical skills needed for businesses to make the best use of technology. The AI Opportunities Action Plan, led by Matt Clifford, technology entrepreneur and Chair of the Advanced Research and Invention Agency (ARIA), will propose an ambitious approach to grow the AI sector and drive responsible adoption across the economy. The Department for Business and Trade (DBT)'s Global Talent Network and Global Entrepreneurs Programme will ensure the UK is the best place in the world for scientists, innovators, and entrepreneurs to live and work.

Questions

10. Where you identified barriers in response to Question 7 which relate to RDI and technology adoption and diffusion, what UK government policy solutions could best address these?
11. What are the barriers to R&D commercialisation that the UK government should be considering?

Data in the Industrial Strategy

Data fuels modern business, both as users and producers. There is a huge opportunity for the UK to use its data more strategically, driving innovation and economic growth, including in the growth-driving sectors. It has been estimated that data has the potential to contribute to UK productivity growth by between 0.23% to 1.26% per year,¹¹⁶ but the UK is currently on the lower end of this range, and further productivity growth gains require greater data maturity.¹¹⁷

Data-specialised businesses are a growing part of the economy, increasing their share of GDP from 6.5% to 7.4% between 2021 and 2023.¹¹⁸ At 7.4% of GDP, the UK data economy is larger as a fraction of the total economy than any European country bar Estonia.¹¹⁹ However, of businesses that handle digitised data, only 21% analysed their data to generate new insights and knowledge, and only 2% used their data for AI or Automated Decision-Making.¹²⁰

¹¹⁵ [Catapult Network \(2023\) Growth and Prosperity Stories.](#)

¹¹⁶ [Department for Science, Innovation and Technology \(2023\) Business Data Use and Productivity Study \(wave 1\).](#)

¹¹⁷ The range highlights the synergies among data capital efficiency and an economy's capability for digital transformation of its production processes. It should also be noted that at least some of these gains are already being captured by the UK economy.

¹¹⁸ [European Union \(2023\) European Data Market Study 2021-2023.](#)

¹¹⁹ [European Union \(2023\) European Data Market Study 2021-2023.](#)

¹²⁰ [Department for Science, Innovation and Technology \(2024\) UK Business Data Survey 2024.](#)

The transformative power of data comes through investment in creating, combining, and building capability to use high-quality data from different sources. Collaboration between the public sector, businesses, and researchers is critical to maximising the benefits of data for the economy. Ensuring public trust, security, and international data arrangements will always be at the heart of this. The Industrial Strategy could include:

1. **Using public sector data as a driver of growth**, including the proposed National Data Library, so that prioritised public data assets (e.g. from transport to environmental data) are an essential part of the UK's broader, forward-looking approach to data access, with better use of public data economy-wide while ensuring citizens' data are protected.
2. **Empowering individuals and businesses with their data.** New Smart Data schemes can provide secure sharing of a customer's data upon their request, with authorised third-party providers. These can drive innovation in and between sectors, such as Open Banking in the finance sector.
3. **Improving data maturity in businesses** to help businesses to do more with data – both as users and producers. This includes improving competition in data-driven markets, and collaborative government and private sector arrangements on consistent standards, data-sharing infrastructure, and supporting businesses in the way data is used across supply chains.

Questions

12. How can the UK government best use data to support the delivery of the Industrial Strategy?
13. What challenges or barriers to sharing or accessing data could the UK government remove to help improve business operations and decision making?

Energy and infrastructure

Infrastructure underpins all economic activity by connecting people, goods, services, energy, and ideas. Improvements in infrastructure will be foundational to success across our growth-driving sectors and to addressing place-specific constraints to growth in city regions and sectoral clusters.

Planning, infrastructure, and transport

An effective planning system is a fundamental enabler for business investment in our growth-driving sectors. At the national and regional level, planning constraints hold back growth, including in high-performing life sciences clusters like Cambridge¹²¹ and clean energy industries hubs such as Tees Valley and the North-East. Firms require predictability and efficiency when applying for consent for projects, but this is not being provided by

¹²¹ [Bidwells \(2024\) Cambridge Databook Offices and Labs January 2024.](#)

existing processes. Businesses have told us that the planning consent process is too lengthy and uncertain – infrastructure projects spend an average of 65 months in pre-construction phases, the highest among peer countries.¹²²

Growth-driving sectors also require high quality infrastructure and transport connectivity. A resilient, safe, and secure transport network provides access to social and economic opportunity, and is fundamental to business investment and location decisions. A lack of infrastructure is holding back the growth of major city regions such as Manchester, where lack of transport is estimated to cause a productivity gap of £8.8 billion each year.¹²³

Targeted, long-term infrastructure investment is a vital catalyst to the success and stability of major city regions and clusters of our growth-driving sectors. Businesses agree that the UK has for too long failed to provide a long-term vision and clear statement of intent to support this.^{124, 125, 126, 127} A lack of housing in some places across the UK also prevents labour markets from operating effectively and prevents successful agglomerations. Further, additional data centre capacity and access to fast, secure, and reliable digital connectivity is essential to enabling economic growth and to reap the transformational productivity benefits of digitalisation and the adoption of AI. Continued investment is needed to meet our ambitious targets to bring gigabit-capable broadband to all of the UK, and standalone 5G to all populated areas, by 2030.

As a key priority of the Growth Mission, the Government has made significant planning, transport, and infrastructure policy announcements. In July 2024, the Chancellor of the Exchequer announced plans to update relevant National Policy Statements within 12 months. In the same month, the Planning and Infrastructure Bill was announced in the King's Speech to unlock more housing and infrastructure across the country.

The Government is developing a 10-year infrastructure strategy, which will be aligned with the Industrial Strategy, and is in the early stages of developing a Rolling Stock Strategy. Support for investors navigating the planning system will be delivered via a new planning triage service, implemented jointly between the expanded Office for Investment and the Ministry of Housing, Communities, and Local Government (MHCLG). These steps will unlock infrastructure investment across the country, which Government will augment through developing clear investment propositions.

¹²² [Boston Consulting Group \(2024\) Reshaping British Infrastructure: Global Lessons to Improve Project Delivery.](#)

¹²³ [Centre for Cities \(2021\) Measuring Up.](#)

¹²⁴ [HM Treasury \(2010\) Infrastructure Cost Review.](#)

¹²⁵ [Department For Transport \(2017\) Transport Infrastructure Efficiency Strategy.](#)

¹²⁶ [PwC \(2016\) High Speed Rail International Benchmarking Study.](#)

¹²⁷ [Boston Consulting Group \(2024\) Reshaping British Infrastructure: Global Lessons to Improve Project Delivery.](#)

Questions

14. Where you identified barriers in response to Question 7 which relate to planning, infrastructure, and transport, what UK government policy solutions could best address these in addition to existing reforms? How can this best support regional growth?
15. How can investment into infrastructure support the Industrial Strategy? What can the UK government do to better support this and facilitate co-investment? How does this differ across infrastructure classes?

Energy

Access to cheap and reliable energy is an influential determinant of business competitiveness and an important consideration for internationally mobile investment. This is within a context where industrial energy will need to decarbonise to meet the UK's Net Zero goals and support the Clean Energy Mission, including encouraging fuel switching to electricity.

Investment in networks will bring benefits to the economy. Onshore network investment to meet Net Zero could directly support an additional 50,000–130,000 FTE jobs by 2050, contributing an estimated £4-11 billion of GVA to the UK economy.¹²⁸

The UK has a stable and enduring framework for clean energy through the Climate Change Act 2008¹²⁹ and its carbon budget framework.¹³⁰ With the Prime Minister's Clean Energy Superpower Mission, in the first three months the new Government has:

- Swept away barriers to onshore wind farms¹³¹
- Consented nearly 2GW of new solar¹³²
- Delivered the most successful renewables auction in UK history, with 131 clean energy projects powering the equivalent of 11 million homes¹³³
- Made available £21.7 billion of funding available over 25 years to make the UK an early leader in two growing global sectors – CCUS and hydrogen¹³⁴
- Established Great British Energy, which will own and invest in clean energy generation in partnership with the private sector, as well as announcing a groundbreaking partnership with the Crown Estate.¹³⁵

¹²⁸ [Department for Energy Security and Net Zero \(2022\) Electricity Networks Strategic Framework: Enabling a Secure, Net Zero Energy System.](#)

¹²⁹ [HM Government \(2008\) Climate Change Act.](#)

¹³⁰ [HM Government \(2023\) Carbon Budget Delivery Plan.](#)

¹³¹ [HM Government \(2024\) Policy Statement on Onshore Wind.](#)

¹³² [HM Government \(2024\) Solar Taskforce Meets in Drive for Clean Power.](#)

¹³³ [HM Government \(2024\) Government Secures Record Pipeline of Clean Cheap Energy Projects.](#)

¹³⁴ [HM Government \(2024\) Government Reignites Industrial Heartlands 10 Days Out from the International Investment Summit.](#)

¹³⁵ [HM Government \(2024\) New Great British Energy Partnership Launched to Turbocharge Energy Independence.](#)

However, a number of growth-driving sectors, including advanced manufacturing and digital and technologies have cited electricity costs as a barrier to growth. Electricity prices in Germany are 34% to 39% lower than for comparative businesses in the UK of any size, while in France they are 31% less for small businesses rising to 53% for the very large.¹³⁶ On average, very large UK energy users face relatively high electricity prices compared to EU competitors (£228/MWh in 2023, compared to £108/MWh in France and £148/MWh in Germany),¹³⁷ although about 400 of the most electricity- and trade-intensive UK industrial users benefit from lower electricity prices due to Government policies. These high electricity costs are a major barrier to growth and investment.

The only way to guarantee our energy security and protect billpayers is to speed up the transition away from fossil fuels and towards homegrown clean energy. Through supporting the UK's clean energy industries, the UK will create good jobs in Britain's industrial heartlands, including a just transition for the industries based in the North Sea. The North Sea is critical to the Clean Energy Mission, and the UK has the opportunity to build on the world-leading expertise in its oil and gas supply chain.

Businesses have told the Government that it needs to improve the electrification of industrial sites and bring parity with other low carbon fuels, allowing them to choose the right decarbonisation option for them.¹³⁸ Government is considering reform of wholesale electricity markets and is also planning further engagement with stakeholders as it looks to act on the specific issue of industrial electricity prices.

Businesses also see the lack of timely grid connections as a significant barrier to investment. Respondents to the recent Call for Evidence on industrial electrification stated that the average delay industrial sites face for an upgraded connection is five years, and some firms are being quoted 8-10 years or longer for a connection. Connection delays are caused by the unprecedented volume of connections being sought, the need for major upgrades to transmission and distribution networks, and the outdated 'first-come-first-served' connections process.

Tackling these barriers will be critical to achieving clean power by 2030. The National Energy Systems Operator (NESO) and network companies are already releasing network capacity and offering earlier connection dates, and the Government is working at pace with Ofgem, NESO, and network companies to further accelerate connections, including ensuring projects necessary for the UK's mission for clean power by 2030 can connect in time. Great British Energy will give confidence to industry and investors through development of sites for clean energy deployment. By investing in and owning clean power generation assets, Great British Energy will provide demand certainty to enable supply chains to invest. The Clean Energy Mission Control, alongside planning reforms to speed up infrastructure development, will play a vital role in accelerating the transformation of the electricity network.

¹³⁶ [Department for Energy Security and Net Zero \(2024\) International Industrial Energy Prices](#). - Quarterly: Industrial electricity prices in the EU for small, medium, large and extra large consumers (QEP 5.4.1 to 5.4.4).

¹³⁷ [Department for Energy Security and Net Zero \(2024\) International Industrial energy Prices](#). - Quarterly: Industrial electricity prices in the EU for small, medium, large and extra large consumers (QEP 5.4.1 to 5.4.4).

¹³⁸ [Department for Energy Security and Net Zero \(2024\) Enabling Industrial Electrification: A Call for Evidence](#).

Questions

16. What are the barriers to competitive industrial activity and increased electrification, beyond those set out in response to the UK government's recent Call for Evidence on industrial electrification?
17. What examples of international best practice to support businesses on energy, for example Purchase Power Agreements, would you recommend to increase investment and growth?

Regulatory environment

The regulatory and competition environment in which our growth-driving sectors operate will be an important determinant of their success. For example, regulation should support emerging sectors to grow, while enabling existing sectors to modernise and evolve.

Competition

Competition and consumer policy, including subsidy control, is an important lever across and beyond the growth-driving sectors. Businesses can invest with certainty when they know that they are protected from unfair competition and consumers can buy with confidence. Competition policy creates incentives for businesses to innovate and allows more productive firms to increase their market share.

The UK has a recognised set of regulatory and competition institutions, including the CMA. Different measures of competition for the whole economy from the CMA State of Competition report 2022¹³⁹ and the OECD¹⁴⁰ suggest that while UK markets are relatively competitive, there has been a modest deterioration in performance over the last two decades on mark-ups and churn rates.

The growth-driving sectors have varying barriers to entry and exit, market structures, and regulation, so are affected by competition differently. In the digital and technologies sector, for example, a key concern for competition is large firms with dominant positions gained through scale economies, lock-in, and network effects.^{141,142} To that end, the Government is delivering reforms in the Digital Markets, Competition, and Consumers Act

¹³⁹ [Competition and Markets Authority \(2022\) The State of UK Competition Report.](#)

¹⁴⁰ [Organisation for Economic Cooperation and Development \(2021\) Methodologies to Measure Market Competition.](#)

¹⁴¹ [HM Treasury \(2019\) Unlocking Digital Competition, Report of the Digital Competition Expert Panel.](#)

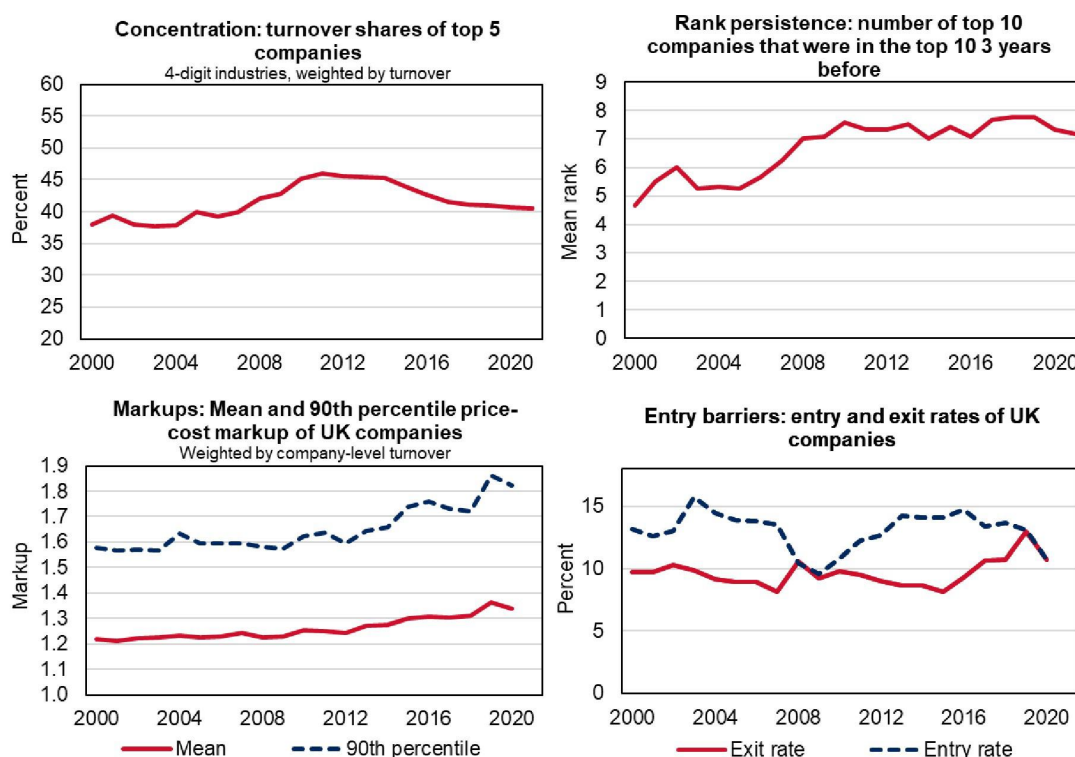
¹⁴² 'Scale economies' describe the cost advantages that firms obtain as their volume of output grows, as their per unit fixed costs fall; 'lock-in effects' refer to a situation in which consumers are dependent on a single manufacturer or supplier for a specific good or service; 'network effects' describe a scenario in which the value of a product increases with the number of consumers who use it. These are all common in digital platforms such as online marketplaces, for example.

(2024) to allow additional scrutiny by the CMA of dominant firms in the digital sector, which are due to commence in January 2025.

The Government is committed to robust and independent enforcement of competition law and consumer protection. It will also investigate ways to boost competition, including in growth-driving sectors, whether through competition law and economic regulation, or through integrating competition considerations into other government policies such as planning, skills, and trade openness. It will explore how policies which boost firm-level productivity and growth (such as innovation and investment) and market dynamism can drive competition – by creating competitors in established sectors and growing markets in emerging sectors.

We will be consulting on a draft of the next Strategic Steer to the CMA from the Business and Trade Secretary to seek stakeholders' views on competition regulation priorities. Government will also be seeking views on similar statements to major regulators in the coming months.

Chart 5: Competition measures from Competition and Markets Authority State of Competition report, 2022



Source: [Competition and Markets Authority \(2022\) The State of UK Competition Report](#)

Questions

18. Where you identified barriers in response to Question 7 which relate to competition, what evidence can you share to illustrate their impact and what solutions could best address them?
19. How can regulatory and competition institutions best drive market dynamism to boost economic activity and growth?

Regulation

Regulation can address market failures, create economic certainty, and drive innovation to stimulate growth while protecting consumers and businesses.¹⁴³ This is vital for the Industrial Strategy and across the Growth Mission and other Missions.¹⁴⁴ For instance, a clear direction of travel provides businesses with the stable conditions and clear incentives to invest in technology and adopt products which move away from higher emission activities, towards Net Zero.

For regulation to be effective, it must be created in partnership with business and regulators, and must consider implementation and enforcement. To that end, the Government is keen to understand how current regulations and the regulatory environment are impacting the growth-driving sectors, and will act where regulations are identified that are not fit for purpose or which will not drive the transformational change sought. For example, on company law, the Government is making reforms, including immediate changes to non-financial reporting regulations, with further consultation to follow.

The Government will also identify where new regulatory frameworks can assist in the development of new technologies and allow for new products to be more effectively regulated and approved. For example, establishing the Regulatory Innovation Office will help position the UK as the best place in the world to innovate, speeding up regulatory decisions for new technologies, from engineering biology to drones, in line with the Industrial Strategy.

The Government is also looking at regulation which impacts the whole economy, including regulation that relates to planning and infrastructure, the energy transition, transport, and childcare. The wider regulatory landscape and the ability of the regulators to drive growth are key parts of the wider Growth Mission. The Government will provide more information on its approach to regulation in due course.

¹⁴³ [Department for Business and Trade \(2024\) Summary of Findings from the Call for Evidence, House of Lords \(2024\) Who Watches the Watchdogs?](#).

¹⁴⁴ [Frontier Economics \(2024\) Accelerating Progress Towards Climate and Policy Goals Through Environmental Regulation.](#)

Questions

20. Do you have suggestions on where regulation can be reformed or introduced to encourage growth and innovation, including addressing any barriers you identified in Question 7?

Crowding in investment

UK firms have access to one of the world's leading financial services sectors. Despite this, as outlined above, the UK has consistently invested less than its international peers, with levels varying depending on firm size, sector, and region. Additionally, while FDI is a UK strength, the Harrington Review noted that some of the UK's international peers are more strategic and better organised in attracting globally mobile investment.¹⁴⁵

There is no 'silver bullet' or 'one size fits all' solution to boosting investment in the growth-driving sectors, so the Industrial Strategy is considering a range of policy areas, including (but not limited to) mobilising capital to ensure businesses have sufficient access to finance and using procurement policy to deliver value for money while supporting growth.

Questions

21. What are the main factors that influence businesses' investment decisions? Do these differ for the growth-driving sectors and based on the nature of the investment (e.g. buildings, machinery & equipment, vehicles, software, RDI, workforce skills) and types of firms (large, small, domestic, international, across different regions)?

Mobilising capital

The UK has a complex landscape of public and private business finance providers and institutions. Some areas operate well or have seen significant progress. For example, over the last decade, the UK has closed the gap in venture capital (VC) investment with the US when measured as a share of GDP (Chart 6). This achievement has been led by investment in the fintech sector, in which the UK ranks second globally and has 48% of European deal value.¹⁴⁶

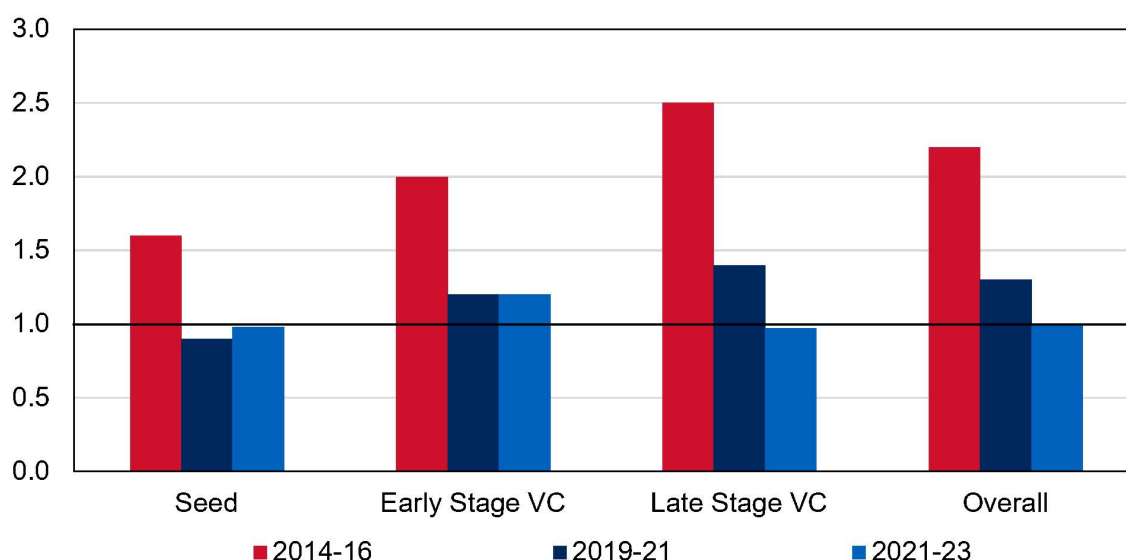
However, the Government knows from businesses that there is still much to do to improve ease of access to growth capital and scale-up finance in the UK. Barriers include risk aversion, information failures, and coordination challenges. Access to finance can vary between regions, is more scarce and expensive for SMEs, and can differ across sectors based on factors such as capital intensity, technology risks, and stage of growth.¹⁴⁷

¹⁴⁵ [Department for Business and Trade \(2023\) Harrington Review of Foreign Direct Investment.](#)

¹⁴⁶ British Business Bank analysis of [Pitchbook](#) data, 2021-2023.

¹⁴⁷ [Oliver Wyman \(2024\) Accelerating Regional Growth.](#)

Chart 6: US-UK venture capital investment multiples (GDP adjusted)



Source: Department for Science, Innovation and Technology and British Business Bank analysis of Pitchbook and GDP data

A range of government tools are relevant to these challenges and opportunities. For the most important international and large domestic investors, an expanded Office for Investment (the UK government's investment promotion function) will provide a seamless journey, convening departments to ensure levers are pulled to unblock barriers. To help UK SMEs get access to the capital they need to start, scale, and grow in the UK, the British Business Bank (the UK government's economic development bank) offers a range of debt and equity products through over 200 delivery partners.

To boost investment and increase pension pots, the Chancellor of the Exchequer and Minister for Pensions are leading a landmark Pensions Investment Review. In addition, for firms who trade or could trade with international markets, UK Export Finance mobilises private capital and de-risks transactions. The Government's approach to attracting international investors will be underpinned by the National Security and Investment Act and other protective tools, which will continue to protect national security while facilitating safe investment.

The Government also uses grant funding and other financial instruments to unlock investment, including examples of grant programmes for specific sectors and Innovate UK's portfolio of grants, contracts and investments used to leverage private capital in innovative firms with ground-breaking technology. In line with recommendations from the National Wealth Fund Taskforce, the Government is creating the National Wealth Fund which will unlock billions of pounds in private investment, supporting the Industrial Strategy.

While in the first half of 2024 more capital was raised in London than the next three highest European exchanges combined,¹⁴⁸ the UK could also do more to leverage its strengths in financial services to generate UK firms who are truly global players who can scale-up, grow, and list in the UK. In 2024, the Financial Conduct Authority reformed the UK's Listing Rules to provide greater flexibility and boost international competitiveness, complementing broader reforms including the Lord Hill Listing Review and Wholesale Markets Review.

Questions

22. What are the main barriers faced by companies who are seeking finance to scale up in the UK or by investors who are seeking to deploy capital, and do those barriers vary for the growth-driving sectors? How can addressing these barriers enable more global players in the UK?
23. The UK government currently seeks to support growth through a range of financial instruments including grants, loans, guarantees and equity. Are there additional instruments of which you have experience in other jurisdictions, which could encourage strategic investment?

Taxation

The Government is committed to competitive corporate taxes, as sustainable growth can only be delivered if businesses have the confidence they need to invest and grow in the UK.

Businesses and tax experts have been clear that a stable and predictable tax environment provides the confidence needed to encourage investment, innovation, and growth over the long term. Corporation Tax is particularly important in companies' investment decisions and is an area where there is an appetite for stability following several years of significant change.

In addition to targeted reliefs available to specific sectors, such as creative industries, the UK has an attractive corporate tax regime, with the lowest headline rate of Corporation Tax in the G7 alongside cross-cutting generous tax support for investment, R&D expenditure, and the development and commercialisation of patents.¹⁴⁹

The Government recognises the importance of predictability and stability within the tax system. To provide this, alongside the Budget the Government will publish a Corporate Tax Roadmap setting out its approach to Corporation Tax for the coming years. This will

¹⁴⁸ [London Stock Exchange Group \(2024\) London Stock Exchange's Equity Capital Markets Update – Q2 2024.](#)

¹⁴⁹ The UK and France have 10% corporation tax on income from qualifying intellectual property, lower than other G7 countries while Canada and Germany have no equivalent treatment. [Organisation for Economic Cooperation and Development \(2024\) Corporate Tax Statistics Database.](#)

include clear commitments to key features of the system and highlight several areas where the Government will be exploring change.

Procurement

The public sector spent over £385 billion in 2022/23 on procurement, making up almost a third of all public spending.¹⁵⁰ This expenditure plays a crucial role in boosting investment and growth through facilitating competition and enabling market entry, supporting the research and innovation ecosystem, as well as delivering infrastructure, public services, and national security.

Government will use the legal framework created by the Procurement Act 2023 to deliver economic growth, raise standards, and deliver greater social value, opening up procurement to new entrants such as small businesses and social enterprises. The Act will launch in February 2025, alongside a refreshed National Procurement Policy Statement which will set out its strategic policy priorities for public procurement and to which all contracting authorities will have to have regard when the new regime comes into force. It will apply the full potential of public procurement to deliver value for money, and will set clear strategic direction for procurement in line with the Government's Missions – including economic growth in support of Industrial Strategy objectives. The Cabinet Office is separately consulting stakeholders on the development of the new National Procurement Policy Statement.

International partnerships and trade

The UK is a proud trading country and among the most open economies in the world. The UK holds strong and constructive partnerships all over the world, built on principles of openness and shared prosperity and a commitment to upholding the international rules-based system.

The UK is a truly global economy with connections extending to the whole world. This is facilitated by trade agreements with the EU and the Trans-Pacific Partnership all the way through to a cutting-edge digital economy agreement with Singapore and digital partnerships with Korea and Japan. The UK continues to trade more with the EU as a bloc than any other trading partner. In the 12 months to June 2024, 47% of the UK's total trade was with the EU.¹⁵¹

International partnerships

The UK's multilateral and bilateral economic partnerships with other countries are crucial to increasing growth – opening up investment and export routes, tackling barriers to trade, and partnering to create shared markets. The UK works closely with international partners to tackle issues affecting the global economy and shared economic resilience, including cooperating to reduce critical dependencies. Alongside partners in the G7, the UK has agreed to enhance resilient supply chains through partnerships around the world, especially for critical goods such as critical minerals, semiconductors, and batteries.

¹⁵⁰ [HM Treasury \(2024\) Public Expenditure Statistical Analyses 2024.](#)

¹⁵¹ [Office for National Statistics \(2024\) Balance of Payments April to June 2024.](#)

In support of the Industrial Strategy, the Government will enhance the UK's already strong bilateral relationships by building on previous agreements and partnerships such as the UK-US Atlantic Declaration and the UK-Japan Hiroshima Accord. The Government is also developing new agreements, such as the UK-Germany Treaty, and delivering an agenda of strengthened cooperation with the EU, as agreed by the Prime Minister and the President of the European Commission. Strategic investment partnerships, such as with the United Arab Emirates and Qatar, will also support economic links, capital flows, and longer-term investment pipelines.

The UK has strong foundations, but there is more that Government can do to ensure that its work with other countries brings tangible benefits for sectors at the forefront of growth. To deliver the Industrial Strategy, the Government will build international partnerships that support growth-driving sectors, and help to manage the geopolitical risks and opportunities affecting growth.

The UK's overseas trade and diplomatic network – one of the largest in the world – will proactively support international business to invest in the UK, and UK companies to export and find new markets. This approach will be complementary to other Government work in this area, including the Strategic Security Review and the Strategic Defence Review.

Trade

Trade is an important driver of economic growth. Openness to global markets gives firms access to better, cheaper, and a wider variety of inputs to their production processes, while also expanding the markets into which firms can sell products. This encourages firms to scale up domestic production, increasing the overall level of output in the economy, as well as creating efficiencies from economies of scale and learning from a broader range of companies. In addition to boosting standards of living, consumers also benefit from a wider variety of goods and services. Research shows a 10% increase in openness is associated with a 4% increase in income per head¹⁵² and that UK firms that export goods are 21% more productive than non-exporters.^{153, 154, 155}

Growth in UK trade has been weak in recent years, with UK trade intensity¹⁵⁶ down 2.5 percentage points in the 12 months to June 2024 compared to its pre-Covid-19 (2018) level.¹⁵⁷ Within the headline figures, stronger UK services trade has offset a weaker goods trade performance.¹⁵⁸

¹⁵² Newfarmer and Sztajerowska (2012) Trade and Employment in a Fast-Changing World, in Organisation for Economic Cooperation and Development (2012), Policy Priorities for International Trade and Jobs, Douglas Lippoldt (ed.), See also Organisation for Economic Cooperation and Development (2018) [Market Opening, Growth and Employment](#).

¹⁵³ [Office for National Statistics \(2018\) UK Trade in Goods and Productivity: New Findings](#).

¹⁵⁴ [Office for National Statistics \(2018\) UK Trade in Goods and Productivity: New Findings](#).

¹⁵⁵ The productivity of exporting firms is based on correlation analysis and do not indicate the direction of causation.

¹⁵⁶ Trade intensity looks at a country's exports plus imports as a share of GDP and considers the country's share of trade relative to the average for its region.

¹⁵⁷ [Office for National Statistics \(2024\) GDP Quarterly National Accounts April to June 2024](#).

¹⁵⁸ [Office for National Statistics \(2024\) GDP Quarterly National Accounts April to June 2024](#).

The Government hears from business that trade barriers inhibit key UK industries from trading, ranging from product-specific prohibitions of UK imports to differences between UK and partner country regulations and standards. UK firms could export more: in 2022, around 11.9% of UK registered businesses were exporters,¹⁵⁹ while 19% of registered businesses had never exported but stated they could export, rising to 22% in 2023.¹⁶⁰ Harnessing the potential of digital trade, which accounts for over half (55%) of UK exports in 2020, is also central to delivering a strong and resilient economy in the UK,¹⁶¹ and Digital Trade Agreements (such as the UK-Singapore Digital Economy Agreement) and cooperation with partner countries can support consumers and businesses to access new opportunities and safeguard the broader digital environment.

The Government also hears from business that occupational regulation and recognition of professional qualifications (RPQ) arrangements are a key facilitator of trade in services and support labour market outcomes.¹⁶² The professional and business services sector can particularly benefit from international RPQ because it contains several important regulated professions. The Government wants to work with the EU to boost jobs, economic growth, and UK-EU trade, including by tackling barriers to trade through seeking to strengthen mutual recognition of professional qualifications.

Efficient customs and border processes also have a positive impact on UK trade by reducing complexity and costs for imports and exports, while protecting against illegitimate trade and enabling the UK to meet its legal obligations under international agreements. Simplifying customs and border processes and providing comprehensive guidance and support to businesses help to reduce administrative costs, including in growth-driving sectors.¹⁶³

The Government will set out its Trade Strategy, aligned with the Industrial Strategy, to help businesses to overcome barriers and maximise trade for the growth-driving sectors and across the whole economy.

¹⁵⁹ [Department for Business and Trade \(2024\) Number of Exporting Registered Businesses in the UK, 2016-2022.](#)

¹⁶⁰ [Department for Business and Trade \(2023\) National Survey of Registered Businesses' Exporting Behaviours, Attitudes and Needs.](#)

¹⁶¹ [Organisation for Economic Cooperation and Development \(2024\) Making the Most Out of Digital Trade in the United Kingdom.](#)

¹⁶² [Foreign, Commonwealth & Development Office \(2024\) UK-EU Trade and Cooperation Agreement, UK Domestic Advisory Group: 2024 to 2025 priorities report.](#)

¹⁶³ [International Monetary Fund \(2022\) Customs Matters: Strengthening Customs Administration in a Changing World.](#)

Questions

24. How can international partnerships (government-to-government or government-to-business) support the Industrial Strategy?
25. Which international markets do you see as the greatest opportunity for the growth-driving sectors and how does it differ by sector?

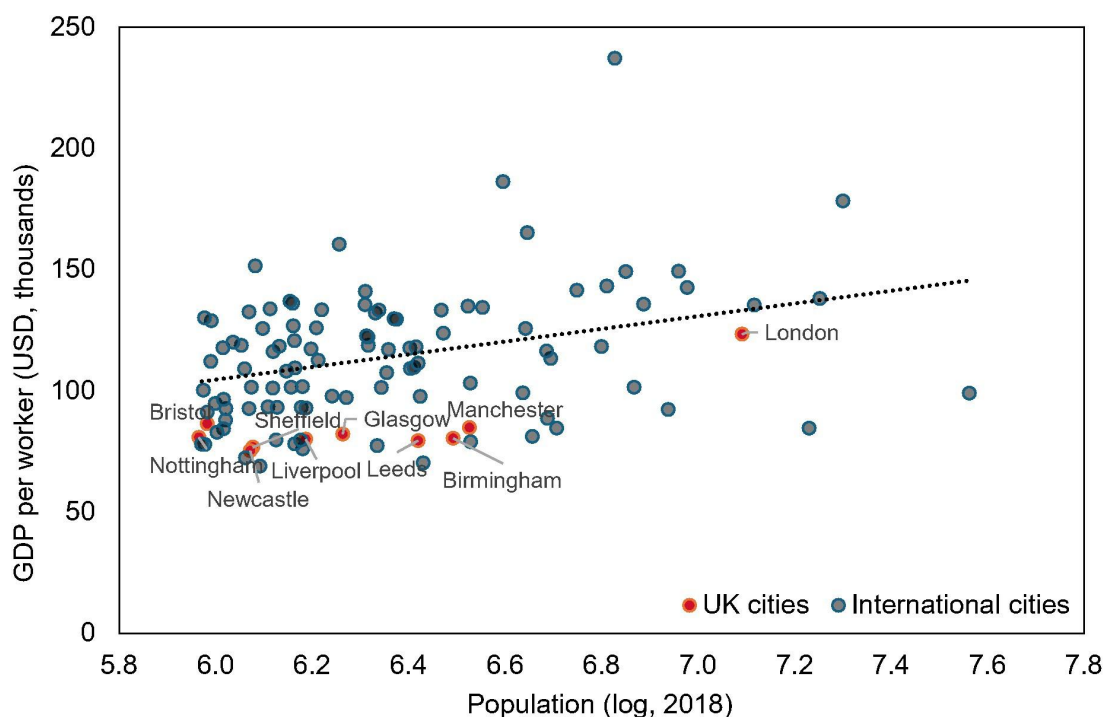
Place

A core objective of the Industrial Strategy is unleashing the full potential of our cities and regions by attracting investment and creating the best environment for businesses in them to thrive.

The UK's economic performance is skewed towards London and the South-East, while other city regions have historically underperformed relative to both the national economy and their international counterparts (Chart 7). The world-leading industries in London and the South-East have a critical role in driving national prosperity.

However, there is enormous untapped potential outside the capital and its surrounding areas. City regions like Greater Manchester, the West Midlands, and Glasgow, are not generating the growth and local prosperity that urban agglomerations of their size should. Centre for Cities analysis shows that for the eight largest cities outside London, the combined gap between actual and potential productivity is £47 billion per year. When including the next 25 city regions outside the Greater South-East (which also underperform), this increases to an estimated £66 billion per year.¹⁶⁴

Chart 7: Productivity and population, major international cities



Source: [Centre for Cities \(2024\) Climbing the Summit, Big Cities in the UK and G7](#)

Within sectors, businesses co-locate in clusters to take advantage of economies of scale, talent pipelines, land, supply chains, knowledge spillovers, and more. The UK

¹⁶⁴ [Centre for Cities \(2021\) So You Want to Level Up?](#)

has world-leading clusters across the country including life sciences in Cambridge and the Liverpool City Region; financial services in Edinburgh, Leeds, and London; advanced manufacturing in Broughton and Newport, Greater Manchester, the West Midlands, the North East, and South Yorkshire; digital industries in Bristol and Northern Ireland; clean energy industries in Aberdeen and Derby, and many more. The Industrial Strategy will coordinate sectoral and business environment policies to overcome place-based barriers in key clusters and enhance their attractiveness as destinations for private investment.

Growing high-potential clusters

The Industrial Strategy will concentrate efforts on places with the greatest potential for the growth sectors: city regions, high-potential clusters, and strategic industrial sites. The success of the Industrial Strategy's growth-driving sectors can only be achieved if these clusters reach their full potential, supported through a place-based approach to policy.

Local Growth Plans are a cornerstone of the place-based approach. These locally owned, 10-year strategies will set out how Mayoral Combined Authorities (MCAs) will use their devolved powers and funding to drive growth in their region. They will build on the region's unique strengths and opportunities to support sectors, identify wider business environment priorities, and provide a framework to unlock private investment. They represent strategic partnerships between central Government and MCAs to identify priorities for growth and will be aligned to the Industrial Strategy.

Alongside this, the Government will explore how to build on existing place-based initiatives to support high-potential clusters and align them behind the Industrial Strategy. This includes considering how the Industrial Strategy can be a 'lens' for informing the recommendations for New Towns locations, creating new large-scale settlements in places where high housing demand constrains the growth of high-potential clusters.

The Government will explore how to create the best pro-business environment possible in city regions and high-potential clusters, helping their sectoral strengths to flourish. It will harness R&D investment to build strong regional innovation ecosystems, use financial mechanisms like the National Wealth Fund to support investible propositions across the UK, ensure investment is a catalyst for growing city regions, and support local businesses and education providers to understand and address the skills needs specific to their areas, through tailored Local Skills Improvement Plans.

Finally, the Government will explore how the Industrial Strategy can identify, select, and intervene in industrial sites across the UK to realise ambitious propositions and become magnets for globally mobile investment. For example, many peer countries are intervening to de-risk, reduce development timescales, and accelerate growth in strategic industrial sites through planning reforms and other policies.

Working in partnership with national and regional leaders

The Industrial Strategy will support a joined-up approach to unleashing regional growth. This is not the first time a national government has tried to deliver a place-based Industrial Strategy, but this time there are stronger foundations for success. The Government is committed to devolving significant powers to Mayoral Combined Authorities across England, giving them the tools they need to grow their sectoral clusters and improve the local business environment. Partnership with devolved governments will make this a UK-

wide effort and support the considerable sectoral strengths of Scotland, Wales, and Northern Ireland.

Methodology for identifying high-potential clusters

The Government is working with local partners to bring together qualitative and quantitative evidence to understand the strong sectoral clusters that exist across the UK, both emerging and established. This work will build on the Innovation Clusters Map published by the Department for Science, Innovation, and Technology in February 2024.¹⁶⁵ Patterns of clustering differ between different sectors, for instance, between manufacturing and services.

The starting point is that successful clusters are characterised by strong concentrations of employment, output, high productivity, and innovation. Within this, clusters can be strong in different ways: either having deep expertise in a concentrated spatial area, or encompassing related businesses and employees in broad spatial areas that cross administrative boundaries.

Clusters can take any geographical shape and often span large geographical areas, cutting across local government boundaries and nations of the UK. When defining clusters, the Government will need to strike a balance between alignment with existing administrative and policy structures, and not imposing arbitrary restrictions.

This Green Paper seeks evidence and analysis to build on this high-level methodology. The responses will be used alongside further work and engagement with experts inside and outside of government, and within places themselves, to deepen the understanding of sectoral clusters and helpful placed-based policy interventions for growing sectors and attracting investment.

Questions

26. Do you agree with this characterisation of clusters? Are there any additional characteristics of dimensions of cluster definition and strength we should consider, such as the difference between services clusters and manufacturing clusters?
27. What public and private sector interventions are needed to make strategic industrial sites 'investment-ready'? How should we determine which sites across the UK are most critical for unlocking this investment?
28. How should the Industrial Strategy accelerate growth in city regions and clusters of growth sectors across the UK through Local Growth Plans and other policy mechanisms?
29. How should the Industrial Strategy align with devolved government economic strategies and support the sectoral strengths of Scotland, Wales, and Northern Ireland?

¹⁶⁵ [Department for Science, Innovation and Technology \(2023\) The Innovation Clusters Map from the Department for Science, Innovation and Technology.](#)

Partnerships and Institutions

The ambition set out across this paper can only be realised in partnership. Only by working with the network of businesses, investors, civil society, international partners, local leaders and devolved governments who play a critical role in the UK economy, can we shape and deliver an Industrial Strategy that can truly drive growth.

At its core, Industrial Strategy is rooted in building institutional capacity to develop and deliver effective economic policy.^{166, 167} Past industrial strategies have been held back by weak coordination and delivery; hence this is a key focus of this Industrial Strategy. This includes:

- Building structures and ways of working which allow for holistic policy solutions, that cut across departmental boundaries and are transformational in scope – for example, through a mission-based approach.¹⁶⁸
- Creating ongoing and open dialogue between business, experts, and policymakers which ensure that policy is fit for purpose, including being able to receive timely feedback from users in order to create, amend, or stop policy.¹⁶⁹
- Creating mechanisms which allow government to monitor its progress and to learn lessons from the past, from business, from other countries, and from other areas of policy at the national and sub-national level.^{170, 171}
- Placing greater emphasis on effective policy delivery, including working collaboratively with delivery partners inside and outside government.¹⁷²
- Creating stable and certain policy direction to allow business and delivery partners to plan and make long-term (investment) decisions, with less policy churn.¹⁷³

To this end, the Industrial Strategy will operate through new institutional structures that should set the foundations for long-term and agile implementation, working with groups of engaged experts who can guide development and delivery. A new independent Industrial Strategy Council will support long term stability and place expertise at the heart of the Strategy.

The Government will convene and co-design with all eight growth-driving sectors. For each, an ambitious Sector Plan will be designed in partnership with business,

¹⁶⁶ [Rodrik \(2004\) Industrial Policy for the Twenty-First Century.](#)

¹⁶⁷ [Rodrik \(2008\) Industrial Policy: Don't Ask Why, Ask How.](#)

¹⁶⁸ Mazzucato (2021) Mission Economy: A Moonshot Guide to Changing Capitalism.

¹⁶⁹ [Institute for Public Policy Research \(2024\) Making Markets: The City's Role in Industrial Strategy.](#)

¹⁷⁰ [The Productivity Institute \(2023\) A New UK Policy Institution for Growth and Productivity – A Blueprint.](#)

¹⁷¹ [Centre for Economic Performance \(2024\) A New Approach for Better Industrial Strategies.](#)

¹⁷² [Institute for Government \(2024\) 10 Lessons for Successfully Restarting an Industrial Strategy.](#)

¹⁷³ [The Productivity Institute \(2023\) A New UK Policy Institution for Growth and Productivity – A Blueprint.](#)

devolved governments, regions and other stakeholders, through bespoke arrangements tailored to each sector. The Government will also explore how it can improve the way that it interfaces with sectors and works across departments, drawing on the success of models like the Office for Life Sciences.

The Government will engage widely throughout the development of this Strategy. The start of this is drawing insight through this Green Paper. Beyond this, we will conduct roundtables and conversations in the coming months to gather expertise and insight to shape our approach. This includes engaging:

- **Businesses** through Ministerial meetings, CEO roundtables, and regional visits to ensure the Government's plans reflect what it means to run and grow a business. Industrial Strategy Mission Groups will bring together business, from scale-ups to large enterprises, to develop targeted solutions on barriers to investment and growth.
- **Business representative organisations and trade unions** through regular Ministerial calls. An Industrial Strategy Forum will bring these groups together to test ideas, consider cross-cutting themes, and provide updates on the development of the Strategy.
- **Devolved governments, elected mayors, and other local leaders**, including through the Council of the Nations and Regions and Mayoral Councils to galvanise regional and place-based growth opportunities, and align where appropriate.
- **Thought leaders and experts** through policy labs to stress-test ideas in detail and consider examples of what has and has not worked well in the past.
- **International partners** through government-to-government dialogues to exchange policy views and identify areas for cooperation.

Industrial Strategy Council

To underline the Government's commitment to business, it will establish a statutory, independent, and evidence-led Industrial Strategy Council (ISC), reporting to the Business and Trade Secretary and the Chancellor of the Exchequer. The ISC will be responsible for informing and monitoring both the development and delivery of the Industrial Strategy over the long term, ensuring that policy interventions are informed by a broad and high-quality evidence base. The ISC will make recommendations, focusing on growth-driving sectors and the pro-business environment. It will also monitor and evaluate impact; data and analysis will be central to this. The ISC, supported by a secretariat of analysts and policy professionals, and by bodies across the public sector, will:

- **Monitor progress** on growth-driving sectors and policies
- **Undertake analysis** to improve the evidence base to include in its reports and advice
- **Feed into policy development** through public reports, ministerial commissions, and private discussion papers

The Government will legislate to establish this statutory body as soon as parliamentary time allows, building cross-party support in the process. Legislation will ensure the ISC's permanence as an institution and that it has the necessary powers to deliver its objectives.

In the meantime, to ensure that the Industrial Strategy is developed with independent expert advice, the Government is introducing an interim Industrial Strategy Advisory Council. The Advisory Council will be chaired by Clare Barclay, CEO of Microsoft UK, who brings a wealth of leadership experience at the top-flight of UK business across technology, innovation, and AI.

Further members will be confirmed in due course, drawn from across business, academia and trade unions to provide a broad range of skills and expertise.

Business Partnership Framework

The Government is developing a Business Partnership Framework to underpin the design and implementation of the Industrial Strategy and wider policies. We recognise that Government can improve the interface between Government and business, better help businesses to navigate the policy landscape, and build Government's capability to better understand business needs. The Framework could include:

1. A new approach to business engagement, setting out best practice and simplifying routes to engagement. This would offer support to those working with sectors and in business-facing roles and encourage development of policy in a more open way with businesses from the start.
2. A new business 'academy' for Government, with a targeted learning and development offer, underpinned by a standards framework setting expectations for all business-facing civil servants from entry to expert level.
3. A new approach to secondments, to support civil servants to spend up to a year in business to increase their experience and understanding of the issues businesses face, to bring back to Government and improve policy development.
4. A data-led approach to gathering timely analysis, insights, and intelligence from business and wider sources, and sharing these widely across Government.

Questions

30. How can the Industrial Strategy Council best support the UK government to deliver and monitor the Industrial Strategy?
31. How should the Industrial Strategy Council interact with key non-government institutions and organisations?
32. How can the UK government improve the interface between the Industrial Strategy Council and government, business, local leaders and trade unions?

Next Steps

This Green Paper sets out Government's commitment to develop a modern, targeted Industrial Strategy with the objective of long-term, sustainable, inclusive, and resilient growth, by spurring investment into all parts of the UK.

In the coming months the Government will work with business, unions, experts, representative groups, and other stakeholders to develop the Industrial Strategy. In addition to the work of the Industrial Strategy Advisory Council, the Government will be holding focused roundtables and conversations across the UK between now and Spring.

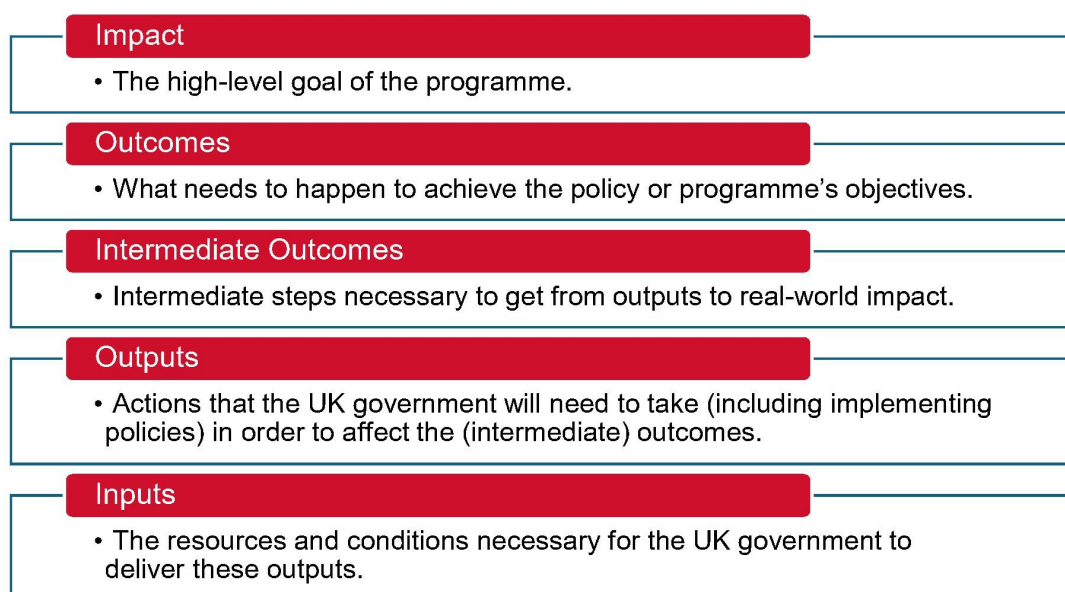
The Government will work closely with regional, local, and devolved government partners to build out local plans for growth aligned to the national Industrial Strategy framework.

The response to this Green Paper will be included in the final Industrial Strategy and growth-driving Sector Plans, to be published alongside the Spending Review in Spring 2025. The Industrial Strategy's implementation will be driven through dedicated teams, working closely with the Industrial Strategy Advisory Council.

Annex – Theory of Change

Economic growth is a complex issue with interrelated short-term and long-term drivers, many of which are structural in nature.¹⁷⁴ To effectively prioritise policies within the Industrial Strategy, targeted at the right sectors and types of economic activity, the Government needs to rationalise this complexity into a series of potential causal pathways. This will also help to identify where to further develop the evidence and analysis.

To this end, a high-level Theory of Change is in development to illustrate the logical relationships between Industrial Strategy policies and growth. For a given programme or policy, a good Theory of Change needs to set out:



Using this terminology, the ultimate impact of the Industrial Strategy Theory of Change is the overarching objective of long-term, sustainable, inclusive, and secure economic growth. The Government has also developed an indicative set of high-level **outcomes** to guide policy development over the coming months. Specifically, the Industrial Strategy will enable:

- **Successful Sectors:** Raise investment in growth-driving sectors to increase their size and productivity.
- **Successful Places:** Grow or establish high-productivity clusters of growth-driving sectors across the UK, driving up overall GDP growth and increasing opportunity through the benefits of increased agglomeration.

¹⁷⁴ Short-term factors include economic shocks, which can have persistent impacts on growth through 'scarring effects'; longer-term factors include trends such as changing patterns of globalisation which shape the international context UK firms operate in; structural factors include characteristics such as the underlying drivers of the UK's economic specialisation.

- **Successful Markets:** Boost market dynamism, innovation, and technological adoption and diffusion through increased competition, an improved capability offer to businesses, and coordinated fiscal and non-fiscal measures.
- **Successful People:** Reduce skills mismatches and boost higher-paid employment in growth-driving sectors, including via increased enrolment in apprenticeships and technical education.
- **Successful Institutions:** Improve UK industrial policy stability and coordination through building partnerships and the creation of a statutory Industrial Strategy Council empowered to advise, make recommendations, and monitor Industrial Strategy policy.

The Theory of Change is a work in progress. Over the coming months the Government will work alongside the Industrial Strategy Advisory Council and other stakeholders and experts to build a set of intermediate outcomes: measurable variables that are critical to achieving its outcomes and ultimate impact. This will allow the Government to identify the outputs that should be prioritised within the Industrial Strategy.

For example:

- The Successful Sectors (outcome) strand of an Industrial Strategy Theory of Change might identify a goal for higher investment (intermediate outcome) in the Industrial Strategy growth-driving sectors.
- Sector Plans (output) would be developed to help drive investment in these sectors and secure their growth.
 - They would do this by developing a long-term vision for each sector and identifying barriers to growth and policies to unlock investment.
- This in turn will require a variety of Government resources as well as complementary actions by businesses (inputs).

Developing this understanding of the Industrial Strategy's contribution to economic growth and other strategic objectives using a Theory of Change will also enable the Government to identify and map critical interdependencies with other policy activity, the wider Growth Mission, and the other Missions (such as the Clean Energy and Opportunity Missions).

In parallel, logical frameworks are in development, which the Government will use to explore and assess the potential causal pathways prioritised by the Theory of Change. Logical frameworks do this by assessing the assumptions required for these pathways to exist and the risks around those assumptions. They can therefore inform an assessment of whether an action or policy will meaningfully contribute to the Industrial Strategy's objectives.

Once the Government has prioritised a set of outcomes and outputs to meet the Industrial Strategy's objectives, this will be used to develop policies and an associated monitoring and evaluation framework. This will also be done in partnership with the ISC and others. Having a robust method to assess the performance of policies is critical to the successful delivery of the Industrial Strategy. It will allow the Government to assess whether policies are delivering on their stated objectives and therefore whether implementation should be improved or the policy stopped or revised.

Questions

33. How could the analytical framework (e.g. identifying intermediate outcomes) for the Industrial Strategy be strengthened?
34. What are the key risks and assumptions we should embed in the logical model underpinning the Theory of Change?
35. How would you monitor and evaluate the Industrial Strategy, including metrics?

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