

Written evidence from Department of Science, Innovation and Technology (SUK0108)

This is a response from the Department of Science, Innovation and Technology (DSIT), on behalf of His Majesty's Government, to the questions posed in the House of Lords Science, Innovation & Technology Committee's inquiry on 'Financing and Scaling UK Science and Technology'. It is accurate as of 28 May 2025, although various policy announcements are planned for the coming months that build on the details included here.

The government recognises that more must be done to help Science and Technology firms scale in the UK. Despite the UK's success in developing world-class science, creating spin-outs, and attracting venture capital investment, there remains a significant gap between the UK and other high-performing Science and Technology driven economies when it comes to the number of firms that are scaling to become the market shapers of the future. It is critical that the UK closes this gap if we are to ensure that our best talent and companies stay and scale in the UK. Only by doing this can we ensure the UK harnesses the full benefits of homegrown science and technology to create growth and change citizen lives. That is our ambition. To realise that we must take a proactive and integrated approach, looking beyond just investment to the other policy levers that are critical to removing barriers to growth that firms face, including skills, infrastructure, regulation, procurement.

To deliver against this ambition, the response highlights the recent update to its Science and Technology (S&T) Framework, which outlines ten critical levers aimed at fostering growth through science and technology. These levers include developing critical technologies, investing in research and development, enhancing talent and skills, and improving financing for innovative companies. To use these levers effectively, the government recognises the need for effective cross-departmental collaboration, which will also be critical for successful delivery of the Industrial Strategy. The establishment of an independent Industrial Strategy Advisory Council will drive better coordination and improve stakeholder engagement. Cross-departmental collaboration will also be supported by the Science and Technology Cabinet sub-Committee, chaired by the Prime Minister.

The response outlines several key reforms this government is introducing to develop the UK's innovation ecosystem and to increase the support available to scaling companies. This includes providing record public R&D

funding; the creation of the National Wealth Fund, which will aim to mobilise up to £70bn of private investment; and the Mansion House Accord which will unlock up to £50 billion investment for the economy. In particular, to stimulate private-sector investment in R&D, the government recognises the need to address the lack of domestic scale-up capital, including from institutional investors. The British Business Bank plays a key role in delivering the government's ambition in this space, with initiatives such as the British Growth Partnership aimed at attracting greater levels of institutional investment into the UK's high-potential sectors, including science and technology.

The response also highlights the UK government's commitment to attracting globally mobile talent, which is critical to scaling science and technology firms. The government's recent Immigration White Paper restated this commitment and set out that the UK will go further in ensuring that the very highly skilled have opportunities to come here and to access our targeted routes for the brightest and best global talent. The UK's competitive immigration offer supports innovative firms and entrepreneurial talent through visa routes such as the Global Talent visa, and the Innovator Founder visa.

In summary, supporting the scaling and financing of UK science and technology companies continues to be a key focus this government as we deliver on our growth mission. The Spending Review, the Industrial Strategy, and associated Sector Plans represent a set-piece moment for defining this government's approach to science and technology in the UK, and will set out an ambitious plan of action for growing science and technology firms in the UK, building on the range of steps already taken by this Government.

1. Translating excellent basic science and technology into global companies has long been recognised as a problem for the UK. Many policy initiatives have tried to address this. What are the key barriers that the Government must address to fix this? What specific policies need to change? Why have previous attempts not succeeded?

- Whilst there is more to do, the UK is well positioned to benefit from its basic research as a world leader in the financing of innovative businesses; with the UK raising \$16.2 billion of venture capital investment in 2024, the highest total in Europe and more than double the amount raised by Germany and France combined. The UK is also home to the third most valuable tech ecosystem in the world, valued at \$1.2 trillion.¹
- The UK has become good at producing start-ups and spin-outs, but less effective at producing large, scaled companies. In the past 50 years we have produced only two technology companies worth over £10 billion – Sage and Arm.
- Some previous attempts at addressing this challenge have taken a narrow view of looking at just the R&D and innovation system, and the links between universities and businesses. Whilst this is a crucial component that the government is continuing to improve (see response to question 3 especially), the barriers facing scaling science and technology companies cut across government policy areas.
- The government is committed to using the S&T Framework as an enduring, systems-level approach to delivering on our national missions and driving growth through science and technology.
- The S&T Framework provides a holistic set of 10 critical levers that government can use to embed a full range of considerations into decision-making:
 - Developing and deploying critical technologies
 - Signalling UK strengths and ambitions
 - Investment in research and development
 - Talent and skills
 - Financing innovative science and technology companies
 - Procurement

¹ [Science and Technology Framework - GOV.UK](#)

- International opportunities
- Research and innovation infrastructure (physical and digital)
- Regulation and standards
- Innovative public sector
- We are deploying all the levers of the Science & Technology Framework, from investing in critical technologies such as artificial intelligence (AI) and improving access to finance for innovative companies, through to procurement reforms and developing the innovation assets (e.g. National Data Library and compute capacity) and skills of the future. This includes providing funding stability, with a commitment to set 10-year budgets on R&D investment in specific areas, where we will be able to target the additional benefits that longer-term investment brings, from the long-term partnerships with industry, developing skills and talent, and fostering international collaborations.
- We will also set out further detail on our approach to translating excellent basic science and technology into global companies in the upcoming Industrial Strategy.

a) What lessons can be drawn from international comparators for innovation ecosystems such as the US, Germany, France, Ireland, Sweden, the Netherlands, or Singapore? Which international innovation ecosystems offer the most relevant policy lessons for the UK, and why? Are there specific policies the UK should adopt or case studies from which we can learn?

- The Government recognises that lessons can be drawn from international partners, and that the UK's science sector benefits from collaborating closely with international counterparts. The government engages with allied governments and organisations like the OECD regularly to compare policy approaches and learn from others. In general, innovation policies work well when they align government, academia and industry partners in unlocking barriers to innovation. However, each country has unique industrial and governance structures and innovation systems, so policies cannot simply be 'lifted and shifted' but rather must be adapted to suit the UK's needs.

- The UK government has a number of innovation policies directly inspired by those in other countries but adapted to UK needs, for example:
 - The Catapult Network is inspired by Germany's Fraunhofer Institutes.
 - Innovate UK's ICURe programme supporting academic entrepreneurs develop spin-outs is inspired by the USA's I-Corps programme.
 - Innovate UK's Contracts for Innovation programme supporting pre-commercial procurement is inspired by the USA's Small Business Innovation Research programme.
 - The Advanced Research & Invention Agency (ARIA) is inspired by the USA's Advanced Research Projects Agency (ARPA and its various descendants).
- The government plans to strengthen ties with international partners and rebuild the UK's reputation as a strong, reliable partner, while harnessing the power of science and technology for global benefit. Specific initiatives include:
 - DSIT's International Science Partnerships Fund (ISPF), which supports UK researchers and innovators to work with peers around the world on the major themes of our time: planet, health, tech, and talent. The Government has committed up to £337m through ISPF up to March 2025.
 - The Tactical Fund (TF) is a collaboration fund for DSIT to deploy flexibly, and is designed to support international collaboration that targets DSIT and wider HMG priorities by providing an agile response to emerging science opportunities and political commitments.
 - The UK's Science and Technology Network (STN), based in many of our overseas Embassies and Consulates and which provides insights on their host country policies and strategies and promotes science and tech partnerships with partner countries.

b) How does the Treasury currently assess the return on science and technology investment and its contribution to the economy, public services and wellbeing? Does Treasury decision-making adequately account for the long-term benefits of science and innovation research? What should be done to ensure the Treasury has the capacity to support a long-term strategy for science,

innovation and technology to benefit the UK economy? What can the government do to improve our understanding of R&D in the UK?

- The Treasury draws on a range of economic evidence in its assessment of the returns to science and technology investment, which includes the market failure rationale for public intervention, productivity benefits and spillovers. Scientific breakthroughs and innovation are central to progressing the government's missions to rebuild Britain and to delivering the Industrial Strategy.
- The Treasury's uniquely broad remit and role in protecting value for public money requires it to collaborate closely with other departments, including their Chief Scientific Advisors. The Treasury assesses programmes through information provided by departments, which includes detailed analysis on the case for each R&D proposal and ensures that investments are aligned with ministerial priorities.
- The Treasury embeds scientific understanding and seeks independent scientific challenge in a variety of ways. Analytical teams are distributed throughout the Treasury to ensure decision making uses robust evidence. In addition, the Treasury regularly engages with the Prime Minister's Council for Science and Technology, which provides impartial advice to the Prime Minister and Cabinet from esteemed experts in science, engineering and technology. The Government Chief Scientific Advisor, Dame Angela McLean, will be providing independent advice on departments' R&D proposals to inform evidence-based Spending Review decisions.
- Where further evidence is helpful, new studies are commissioned. Recent examples include studies on the productivity returns to public R&D and how public R&D leverages private R&D investment. These reports found that:
 - Productivity impacts: UK public R&D has been estimated to have an average rate of return of 40% 6 years after the investment is made. In other words, £100 million of public R&D investment could be expected on average to yield, in 6 years' time, an increase in annual private sector productivity worth £40 million². In addition, for every £1 a business spends on R&D, on average its annual productivity will be 20p

² <https://www.gov.uk/government/publications/returns-to-public-research-and-development>

higher. The wider economy also benefits from an equal boost in productivity³.

- Private investment impacts: In addition, £1 pound of public R&D also leverages, on average, £2 of private R&D over the long run⁴.
- DSIT also work with organisations like the [Enterprise Research Centre](#) and [Innovation and Research Caucus](#) to improving our understanding. DSIT and UKRI also make data available so that independent researchers can assess the R&D's impact. For example, work by the Enterprise Research Centre led to the finding that, in the 6 years after receiving their first R&D grant funding, employment increases in the average business by 21% and turnover grows by 23%⁵.
- The government requires all significant programmes to carry out evaluations. UKRI has now published 96 impact evaluation reports on its [website](#). R&D programmes from across DSIT and government are now published on the government [Evaluation Registry](#).
- Networks also exist across government to spread and improve best practice on understanding the impact of R&D. DSIT, UKRI and other government departments also continue to improve methodologies for R&D and have recently published reports on [best practice in R&D evaluations](#) and [counterfactual methods for R&D](#).
- However, there are still a number of factors which complicate the measurement of R&D's impact:
 - R&D impacts are uncertain and novel. For example, British Antarctic researchers were not expected to discover the Ozone Hole. The benefits of closing the hole were estimated to be between £6bn and £11bn⁶. Similarly, the discovery of graphene was driven by scientific curiosity and experimentation rather than a deliberate search for the material. Today, graphene is considered a disruptive technology with applications in a substantial range of industries⁷ and a predicted market of over £1.1 bn by 2027⁸. Likewise, mRNA vaccines that were critical to responding to the Covid-19 pandemic are based on basic science that was originally developed to experiment with gene expression in

³ [Understanding the returns to R&D | Frontier Economics](#)

⁴ Oxford Economics, 2020

⁵ <https://www.sciencedirect.com/science/article/pii/S004873331930085X>

⁶ [Impacts of NERC science: ozone hole – UKRI](#)

⁷ [Applications - Graphene - The University of Manchester](#)

⁸ [Global graphene market will continue to grow, researchers find | Graphene Flagship](#)

the 1980s⁹. Katalin Kariko, the Nobel Prize winner who worked on mRNA technology, was demoted for her mRNA work until the benefits became clearer many years later¹⁰. Finally, while a modern-day house would be incomplete without a microwave oven, its discovery was accidental. In 1945, the American engineer Percy Spencer filed a patent for the first microwave after noticing a chocolate bar melting in his pocket when he was working with a magnetron¹¹- an example of where research produced impacts and novel insights that were unrelated to the initial focus of the research.

- R&D's full spillover impacts continue long into the future. For example, the initial work on the internet started in the 1960s, but is continuing to shape the global economy today. Likewise, although modern day penicillin was first discovered in 1928 (and was commercially produced around 1940), antibiotics make, to this day, modern medical procedures such as organ transplants and cancer treatments possible.
- The uncertainty, long time horizons (potentially over 20 years for some programmes) and unexpected spillover impacts mean it is not possible to fully understand and measure the impacts of any R&D programme.
- To continue to improve our understanding of R&D in the UK, the government, led by DSIT, will continue to engage with R&D stakeholders, conduct horizon scanning for new technologies, and regularly refresh its evidence base of academic research.
- DSIT has also introduced a new way to visibly target the government's R&D portfolio to support three broad growth-driving objectives: a) advancing curiosity-driven research, b) delivering on government priorities, and c) enhancing innovative company formation and growth.
- This new approach will help ensure that DSIT has the best possible use of its R&D budget to get the maximum effect for the UK, and will provide greater transparency on how the R&D budget supports the different stages of R&D. The return on investment across these categories will differ, with the first focused on longer-term returns which can be harder to measure, but with the second two focused on leveraging investment and driving growth in the shorter term,

⁹ <https://www.nature.com/articles/d41586-021-02483-w>

¹⁰ [Katalin Karikó was demoted by Penn before winning a Nobel](#)

¹¹ [The Microwave Oven's History | KitchenAid](#)

aiming to achieve at least a 1:3 leverage ratio of public to private investment.

c) What can the UK do to ensure that science and technology developed in the UK has the maximum economic and strategic benefit to the UK? Do other countries have policies—for example, in intellectual property—which have allowed them to retain more public benefit domestically?

- The UK Government is committed to ensuring that science and technology developed domestically delivers maximum economic and strategic benefit.
- Intellectual property (IP) underpins our economy, allowing businesses and individuals to commercialise their ideas, turning them into products and artistic expressions. The UK is regarded as a world leader in IP, promoting an effective and balanced regime which encourages and supports innovation. The UK ranks 5th in the World Intellectual Property Organisation's 2024 Global Innovation Index¹², having been in the top 5 for the last 12 years, and 2nd according to the US Chamber of Commerce's Global Innovation Policy Centre Index¹³. This history of a strong IP regime gives creators, inventors, and investors the confidence to turn their ideas into reality, realise new opportunities and adapt to challenges. They also help consumers to buy with confidence.
- More than half of UK firms' investment is in intangible knowledge assets (£134.5 billion) of which a core part is protected by IP rights. Industries with above average IP rights make an important contribution to the UK economy and account for 33% (£414 billion) of UK non-financial-added output, 19% of total UK employment (5.8 million), and £16 billion of goods exported.¹⁴
- The UK has one of the best IP systems in the world which supports economic growth by being a powerful enabler that accelerates investment in science, technology and innovation, and helping foster the best creative industries in the world.
- Other leading innovation economies, such as the United States and countries within the European Union, generally allow publicly funded

¹² [Global Innovation Index 2024. Unlocking the Promise of Social Entrepreneurship](#)

¹³ [2025 IP Index: Strengthening Global IP for a Brighter Future | U.S. Chamber of Commerce](#)

¹⁴ Source: Intellectual Property Office, [Use of Intellectual Property rights across UK industries](https://www.gov.uk/government/publications/use-of-intellectual-property-rights-across-uk-industries)
<https://www.gov.uk/government/publications/use-of-intellectual-property-rights-across-uk-industries>

intellectual property to move across borders. Rather than restrict this, they focus on building strong domestic ecosystems that help research to scale to deliver economic benefits at home. The UK is taking a similar approach – see especially questions 3b and 3c below around exploiting intellectual property. This has led to the UK being second globally for investment into university spin-out companies, suggesting strength in developing science discovered in the UK.¹⁵

- The Government is taking steps to show how data is better considered as an asset in the economy (public sector, business data and individual's own data). This takes into account data's role in growth, balanced with important privacy, security and international expectations and obligations.

d) Cultural differences, for example around scientific entrepreneurship, attitude to risk, and relationships between academia, business and Government, are often cited to explain why the UK's technology sector has not matched the excellence of its basic research. Do you agree with this view, and if so, what can the Government actually do to change the culture?

- Entrepreneurial culture is, to some extent, downstream of policy, so the Government's role is primarily focused on setting the right policy environment for a pro-innovation culture to thrive. Companies during the same period. See question 3b for more details.
- Whilst academic culture may historically have been more averse to entrepreneurship and working with industry, there is an ongoing culture shift, especially amongst the next generation of students and faculty. Student start-ups have increased from 3,900 launched in 2015/16 to 4,900 in 2022/23. In the same period, university income from industry contract research increased from £1.25 billion to £1.69 billion.¹⁶
- This change in outlook helps explain why investment in university spin-outs increased 38% from 2023 to 2024 despite a nearly 19% decline in the wider equity market for high-growth.¹⁷
- Government will continue to provide significant funding and support to encourage commercialisation and an entrepreneurial culture in universities. We are working to recognise a wider diversity of

¹⁵ <https://globalventuring.com/university/spinouts-double-fundraising-in-ten-years/>

¹⁶ Higher Education Statistics Authority. Higher Education Business & Community Interaction survey.

¹⁷ Beauhurst, Spotlight on Spinouts

contributions and career paths in research and innovation to support the pipeline of talent; for example, UKRI now require narrative CVs in funding applications. These capture the full range of the subject's accomplishments ensuring that activities such as commercialisation are acknowledged.

- We are also supporting connections between investors and cutting-edge technology through the Science and Technology Venture Capital Fellowship designed to upskilling mid-career venture capitalists (VCs) in deeptech and life sciences.

e) Is the UK at risk of, or experiencing, brain drain for scientists, technologists, and entrepreneurs? How can the Government prevent this, and ensure the UK remains an attractive destination for internationally mobile talent, and actively seek out top scientists and innovators to move to the UK? How can the UK ensure that it trains sufficiently skilled people for its wider science and technology ambitions?

- We are open for business when it comes to science and technology, and we want the UK to be the destination of choice for globally mobile top talent, but the government has been clear that net migration must come down from the current unsustainable levels.
 - While the government's recent Immigration White Paper makes clear that net migration must come down, it also recognises the valuable contribution that high-skilled workers make to our science and technology sectors in driving R&D-led growth and sets out the government's commitment to going further in ensuring that the very highly skilled have opportunities to come to the UK and to access our targeted routes for the brightest and best global talent.
 - The UK offers one of the strongest science bases in the world, being home to world-leading universities – including 4 of the global top 10 – and outstanding research institutions, with opportunities in high-growth areas like life sciences, quantum, and AI.¹⁸
 - To facilitate exceptional talent coming here, the UK's current immigration system offers targeted routes for individuals who promote growth to come to the UK, including the Global Talent, High Potential and Innovator Founder visa routes.
- To deliver on the commitments to top talent in the Immigration White Paper, the Government will make it simpler and easier for top scientific talent to use our Global Talent visa, review the Innovator

¹⁸ [QS World University Rankings 2025](#)

Founder visa to support entrepreneurial talent currently studying at UK universities, increase the number of workers that an overseas business can send to the UK under the Global Business Mobility (GBM) Expansion Worker route with the aim of establishing a presence here, expand the Future Technology Research and Innovation (FTRI) Government Authorised Exchange (GAE) scheme to increase access to promising talent, and explore a targeted and capped expansion of the High Potential Individual (HPI) visa while focusing on individuals beneficial to the UK workforce. Further details will be provided in due course.

- In addition, the government works with the UK's R&D sector to attract and retain top talent. The government supports this through investment in prestigious talent schemes, fellowships and professorships delivered by UKRI and the National Academies. For 2025/26, DSIT has allocated £773m to UKRI's talent funding and £217m to the four National Academies to support their research and talent schemes.
- The UK's association to Horizon Europe also provides access to extensive funding streams and a collaborative environment, attracting top-tier talent globally as part of the world's largest R&D programme. Through Horizon's European Research Council (ERC) programme, established top researchers from around the world can receive multi-million-pound awards to relocate and conduct groundbreaking research at UK institutions.
- The UK's AI Opportunities Action Plan and forthcoming Industrial Strategy are further examples of the UK's long-term commitment to science and technology and to attracting the very best talent to our high-growth sectors.
- The Department for Business and Trade's Global Talent Network (GTN) team leads on various streams of work to ensure that the UK remains an attractive destination for internationally mobile talent. A GTN programme, AI Futures Grants, provides funding to universities and SMEs to contribute to the relocation costs of international AI researchers and engineers with exceptional promise moving to the UK. Organisations can be allocated up to £100k, with up to £10k of relocation costs reimbursed for each international hire.

2. How should the UK's science and technology strategy respond to ongoing major changes in the economic, geopolitical, and technological landscape?¹⁹ What challenges and opportunities now face the UK's science and technology sector? What policy actions would you prioritise?

- Developing a world-class industrial Science and Technology sector is fundamental to national security and resilience as it strengthens economic stability, enhances technological innovation and ensures preparedness for emerging challenges. It is therefore a strategic priority for our government.
- To respond to evolving/emerging threats to UK national security the science and technology space, UK has developed a strong protective economic security toolkit, which includes powers under the National Security and Investment Act and Procurement Act. This is used in relevant cases and in a proportionate way. This provides a modern set of powers, the former aligning our investment screening with many other like-minded countries.
- The Government is currently undertaking a range of activities which will determine our response to changes in science and technology. This includes the update to the Science and Technology Framework and the Industrial Strategy will set out the Government's vision for 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.
- The Industrial Strategy Green Paper "Invest 2035"¹⁹(published 14 October 2024) outlined recent challenges that the UK economy has faced. This includes significant shocks, such as the COVID-19 pandemic, economic uncertainty following the UK's exit from the European Union, and the energy price shock following Russia's invasion of Ukraine.
- These all follow fundamental and longer-term challenges, such as the slowdown in productivity growth which the UK has experienced over the past decade and a half. Invest 2035 also highlights the following trends which will shape the UK's economic future. The government will need to help capture the benefits and mitigate associated costs in order for the industrial strategy to be a success:
 - Our transition to net zero
 - Continuing geopolitical uncertainties
 - The rapid development of AI, digitalisation, and increased automation
 - Changing patterns of demand and demographics.

¹⁹ [Invest 2035: the UK's modern industrial strategy - GOV.UK](#)

a) Is there clear cross-government coordination on delivering the UK's science and technology strategy, including from the Treasury and central Government as well as DSIT?¹⁰ How could cross-Government coordination be improved?

- DSIT is uniquely positioned to coordinate on delivering government's S&T strategy. This includes through mobilising effective delivery of government's annual c. £20bn R&D budget to ensure maximum return on investment. DSIT funds two thirds of all government R&D, including through key partner organisations such as UK Research and Innovation (UKRI).
- DSIT acts as a coordinator across government to deliver this investment effectively, working in partnership with HMT, the Government Office for Science, Cabinet Office and all R&D investing departments. DSIT is working closely with HMT and other government departments throughout Phase 2 of the Spending Review process to ensure any proposed spending plans are coordinated and delivering on the government's priorities.
- To direct R&D investment more deliberately, effectively and transparently, DSIT has categorised its portfolio into three distinct buckets: advancing curiosity-driven research, delivering on government priorities, and supporting companies to start-up, scale-up and stay in the UK.
- The three-part structure will allow us to place a greater focus on the purpose and outcomes associated with programmes within each of these categories right across government. Collecting data on spending in-line with this new structure will allow for clearer decision-making on how to align spending to deliver on priorities, including on delivering economic growth. For example, that means driving greater leverage on public funding in the latter two categories.
- This new approach also provides a clearer framework to demonstrate at a high-level what R&D investment across all public bodies is delivering. DSIT and UKRI have a key role across all 3 of these categories, but other Departments and public funders will be more focused on one or two of them.
- Our intention is to roll out this portfolio approach across government and all funding agencies, including arm's length bodies and funding agencies such as NIHR, to bring more transparency to the purpose and effectiveness of HMG R&D investment.

- Coordination of specific priorities on S&T across government also takes place through the following governance:
 - The Science and Technology Committee, a cabinet committee chaired by the Prime Minister, considers matters related to science and technology more broadly to drive the UK's economic growth and national security.
 - Alongside Cabinet committees there are five designated Mission Boards - on growth, clean energy, safer streets, opportunities and health. The Boards are chaired by the respective lead Secretaries of State, with a remit to oversee and drive progress across Government on the relevant mission; they coordinate innovation and science and technology activity where it is critical to delivery of the mission.
 - The government's Industrial Strategy, which aims to drive sustainable economic growth and innovation across eight priority sectors with science and technology at their heart, means government can effectively coordinate and prioritise across these sectors. To support the delivery of the Industrial Strategy, the government has established a statutory, independent and evidence-led Industrial Strategy Advisory Council to help improve coordination and cross-government delivery of the strategy. The Council will make recommendations on the development and delivery of the Industrial Strategy through wide engagement with stakeholders to ensure interventions are informed by a broad and high-quality evidence base.

b) Does the UK Government have the right strategic priorities for its R&D spend? For example, do the five critical technologies identified in the Science and Technology Framework¹¹ align with the UK's strengths and weaknesses? What about the emerging prioritisation in the Government's Industrial Strategy?¹² What implications will a required shift to defence spending in R&D have?

- Even though the Government inherited an extremely difficult fiscal position, we are clear that R&D is fundamental to kickstarting economic growth and delivering the Government's five Missions.

R&D has already been identified as a central pillar to this Government's plan to drive economic growth through the announcement of the £20.4 billion investment in 2025/26.

- R&D investment needs to strike a balance between investment in broad-based, curiosity driven research, and targeted investment in priority areas of technology and innovation. This is a balance the Government keeps under regular review, working closely with UKRI.
- This Government is committed to the Science and Technology Framework and this includes developing and deploying critical technologies. To identify the UK's critical technologies, HMG built on the analysis that informed the Framework, assessing over fifty technologies using the following criteria – market potential, comparative advantage, foundational importance, as well as growth missions and national security objectives. This was supported by ongoing Government Office for Science analysis of global strengths and areas of UK comparative advantage in key technologies, as well as other sources of analysis. Unlocking the full potential of UK S&T is required to drive growth, create jobs, and ensure all citizens live healthy, secure, and sustainable lives.
- The Industrial Strategy will set out strategic priorities for R&D and technology from an industrial policy point-of-view, and the Digital and Technologies Sector Plan will look at how we unlock growth opportunities in a number of areas of technology with high-growth potential where the UK has clear strengths.
- We are also supporting our five National Missions through R&D. Science and Technology sit at the heart of achieving these missions and are critical for both identifying the challenges we must overcome and delivering the solutions needed to achieve the milestones in the plan for change. For example, UKRI is developing the new R&D Missions Accelerator Programme (R&D MAP). The R&D MAP, through which we are initially investing £25 million,²⁰ will address specific challenges our National Missions face. Partnering with private and third-sector organisations, this initiative aims to turn scientific advancements into real-world benefits, improving public services and quality of life across the UK.

c) Given that the UK cannot be world-leading in everything, which sectors should the UK prioritise (and de-prioritise)? Which sectors

²⁰ Line 3.71 in the [Autumn Budget 2024](#).

offer opportunity for the UK to obtain a strategic advantage, given global supply chains and the nature of the UK economy?

- The Invest 2035 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.
- The Industrial Strategy will focus on eight growth-driving sectors – those in which the UK excels today and will propel us tomorrow. The Industrial Strategy's eight growth-driving sectors are: Advanced Manufacturing, Clean Energy Industries, Creative Industries, Defence, Digital & Technologies, Financial Services, Life Sciences, and Professional & Business Services. Over the last 25 years, around a third (30%) of our highest productivity industries were responsible for generating nearly 60% of our economy's entire productivity growth, which is why we will focus on these sectors²¹.
- While there is not one, single analytical methodology for prioritising sectors, we have initially considered metrics including output growth, productivity and the UK's international position to identify the UK's current and emerging strengths.
- As set out in our Green Paper, to maximise its impact on growth, the Industrial Strategy will focus on stimulating investment and activity in sectors with the highest growth potential over the next 10 years.
- We have focused on which sectors help us meet our broader objectives for Net Zero, regional growth, and economic security and resilience – to make sure that we secure the type of growth we want.
- While the Industrial Strategy's focus will be on growth-driving sectors, this will include addressing cross-cutting challenges and supporting a pro-business environment. All sectors can shape and will benefit from wider policy reform through the broader Growth Mission, which will create the conditions for businesses to invest and employ, and consumers to spend with confidence.
- Through our Green Paper we welcomed views from businesses across the economy, to input and shape our approach.
- The Industrial Strategy will be published alongside Sector Plans for the growth-driving sectors, aligned with the multi-year Spending Review. These Sector Plans will set out the specific sub-sectors of

²¹<https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/datasets/outputperhourworkeduc/current>

focus, identify key barriers to growth, and describe how government and industry intend to achieve long-term growth for the sector.

d) Does the current scientific incentive structure, around funding, peer review, and publications, reward high-impact science and technology? How can it be reformed to do so without just adding more bureaucracy to the system? Are there any lessons the UK's public research funders, such as UKRI and ARIA, can learn from the field of metascience to maximise their impact?

- For UK research funding, incentives that recognise and reward research excellence focus on a broad definition of excellence. The dual support approach to higher education research funding seeks to create the right balance between research funding which is directed towards strategic priorities and institutional funding for research and knowledge exchange. The Research Excellence Framework assesses the quality of research across UK HEIs and recognises the impact it has including spin-out formation, IP and underpinning innovation clusters.
- Peer review remains central to assessing the quality and rigour of research proposals and steps are being taken to ensure this is working as effectively as possible. For example, funders including UKRI undertake analysis and reforms to improve incentives in the system. In July 2023, UKRI commissioned a Review of Peer Review²². The study reviewed interventions to the peer review processes used in research and innovation (R&I) award funding.
- The Review assessed 38 interventions, which range from small process 'tweaks' such as increasing or decreasing the number of reviewers per application to more fundamental changes such as partial randomisation or matching events to bring together potential grant applicants to develop joint proposals. The main recommendation was that the process design always be considered when designing new grant funding programmes to ensure that the process was appropriate to the funding opportunity. UKRI have published the findings of the review, enabling the wider community of R&I funders to optimise and innovate in their award-making processes.
- Reforming the scientific incentive structure without adding more bureaucracy is a complex challenge and the government recognises

²² [Review of peer review – UKRI](#)

that there are further ways to improve the effectiveness of public research funders and reduce bureaucracy. A key pillar of delivering DSIT's R&D reform agenda is transforming UKRI to help fulfil the potential of science and technology in improving lives and delivering economic growth.

- We are also developing and experimenting with new approaches to funding R&D to deliver greater impact faster.
- For example, UK research funders can also learn valuable lessons from metascience to maximise impact; metascience is the study of the science system and how to improve it.
- One approach to reducing bureaucracy is to streamline administrative processes and reduce the burden on researchers. The UK Metascience Unit, a joint team spanning DSIT and UKRI, is trialling different peer review mechanisms, such as distributed peer review, to improve efficiency and reduce the administrative load while maintaining high-quality peer-review.
- The UK Metascience Unit is also investing £10m in research and producing insights on:
 - Research funding allocation, where it has been often noted that traditional processes can be overly risk-averse, inequitable and inefficient.
 - Devising better metrics for understanding the quality of research efforts.
 - Addressing the replication 'crisis', where several highly-cited studies appear to be based on irreproducible evidence.
 - Understanding and evaluating how AI is changing the work of scientists
 - A range of other topics, including industry-academic collaboration, interdisciplinarity, the publication system, emerging sub-field detection, and the impact of different modes of funding.
- Another example is ARIA , which is an independent research body, custom built to fund high-risk, high-reward scientific research with minimal bureaucracy. Importantly, ARIA has maximum autonomy over its research and project choice, and the allocation of funding to research projects and different sectors is decided by those with relevant technical expertise.
 - ARIA's focus is exclusively on programmes that have the capability to produce significant technological or societal change, and ARIA is enabled to accept a high level of failure within its programme choice. ARIA has launched its first

cohort of 7 programmes and has made more than £400m of funding available.

- In order to maximise impact, ARIA's Activation Partner programme embeds entrepreneurship into ARIA's programmes at an early stage. ARIA works with Activation Partners like Google DeepMind and Fifty Years to empower talent and support new and entrepreneurs in its target areas – maximising the potential for societal impact. This call has already led to five US organisations establishing operations in the UK, including two of the world's most successful deep tech venture capital funds.
- We have also created the R&D Missions Accelerator Programme, a new multi-year programme that will fund the research and development of novel science, technology and innovation solutions to tackle the major problems of our national Missions. The R&D MAP has worked closely with Missions to identify their priority problems and will build partnerships with private and third sector experts to deliver impact. Its funding mechanisms will be bespoke to each Mission problem, guided by lessons learnt from other organisations and previous programmes and will seek to use novel funding mechanisms where this will deliver impact faster and attract more co-investment from the private and 3rd sector. UKRI will deliver the programme, recruiting Research and Innovation 'Challenge Directors' to shape and lead delivery of specific projects to achieve the challenge's goal. These directors will operate with maximum autonomy, learning from the ARIA model, and be empowered to work directly with mission teams within government to solve the problem.

3. Is the UK's research and innovation landscape well-structured to support science and technology commercialisation, economic impact, and strategic advantage for the UK?

- The government has taken several steps to strengthen the research and innovation landscape for science and technology companies, but there is more to do to create a truly integrated landscape. Our ambition is to create a joined-up funding system that supports academics, entrepreneurs and businesses across all the stages of commercialisation. In particular we will focus on creating an integrated approach across the main public finance institutions that support innovative firms, particularly Innovate UK, the British Business Bank and the National Wealth Fund, and through this join-up we will seek to develop a pipeline of opportunities to crowd in private investment. We have created a new governance forum to support this join up and will be bringing forward reforms to the individual organisations and their offerings.
- This will build on individual reforms across these organisations:
 - Support for businesses through Innovate UK and the catapult network (question 3b) which are at an all-time high of funding.
 - Support for university commercialisation and spin-outs (question 3c).
- To support companies to scale and access the finance they need to grow, the government has also launched the National Wealth Fund (NWF) and introduced important initiatives such as the British Growth Partnership, a British Business Bank vehicle which aims to crowd-in UK pension funds and other institutional investment into venture capital funds and innovative businesses.

a) Is there a clear pipeline of investment, across the public and private sector, for science and technology companies that want to bridge the valley of death from initial idea to billion-dollar company--and if not, where are the gaps?

- The UK offers a significant package of support for science and technology companies through various stages of their development, and there is a growing pipeline of public and private investment across the innovation lifecycle. However, UK science and technology firms can still face significant fundraising challenges during their transition from early-stage innovation to growth, often referred to

as the "valley of death". These companies are perceived to be high-risk, as they often have higher capital costs, and may be pre-revenue with a longer development timeline to bring their products to market.

- The UK has an improving VC landscape, ranked third worldwide,²³ and UK investors are optimistic about finding deals within our science and technology sectors²⁴. However, our VC intensity per capita sits at roughly half that of US levels²⁵, with the US being the world's leading VC market. This gap is much smaller when measured relative to GDP. UK Series B capital is significantly lower than in the US, with \$2.4 billion²⁶ compared to \$18.4 billion in 2024²⁷. The deal count and total value of Series B rounds in Europe have declined dramatically²⁸. Poor venture capital returns since 2021 have led to a lack of investment in European Growth Equity funds, exacerbating the shortage of capital for European Series B raises. Additionally, whilst the UK still maintains relatively high venture capital returns - in line with the US and EU overall and above the US and the rest of the EU for older vintages - in 2024, 62% of UK fund managers believed the availability of exit opportunities to be poor or very poor²⁹.
- Mapping investment gaps can be complicated by differences between sectors. For instance, smaller businesses in agritech often struggle more to secure seed funding compared to a Large Language Model (LLM) company at the same stage. Therefore, the pipeline of investment for each sector can be quite different. The sectors in which the UK has the largest gap on a GDP-adjusted basis include life sciences, where the US raised 1.6x more investment in 2021-2023, R&D intensive sectors (1.4x) and deeptech (1.3x). In green tech and software sectors the UK now performs in line with the US, and in fintech the UK now outperforms - deploying twice as much investment as the US in 2021-2023 after controlling for the size of the economy³⁰.

²³<https://dealroom.co/reports/uk-innovation-forward-look-for-2025>

²⁴ British Business Bank (2024) 'UK Venture Capital Financial Returns 2024 Report' p41. Available at [uk-vc-financial-returns-report-2024 \(1\).pdf](https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2024-11/uk-vc-financial-returns-report-2024.pdf)

²⁵ <https://pitchbook.com/news/articles/which-country-has-the-most-vc-per-capita>

²⁶ <https://techfundingnews.com/which-uk-tech-startups-raised-millions-recently-10-funding-rounds-you-should-know-about/>

²⁷ <https://dealroom.co/guides/global>

²⁸ <https://pitchbook.com/news/articles/hot-or-not-where-european-vc-funding-went-in-2024>

²⁹ British Business Bank 'UK Venture Capital Financial Returns 2024' report, available at <https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2024-11/uk-vc-financial-returns-report-2024.pdf?attachment>

³⁰ British Business Bank (2024) Small Business Equity Tracker, available at <https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2024-07/sbet-2024-report.pdf?attachment>

- Nevertheless, key measures aimed at crowding-in investment to address gaps in the availability of investment include:
 - Significant public funding available through UKRI and the Catapult Network supporting early-stage R&D and commercialisation. Our reforms to UKRI will also aim to provide a comprehensive support ladder from idea to start-up and scale; initiatives such as Investor Partnerships have shown how public R&D funding can unlock significant private investment, with £100m in grants leveraging £1.44bn in private investment. The new leadership at UKRI and Innovate UK will focus on further enhancing this support pathway for scaling R&D-intensive companies.
 - The British Growth Partnership aims to crowd-in UK pension funds and other institutional investment into venture capital funds and innovative businesses, supported by a cornerstone government investment. Investments from the fund will be made on a long term, fully commercial basis, independent of government, leveraging the Bank's capability and market access to a range of promising high growth UK companies.
 - This builds on progress made by British Patient Capital (BPC), which was established following the Patient Capital Review in 2018 to provide access to finance for UK scale-ups and attract private capital. BPC, a commercial subsidiary of the British Business Bank (BBB), aims to improve access to finance for UK scale-ups through direct investments and fund-of-fund investments. BPC manages capital across three programmes: the BPC Core Programme, Future Fund: Breakthrough, and the Life Sciences Investment Programme. It oversees £3.125 billion in assets under management, with total lifetime fund and co-investment commitments of £2.3 billion. Its portfolio includes 1,350 companies, including 363 university spin-outs. Notably, 36% of the UK's current unicorn businesses have received investment from BBB-supported funds.
 - On 24 March 2025, the Bank retired the British Patient Capital and British Business Investments brands. Consolidating its programmes under a simplified structure will strengthen the Bank's market-shaping investment activities, enhance its impact, and provide clearer insight into its role and programmes
- Additionally, at the UK International Investment Summit (IIS), the Chancellor announced the launch of the new National Wealth Fund,

the UK's flagship public financial institution, designed to mobilise over £70 billion of private investment into the UK's growth and clean energy missions. The National Wealth Fund's strategic steer confirms its mandate to invest in the government's strategic priorities, including digital and technologies.

- To further support the effectiveness of the UK's innovation landscape, officials have conducted a stocktake examining how well the UK's public financial institutions and related organisations are positioned to deliver the government's priorities, mobilise private investment and drive long term economic prosperity.
- The stocktake concluded that, while the landscape is positioned broadly well to deliver against government priorities, there are opportunities for reform. In response, at the Spring Statement the government announced the creation of a new CEO-level forum aimed at fostering greater collaboration between public financial institutions and government departments.

b) How well do the current organisations intended to help early-stage commercialisation (such as Innovate UK and the Catapults) perform this task? What could be done to make these organisations more effective?

- UKRI, and the Catapults it funds, play a critical role in supporting innovation, business growth, and translating research into commercial success.
- Innovate UK is reaching more innovators than ever before. Today its network extends to over 450,000 innovators. Every £1 Innovate UK invests in grants for business innovation returns over £3.61 in direct business benefit, including for SMEs, with the total economic return valued at over £6.21³¹.
- Innovate UK offers a range of programmes to support innovative spin-outs, start-ups and scale-ups to grow. This includes newer programmes that are experimenting with new ways to attract more private capital into the firms Innovate UK supports:
 - Through Innovate UK Business Growth we provide tailored innovation and growth support to innovation-focused SMEs. We supported 10,671 such businesses in FY 23-24 that have raised more than £483m in investment following our intervention and created 2,637 jobs. In this community, we

³¹ <https://ircaucus.ac.uk/publications/innovate-uk-grants-rd-returns/>

have a pipeline of 6,086 SME businesses which we have identified as scaling potential or scaling.

- Innovate UK's Investor Partnerships programme provides grant funding with aligned investment and the benefit of early investor involvement. We have supported 360 SMEs with £144 million in grants, with £393 million aligned investment from a pool of 155 investor partners. The total investment raised by those SMEs is £1.23 billion.
- Innovate UK's Innovation Loans are for highly innovative late-stage research and development (R&D) projects with a clear route to commercialisation and economic impact. We have supported 251 companies with 273 loans totalling £229 million in commitments.³²
- The UK's nine Catapults, funded by Innovate UK and each with a specific sector or technology focus, span more than 65 locations across the UK³³. They work across Technology Readiness Levels (TRLs) 4-7 and play an important role in supporting commercialisation by de-risking the transition from research to delivery. Catapults do this by providing R&D infrastructure, specialist knowledge and expertise, partnership and collaboration building capabilities, and business support. Businesses working with Catapults are more likely to get a product or project to market, and this product is likely to be of higher quality than it would be otherwise³⁴. For example, CPI partnered with SME Azotic Technologies to take their N-Fix® technology from proof-of-concept to a commercial product, enabling farming without pollution from traditional chemical fertilisers. CPI used its expertise and unique infrastructure to facilitate a robust production process to deliver multi-ton manufacturing, accelerating the commercialisation by months and ensuring the procurement of future funding for Azotic³⁵. We are working closely with Innovate UK to drive continuous improvement of all the Catapults and align them to the needs of our modern Industrial Strategy.
- While all Innovate UK's programmes have a positive impact on the business they support, the large number of programmes it now delivers across sectors, technologies and stages of business development risks spreading its interventions too thinly. To ensure

³² Source: Innovate UK

³³ <https://catapult.org.uk/about-us/why-the-catapult-network/>

³⁴ <https://catapult.org.uk/catapult-network-welcomes-new-report-demonstrating-catapult-impact/>

³⁵ <https://www.uk-cpi.com/case-studies/azotic-technologies>

that it is delivering maximum impact we must ensure that Innovate UK is able to identify and target support at the sectors and technologies with the greatest potential of generating world class high growth firms and work intensively to scale them in the UK. This will require making choices about where to focus Innovate UK's interventions, ensuring that it is supporting firms that can attract growth capital. Under its newly appointed Executive Chair, we will refocus its objectives to maximise its impact and spillovers to the UK economy. We will refine its offer to better support the highest-potential firms at different stages of growth and will integrate this offer with other public finance institutions such as the British Business Bank. This will underpin our overall objective to take an integrated approach to supporting innovative firms to grow using all of Government's policy and investment levers.

- As mentioned above, ARIA's innovative Activation Partner programme is designed to ensure that early-stage R&D has a clear route to societal impact, through partnerships with pioneering organisations including Google DeepMind and Convergent Research. Activation Partners will conduct a range of activities, such as providing fellowships and access to market insight, to embed entrepreneurship at an early-stage across ARIA's programmes. We will be carefully monitoring and learn from this innovative approach.

c) How effective are the UK's universities at encouraging commercialisation? Has the recent Independent Review of University Spin-outs³⁶ resulted in positive policy changes?

- UK universities are a cornerstone of the national innovation ecosystem, globally recognised for their research excellence. They play a crucial role in translating scientific discoveries into economic and societal value. The Independent Review of University Spin-outs identified ways to enhance the translation of university-based research into high-growth businesses.
- To date, 52 universities have adopted the review's recommendation, this reflects strong collaborative efforts within the sector to advance innovation on a voluntary basis. Since the review, there have been positive progress. The average equity stake that universities take in spin-out companies has decreased to 16% in 2024, down from 22% in 2023, helping to create more investor-friendly terms and support founder retention³⁷. In the same year,

³⁶ [Independent review of university spin-out companies - GOV.UK](#)

UK university spin-outs secured over £2.6 billion in funding, marking a 38% increase from the previous year. This growth occurred despite a nearly 19% decline in the wider equity market for high-growth companies during the same period, demonstrating investor confidence in the UK spin-out ecosystem³⁸.

- The government has bolstered support for spin-outs. The Higher Education Innovation Fund, which supports knowledge exchange between universities and the wider world, is set at £280 million for the 2024-25 academic year, with £20 million specifically allocated for commercialisation³⁹. Research England and the Higher Education Statistics Authority are developing a database of spin-out companies and monitoring the adoption of the spin-out review recommendations, with the register set to launch later in Spring. This will establish a key data baseline to inform policy. Also, £40 million over five years has been allocated for proof-of-concept funding and support for researchers spinning out⁴⁰.
- To support effective practices in research commercialisation, the government continues to fund TenU, a collaboration of leading university technology transfer offices (TTOs). In 2024, TenU published detailed guidance on software spin-out deals, helping to improve consistency, transparency, and fairness in deal-making across the sector. This forms part of a broader push to embed best practice in university commercialisation activities. The CCF RED (Research England Development) project is enabling a group of universities to pilot new models of TTO operations, with the aim of improving efficiency, responsiveness to academic founders, and alignment with investor expectations. Together, these initiatives are strengthening the capability and professionalism of TTOs, supporting a more effective and competitive spin-out environment. The SETsquared Impact-IP project is enhancing deal readiness by supporting universities and founders to better structure IP terms from the outset.
- UK universities are more effective than ever at attracting investment and bringing ideas to market. Their performance is now, when research resource is taken into account, competitive with the USA in terms of patents, spin-outs and income from intellectual property.⁴¹ The recent policy changes and increased support have

³⁷ RAEng, Beauhurst (2025) https://raeng.org.uk/media/xutduqvm/spotlight_on_spinouts_2025_24_03_25.pdf

³⁸ RAEng, Beauhurst (2025) https://raeng.org.uk/media/xutduqvm/spotlight_on_spinouts_2025_24_03_25.pdf

³⁹ DSIT, HM Treasury (2023) 'Independent review of university spin-out companies government response'.

⁴⁰ HM Treasury (2024) 'Autumn Budget 2024 – HC 295'

⁴¹ <https://www.ukri.org/publications/higher-education-business-and-community-interaction-analysis-reports/>

positively impacted the commercialisation efforts of UK universities. Ongoing monitoring and support will ensure continued progress in this area, reinforcing the UK's position as a global leader in academic entrepreneurship.

4. How can the Government encourage more private-sector investment in R&D, and in R&D intensive companies, including technology start-ups and scale-ups, in the UK? What are the major factors behind the exodus of capital and companies to the US, and is there anything that the UK can do to prevent this? We would welcome case studies from entrepreneurs or investors who have moved abroad, setting out their reasons for doing so.

- Government recognises that R&D intensive companies require higher amounts of capital to develop and validate their products for market, often taking longer to do so than less R&D intensive companies. While the UK has built one of the strongest global pipelines of science and technology companies, underpinned by world-class research institutions and a growing base of early-stage investors, we recognise that the UK ecosystem can fall short when it comes to supporting businesses at the scale-up stage, particularly in comparison to the US.
- A significant factor at present is the lack of domestic scale-up capital. UK companies seeking to raise funding rounds of over £100 million frequently rely on international investors, largely because there are too few domestic sources of growth finance at this level. UK pension funds, which collectively manage trillions in assets, have historically lacked the flexibility and risk appetite to invest in high-growth, innovation-led sectors. Compounding this issue is a shortage of specialist investment expertise—particularly in venture capital and late-stage tech investing—within many of these institutions.
- From the perspective of UK businesses, there are additional barriers. University spin-outs and research-intensive firms often struggle to commercialise effectively due to a lack of experienced leadership and business support. As noted in the August 2023 Council for Science & Technology innovation finance evidence pack, there appears to be a notable gap in commercially-minded talent—individuals who can lead a company from prototype to product, or from early-stage funding to international scale. Without this, many founders are forced to look overseas for the leadership, investment, and infrastructure needed to grow.
- Infrastructure itself presents another challenge. The UK can lack sufficient specialist facilities for testing, manufacturing, and scaling breakthrough technologies. This may weaken investor confidence in

business ideas and can also make it harder for companies to build out their operations domestically.

- Through the forthcoming Industrial Strategy and Spending Review, we are signalling our long-term commitment to innovation-led growth and removing key barriers that have held companies back. We are enhancing the role and reach of Innovate UK to provide more coordinated and impactful support at the critical stages of commercialisation. At the same time, we are strengthening the UK's venture capital ecosystem—enabling it to raise larger funds, attract greater institutional investment, and direct more capital into science and technology businesses.

a) How should the Government encourage multinational technology companies to focus more of their R&D activities and foreign direct investment here? What factors lie behind their reluctance? Does the UK compete sufficiently for this investment?

- Multinational tech companies invest heavily in UK talent, infrastructure and R&D. Just this past autumn, Amazon Web Services committed £8 billion⁴² in the form of a five-year investment and US firms CyrusONE, ServiceNow, Cloud HQ and Core Weave announced the UK as the home of new data infrastructure worth £6.3 billion⁴³.
- Tech companies looking for an international or regional base for their operations also find a favourable business environment in the UK, including London as a global professional and financial services hub; a strong R&D and talent base; a shared language and common legal traditions; and a convenient geography and time zone.
- Overseas investment in UK R&D is strong, at 0.24% of GDP in 2022. This compares to an OECD average of 0.18% and places the UK 1st in the G7 nations and 12th in the OECD for overseas investment in R&D⁴⁴.
- Corporate venture capital (CVC) investment is also another source of strategic equity finance, where an established company will invest in a start-up. Typically, the aim of CVC is novel technology integration into their core business or supply chains. Corporate

⁴² <https://www.gov.uk/government/news/tech-secretary-welcomes-foreign-investment-in-uk-data-centres-which-will-spur-economic-growth-and-ai-innovation-in-britain>

⁴³ <https://www.gov.uk/government/news/chancellor-announces-8-billion-amazon-web-services-investment-as-she-vows-to-make-every-part-of-britain-better-off>

⁴⁴ [OECD MSTI data](#)

Venture Capital investment has been shown to accelerate the development of high-potential start-ups and innovation. The value added by CVC investment can include capital for growth, industry expertise, due diligence support, and enhanced distribution channels, and can unlock access to debt finance from institutional finance providers. This is in addition to their valuable role as customers for the start-up company technology, a reliable supplier and potential collaboration partner.

- The Office for Investment (OfI) encourages multinational technology companies to focus more of their R&D activities in the UK by managing relationships with international corporates, sharing insights and investment opportunities, and supporting their investment activities across the UK. Recently, the OfI's Venture Capital Unit supported Japanese multinational company, TDK, in setting up their UK office, while facilitating £1bn of direct investments from international corporates into the UK.
- The UK has less CVC activity than comparable countries, with just 14% of UK equity deals having a CVC participant, compared to 24% in the US⁴⁵. This is in part due to a lack of domestic corporates prioritising investment into R&D technologies. Increasing the rate at which UK corporates participate in equity finance deals while continuing to encourage increased participation from international CVCs could unlock an important source of strategic capital for UK R&D start-ups.
- DBT ran a series of corporate roundtables in between 2023 and 2024 in an effort to determine which factors lie behind UK corporates' reluctance to engage in R&D investment. Findings indicated their reluctance was not lack of talent or opportunity in the market, but in the culture of how domestic corporates approach their long-term strategies. In the UK, corporates are more focused on short term profit and losses, meaning they are less likely to commit expenditure towards long term R&D. Internal capabilities were also highlighted as obstacles for UK corporates given they often do not have the necessary skill sets in house, or networks across R&D ecosystems, to assess and invest in UK businesses.
- DBT is exploring how it could support UK corporate investment into domestic R&D via sharing of best practices, highlighting evidence of long-term shareholder benefits, and working with OfI to build an

⁴⁵ <https://globalventuring.com/corporate/europe/uk-corporate-vc-startup-investment/>

international network of corporates committed to supporting UK R&D companies.

b) Why don't major institutional investors in the UK invest more in UK science and technology companies as they scale up? Is there sufficient expertise and understanding of science and technology in the UK finance sector?

- The reasons why major UK institutional investors, such as pension funds, have not heavily invested in science and technology companies as they scale are varied and the subject of debate.
- UK institutional investors (such as pension funds) are noticeably underinvested in UK venture capital and growth equity. In the UK, less than 10% of venture capital comes from public and corporate pension funds, when the comparable figure in the US is over 70%. UK DC pension schemes currently hold over £500 billion of assets (set to double to £1 trillion by 2030), however two thirds of pension providers have 0% direct investments into illiquid assets in their "default" pension offering.
- Evidence from international peers demonstrates that the scale of a pension fund is a key factor in how sophisticated their investment strategy is, including whether they invest in Venture Capital and innovative companies. While the UK has significant total pension assets under management, UK pension funds are more fragmented than key international comparators.
- Furthermore, UK pension funds have historically lent towards stocks and bonds rather than equity investments due to regulatory emphasis on liquidity rather than returns focused, riskier, illiquid assets. The resulting landscape is one in which UK venture funds have been unable to secure capital commitments from domestic pension funds, meaning there is less capital available to invest in science and technology companies.
- In contrast, the US saw increased institutional investor participation in their domestic VC market following the relaxation of the 'prudent man rule' under the Employee Retirement Income Security Act (ERISA) in 1978. This relaxation is widely believed to be one of the major reasons for the development of US's scale-up ecosystem.
- The Government is actively addressing the lack of domestic pension fund participation in the venture market through initiatives like the Mansion House Compact and Accord and the British Business Bank (BBB) via core programmes, the Life Sciences Investment

Programme (LSIP), the British Growth Partnership (BGP), and the Long-term Investment For Technology and Science (LIFTS) scheme.

- Established under the previous administration, LIFTS is a £250 million commitment to Schroders Capital, designed to create a new investment vehicle tailored to the needs of pension funds. This initiative aims to generate over £1 billion of investment into UK tech companies and currently involves Phoenix Group as the sole pension provider.
- On 13 November 2024, the Chancellor announced pension reforms aimed at unlocking £80 billion for infrastructure and future businesses, and will tackle fragmentation in the UK pension system, creating pension megafunds that take advantage of scale and consolidation to invest in productive assets, and also see a shift in focus for pension funds away from short-term considerations around costs and towards a longer-term focus on value for money. An update on this work, including the final Pensions Review Report, will be published in the coming weeks. This is supported by industry-led commitments from eleven of the UK's largest pension firms to allocate at least 5% of their funds to unlisted UK equities by 2030, and the Mansion House Accord, a subsequent further commitment from seventeen workplace pension providers to invest at least 10% of their defined contribution default funds in private markets by 2030, which will include assets that boost the economy such as infrastructure, property and private equity. Under the Mansion House Accord, and subject to the availability of appropriate investment opportunities, at least 5 percent of these portfolios will be ringfenced for the UK, expected to release £25 billion directly into the UK economy by 2030.
- Additionally, the UK is accelerating the development of its science and technology investment base by upskilling mid-career venture capitalists (VCs) in deeptech and life sciences through the Science and Technology Venture Capital Fellowship. The DSIT-funded Science & Technology Venture Capital Fellowship is a pioneering program to build expertise in these sectors. Launched in November 2024 and formally introduced by Minister Vallance in January 2025, the Fellowship helps ensure that the UK has a strong base of skilled investors, including those managing capital from pensions reforms. This initiative also promotes diversity in venture capital, offering scholarships to underrepresented groups.

- These initiatives will build upon the UK's existing strong investor base, with a growing number of specialist VC investors who have recognised the opportunity from UK S&T, but who typically lack the scale to lead later stage funding rounds. At the same time, a growing number of larger US VC's and PE firms are establishing bases in the UK, including Sequoia, Lightspeed and Bessemer, with Blackrock also keen to consolidate its UK presence in a single office-space, having recently noted that it had 'allocated more capital back to the UK tactically [as] the new administration is trying to tackle some of the hard issues'.⁴⁶
- By addressing these challenges through targeted initiatives and reforms, the UK aims to unlock significant growth capital for S&T companies, encouraging more institutional investment in these high-potential sectors.

c) To what extent is the lack of scale-up capital and UK tech investment due to larger macroeconomic factors (e.g. passive investing, global diversification)? Is there anything the UK Government can do to mitigate these?

- The government is seeking to provide a balanced suite of programmes to support the continued development of the UK's scale-up ecosystem, including via our public financial institutions and wider business support initiatives.
- It is difficult to quantify the extent to which a lack of scale-up capital in the UK is due to larger macroeconomic trends as opposed to other possible factors that could include domestic VC market maturity, UK investor risk profile, a simple lack of capital, or lack of domestic institutional LPs. The current slowdown in VC investment is largely due to the rising cost of capital, rather than passive investing or global diversification. Post Global Financial Crisis (GFC), interest rates were as low as 0.25 for around 10 years⁴⁷, making borrowing cheap. This environment encouraged institutional investors to deploy capital in order to maximise returns. Since then, the landscape has changed due to a combination of Covid, global geopolitical factors, and public market stagnation. These factors drove inflation, put pressure on supply chains, and narrowed investor exit opportunities. With the cost of capital much higher,

⁴⁶ The Times (24 April 2025) 'BlackRock CEO Larry Fink: We're investing in 'undervalued' Britain'

⁴⁷ <https://thinkplutus.com/uk-interest-rate-history/>

and LPs waiting for returns on investments from previous funds, the lack of scale-up capital has been exacerbated in recent years.

- Business investment has been particularly weak in the UK relative to other countries over the past few decades. Since Q2 2010, real business investment in the UK has averaged 9.6% of GDP, the lowest level in the G7⁴⁸. To support macroeconomic and fiscal stability, at Spring Budget 2025 the government confirmed a set of responsible reforms to the fiscal framework that improve certainty, transparency and accountability.
- Furthermore, the government is providing stability and predictability to support businesses to invest by publishing a Corporate Tax Roadmap, which confirms the government will cap the rate of Corporation Tax at 25%, the lowest in the G7, for the duration of Parliament.

d) Are financial regulatory frameworks making London an attractive place for high-growth science and technology companies to IPO and list? What can the UK do to encourage high-growth companies to list here?

- The UK's markets are deep and strong, delivering for firms and investors and supporting firms to start, scale, list and stay here. In 2024, the UK raised more equity capital (£25bn) than the next three European exchanges combined.
- The government is taking forward an ambitious set of reforms to boost the attractiveness of UK capital markets and is focused on delivering these reforms. This includes making it easier to IPO in the UK through:
 - the Financial Conduct Authority's (FCA) overhaul of the UK's Listings Rules. This brings the UK's rulebook in line with international best practice and by changing rules to allow dual class share structures, we have opened the door to tech firms to list in the UK.
 - reforming the Prospectus regime to simplify and improve the UK's approach to the information a firm needs to publish as part of an IPO. The government has legislated to provide the FCA powers to reform these rules and from early 2026 the new regime will take effect. This will provide better, more

⁴⁸ HMT/ Bank analysis of G7 countries domestic data sources. The analysis is featured in a recent speech by MPC member Megan Greene - [Worlds apart? UK inflation and monetary policy in an international context - speech by Megan Greene | Bank of England](#)

relevant information to investors and allow companies to raise larger sums more easily.

- improving the quality and quantity of investment research in the UK by reforming the much-criticised unbundling rules.
- Taken together, these changes mean that firms can list and raise capital quickly and easily in the UK, supporting them to achieve their growth ambitions.
 - The government is also going further, including: establishing PISCES – the Private Intermittent Securities and Capital Exchange System. This is a new type of stock exchange which will support private company growth and provide a steppingstone on to public markets for companies who want to stay private for longer. It will launch in June (2025).
 - Establishing a 10-year strategy for financial services, with both capital markets and fintech identified as priority growth areas, recognising the importance of a stable regulatory environment. This will be published later this year.

5. Are the current major public sector investment vehicles, such as the [National Wealth Fund](#), [British Business Bank](#), and [British Patient Capital](#), sufficiently resourced—in terms of capital, as well as scientific, technological, and financial expertise—to make meaningful scale-up investments in UK science and technology companies? Do they have the mandate to do this? If not, what changes or reforms would you propose?

- The National Wealth Fund is equipped with £27.8 billion of capital to catalyse and mobilise additional private investment across the UK. It is ready to deploy capital into the digital and technologies sector as one of its priority sectors for investment and has a specialist banking and investments team who have the expertise to deliver complex financial transactions that crowd in private capital.
- The British Business Bank also has significant capability as the largest domestic investor in UK venture and venture capital. As outlined in the Bank's [Power of 10 Report](#), in the 10 years since being established, the Bank has supported 11% of all UK equity deals and accounts for 15% of total equity investment. In response to feedback from partners and stakeholders, the Bank has made changes to its structure to make its programmes more accessible and straightforward. Moving forward, all activities will be organised under two core business units - Investment and Banking - within a single, cohesive British Business Bank brand. On 24 March 2025, the Bank retired the British Patient Capital and British Business Investments brands. Consolidating its programmes under a simplified structure will strengthen the Bank's market-shaping investment activities, enhance its impact in support of our industrial strategy priorities, and provide clearer insight into its role and programmes. The bank's future resourcing is being considered through the government's ongoing spending review.

a) What evidence do we have that these initiatives “crowd-in” investment from the private sector rather than crowding it out? What can the Government do to encourage co-investment with the private sector in priority areas? Does the Government have a clear view of the kind of investor it wants to be?

- Government as an investor aims to crowd in as much private capital as possible across priority sectors to support continued economic growth.

There is strong evidence that Government initiatives have helped to crowd in investment.

- One of Government's most important levers for helping to crowd in private capital has been the British Business Bank (BBB or the Bank). Over the past decade, the Bank has deployed £6.3bn in public funding, which has been accompanied by £26.2bn in private capital and guaranteed lending, equating to over £4 of private investment for every £1 of public funds⁴⁹. Focusing solely on private capital leveraged, the Bank has attracted £16.1bn in private investment, representing a 2.6x multiple on its public funding deployment. This leverage has been distributed relatively evenly, with 54% accompanying the Bank's equity programmes and 46% through its debt schemes, indicating that both forms of finance are effective vehicles for attracting co-investment⁵⁰.
- The BBB's commercial performance further underscores the effectiveness of its model in aligning public investment with private sector incentives. As of the end of 2023/24, the Bank achieved an average annual return of 4.2% across its commercial, mandated, and service arm, which is well above the Government's medium-term cost of capital of 1.3% over the same period. Within its commercial equity programmes specifically, the Bank has delivered a combined internal rate of return (IRR) of 12.0% since inception⁵¹. These returns demonstrate that government-backed initiatives can deliver both economic impact and financial sustainability, helping to de-risk investment in innovative sectors while also appealing to private investors seeking credible commercial outcomes.
- To encourage further co-investment with the private sector in priority areas, support for investment vehicles that combine public capital with institutional and private investment (such as the British Growth Partnership) are important next steps in leveraging the Bank's market expertise to unlock greater participation from pension funds and other institutional investors in UK innovation. The permanence of the Bank's £7.9bn in commercial capital also strengthens its ability to reinvest strategically and partner with private investors on a long-term basis.
- In addition to the BBB, the National Wealth Fund also undertakes a detailed additionality assessment for every transaction as part of their decision on whether or not to invest in a project. This is to ensure they are being additional and not crowding-out the private sector.

⁴⁹ <https://www.british-business-bank.co.uk/about/research-and-publications/10-year-impact-report>

⁵⁰ <https://www.british-business-bank.co.uk/about/research-and-publications/10-year-impact-report>

⁵¹ <https://www.british-business-bank.co.uk/about/research-and-publications/10-year-impact-report>

- The new strategic steer issued for the National Wealth Fund clearly sets out its future mandate to invest in the government's industrial strategy priorities, and the BBB will support the ambitions of the industrial strategy through its programmes including through greater support and lending to help smaller businesses. For example, in January 2025, the Government announced that the Bank would increase its support for the Creative Industries sector, which is a significant signal of intent ahead of the upcoming spending Review. This will include focusing the Bank's equity investment activities to invest in scale-up businesses and venture capital funds focusing on the Industrial Strategy sectors.

6. The Government has set out many policy actions in the Science and Technology Framework and elsewhere that it hopes will support the UK's science and technology sector and scale-up. Are these measures working? Do they address the right problems? What additional policy levers exist for the Government to support scale-up?

- The Science and Technology Framework⁵² sits at the heart of the government's ambitions across the National Missions, Industrial Strategy, and Plan for Change. The Framework will ensure that science and technology informs all aspects of the Industrial Strategy, including delivering the private sector investment needed to help companies scale-up and to deliver long-term economic growth.
- As part of developing the government's economic growth plans, DSIT has worked across government to ensure that we take an integrated approach to financing and scaling science and technology companies. This builds on the actions set out in the Science and Technology Framework, going further in the core areas it identifies including access to finance, the R&D system, skills & talent, procurement and regulation.

a) On public procurement, are the flexibilities provided by the Procurement Act 2023 being used by Government to support UK innovation? Are there international procurement models the UK should emulate?

- The Procurement Act only came into force in February 2025, so a comprehensive assessment of its impacts cannot be made yet. However, the government is committed to using the flexibilities to support better value for money in public procurement, including by delivering more innovation.
- A key component of enabling procurement of innovation is good pre-market engagement, alongside the Procurement Act, the government launched a Central Digital Platform to hold opportunities in one place - this includes over 1000 notices for where procurement teams want to engage with the marketplace. This is a promising start for the Procurement Act and there are some good examples of engagement focussed on innovation emerging.
- The government has established a Commercial Innovation Hub to assist departments with procuring innovative solutions, using the full

⁵² [Science and Technology Framework - GOV.UK](#)

flexibilities of the Procurement Act and connecting departments to commercial experts within the Cabinet Office. The hub seeks to address key barriers to innovation, such as low-risk appetite, insufficient skills, and limited strategic planning, fostering a culture that embraces innovation and strategic procurement. The Hub champions procurement of innovation to address key challenges in service delivery across the five national missions.

- In innovation and procurement, it is important to identify the correct aspects of international models. Many UK policymakers have looked to the US for inspiration, and talked of the need to replicate elements that led to e.g. the creation of the semiconductor industry. These US policies have tended to be about how R&D spending for defence is deployed, not about how the US federal government manages procurement of public service delivery. There is room for innovation in all areas of public procurement, but some areas are more conducive to cutting-edge technology development than others.
- Defence is an area where government procures a large amount of advanced technology and deploys R&D spending to support this. At the Spring Statement, the government announced UK Defence Innovation (UKDI), a new organisation to work with innovative firms to rapidly get cutting-edge military technology into the hands of British troops and create high skilled jobs across the UK. UKDI will significantly simplify and consolidate the MOD innovation landscape, drive significantly faster innovative procurement, actively foster a strong UK defence technology sector, and unlock the full potential of defence spending for wider economic spillovers. UKDI will have a ringfenced budget of £400 million initially, which will increase in future years.
- The United Kingdom is committed to staying abreast of international procurement trends and we are proud of how the Procurement Act empowers innovative procurement practices. We actively engage with international partners through various bilateral and multilateral forums (such as the OECD as well as the GPA and CPTPP), to exchange ideas and best practices, covering all aspects of public procurement, including innovation. In developing the Procurement Act, we established a Procurement Transformation Advisory Panel which included international experts so that we could learn from best practice in other countries.

b) What impact assessment has been made of major Treasury policies such as R&D tax credits? Are recent reforms of R&D tax

credits making them more effective at supporting innovation in the UK?

- At Autumn Budget 2024, the Government committed to periodically evaluating the R&D reliefs to ensure they are as effective as possible and underpinned by a credible, up to date evidence base⁵³.
- The R&D reliefs have been evaluated at regular intervals. In 2020, HMRC estimated that the RDEC scheme incentivises £2.40 to £2.70 additional R&D for every £1 of public money spent.⁵⁴ In 2019, an external evaluation estimated that the SME scheme incentivises £0.60 to £1.28 additional R&D for every £1 of public money spent⁵⁵.
- The Government has committed to maintaining the generosity of the rates in both the merged R&D expenditure credit (RDEC) scheme and Enhanced Support for R&D Intensive SMEs (ERIS)⁵⁶. Overall, R&D reliefs will support an estimated £56 billion of business R&D expenditure in 2029-30, roughly a 20 per cent increase from £47 billion in 2022-23.
- The Government is also committed to strengthening the administration of the reliefs to reduce the unacceptable levels of error and fraud, and to provide greater certainty and predictability to genuine claimants⁵⁷.

⁵³ [Corporate Tax Roadmap.pdf](#)

⁵⁴ [Evaluation of the Research and Development Expenditure Credit \(RDEC\)](#)

⁵⁵ [R&D Tax Relief for SMEs Evaluation](#)

⁵⁶ [Corporate Tax Roadmap.pdf](#)

⁵⁷ [Corporate Tax Roadmap.pdf](#)