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Bleeding to death: the science and technology growth emergency

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Science and Technology Committee

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Q in footnotes refers to a question in oral evidence.

SUMMARY

The UK economy is bleeding out in a national crisis of growth, especially in the science and technology sectors. The risk is that the Government will not carry out the radical reforms needed before it is too late.

The “failure to scale” for UK technology companies is not new. It has been a deep-rooted problem. But we are in a new technological and geopolitical context, with the rise of AI and the fracturing of the old global order. Technological sovereignty—who owns and operates critical technologies—is more important than ever. Domestically, the UK has seen sluggish productivity growth and near-flat real wages since the global financial crisis. The UK economy is simply not working, and the consequences are easy to see.

This has now reached a crisis point. The UK has seen a procession of promising science and technology companies moving overseas rather than scaling here. The UK’s inability to retain the economic benefits of its R&D endeavour is a fatal flaw in any growth strategy.

We judge that decisive and speedy action across Government could staunch the bleeding. Clear leadership from the Prime Minister and Chancellor is needed now. We believe that a National Council for Science, Technology and Growth, modelled on the National Security Council, must urgently be established and start to take action.

The Government has set out in the Industrial Strategy to make the UK “one of the top three places” to scale a business and to secure the first trillion-dollar technology company in the UK by 2035. These are worthy ambitions, and some reforms are underway. The UK is sliding in the opposite direction, but it still has a chance to seize the enormous opportunities for technological and economic growth that we are currently letting slip through our fingers. Action and coordination across the whole of Government is urgently required.

The UK has an internationally competitive research base, especially in its universities, albeit this is now under financial threat. There is a healthy and growing scene of start-ups and spin-outs; great progress has been made at their early stages. But the UK has been less effective both in scaling up companies that start in the UK and in diffusing new science and technologies across the economy. The result is a country with four of the top ten global universities, but only three of the top 100 industrial R&D spenders globally and none in the top ten.

Companies looking to scale up are hard-put to find late-stage capital from the UK. They are often forced to seek funding overseas, typically in the US, and this leads to a strong bias towards promising start-ups being acquired or floating overseas. The UK risks becoming an ‘incubator economy’ whose young, fast-growing companies continually move abroad, taking much of the economic benefit in jobs and tax receipts with them.

This lack of capital has several causes. The UK’s institutional investors, especially pension funds, are fragmented and risk-averse. Fragmentation means pension funds don’t have the scale to allocate significant assets to high-risk, high-reward investments in science and technology companies. 72% of the US’s venture capital funding comes from pension funds, compared to just 10% from the UK. In 1997, pension funds allocated 50% of their assets to UK equities: now it’s less

than 5%. The result is that UK companies are starved of investment. Selling ourselves short does not serve the interests of British pension-holders.

The UK's capital markets are not working, either. Companies list overseas with the perception that higher valuations are available there, which reduces activity and capital in the UK market, perpetuating a vicious cycle. In the first eight months of 2025, only 7 UK companies listed on the London Stock Exchange compared with 129 in the US. Newly listed UK companies raised less capital over this time than even the Angolan stock exchange, as many promising companies shifted listings overseas or returned to private ownership.

Public investment institutions like Innovate UK, the British Business Bank and National Wealth Fund potentially have a key role to play in supporting the domestic technology sector. But they are small relative to overseas comparators, and are overly complicated; they must be consolidated, or at a minimum joined up more effectively. Businesses want a 'single front door' to understand what support might be available, but instead find a confusing and often bureaucratic web of organisations and support that is often slow and spread too thinly.

Early contracts are vital for technology companies to grow: a contract can be worth far more than a grant. Contracts can anchor companies to remain and grow in the UK. But early-stage UK companies can struggle for this revenue. Risk-averse and inflexible government procurement shuts out SMEs from government contracts. Combined with the lack of larger technology companies based in the UK which could provide contracts, startups often have no choice but to seek equity funding from overseas, which can lead to a loss of control over the company.

The Government's laissez-faire approach to technological sovereignty must change. All too often we have allowed promising UK science and technology companies and lucrative contracts to be acquired by overseas investors, especially in the US. We must nurture and support these companies to remain here, anchoring them firmly into the structures of government, academia and commerce, and make it the obvious choice for them to grow in the UK.

It is clear to us that a government that is really serious about growth and wealth creation cannot keep in place costly visa barriers to the scientists and entrepreneurs it hopes to attract to the UK; nor can it allow the life sciences industry to collapse because of short-term fiscal considerations. The fact that these issues are unresolved is symptomatic of a wider dysfunction in cross-government coordination.

Our report makes a range of recommendations to fix the long-standing failure to scale. These include:

- **Leadership from the Prime Minister and Chancellor**, through a newly empowered "National Council for Science, Technology and Growth", is urgently needed. It should be modelled on the National Security Council. It should include the PM, Chancellor, Minister of State for Science, and Principal-level representation from DSIT, DBT, the Home Office, MoD, DHSC, DESNZ, DWP, and Department for Education, as well as key public investment bodies and scientific advisers. It should meet frequently to prioritise science and technology for growth, break down barriers to progress, and break the UK out of its doom loop. It should be able to meet

responsively to make decisions and call in ad-hoc attendees as needed. The Council would provide strategic coherence and effective delivery, which is evidently lacking from existing structures. (See Chapters 2 and 6 for further discussion.)

- **Institutional investors:** We welcome the Mansion House Reforms, but the Government must press on with implementation, and go much further. The shocking 90% decline in the proportion of domestic pension fund investment in UK equities is a significant factor behind our economic malaise, but as its origins are largely political, it can be reversed politically. We do not believe that the average contributor to a UK pension fund would think it right that most of their contributions should go to boost overseas economies, starving their own country of investment. The Government should ask pension funds to survey their active contributors on this matter, and respond accordingly. The Government should reserve powers including mandation and withholding tax relief from funds that fail to meet their Mansion House targets. With the Pension Schemes Bill currently in the Commons, the government has a ready opportunity to make the legislative changes needed.

The shrinkage in domestic investment has led also to a shrinkage in the capacity of fund managers to assess early stage and higher risk investments. The Government should explore possibilities short of mandation to incentivise pension funds to invest in science and technology companies. Consolidation of DC pension funds, including the large number of Local Government pension funds, should be pursued vigorously, and investment in UK-based technology companies should be tracked to ensure the reforms are benefiting the sector. (See Chapter 3.)

- **Public investment bodies:** Innovate UK, the British Business Bank (BBB), and the National Wealth Fund (NWF) all have critical roles to play in what should be a coherent system, but they need to work much more closely together. There is a strong argument for consolidating them into one body, and scaling them up to provide a competitor to the sovereign wealth funds available overseas. Innovate UK, under new leadership, must streamline, simplify, and accelerate its grants. An Innovate grant should be a mark of technological due diligence leading to a pipeline of public and private investment, or it risks being seen as a bureaucratic bridge to nowhere. The BBB has several good schemes to encourage institutional investment into science and technology companies, but these should be expanded. The NWF is new to investing in technology companies and now has a broad remit. A specific target is needed to provide late-stage financing to a small number of promising technology companies, with a view to keeping them in the UK. The public investment bodies should make more extensive and effective use of their ability to take on, share, and reduce risk, including through guarantees. (See Chapter 4.)
- **Public procurement:** Public procurement is a crucial lever that can unlock growth of innovative science and technology companies in the UK. The Government must build capacity if procurement is to be an innovation engine, supporting UK-based supply chains: outcome-based, swift, flexible, rather than bureaucratic and risk averse processes that favour large incumbents. It should set a target for each procuring body to spend a mandatory percentage of their budgets with innovative UK-based SMEs to build capacity, as the US has done with SBIR (Small Business

Innovation Research). Ministers need to back officials who procure innovative, domestic solutions, celebrating successes and accepting failures. The Government needs to adopt a risk-on, long-term mindset, changing the institutional incentives that hold back innovation. For critical frontier technologies, the Government should consider Vaccine Taskforce-style procurement to stimulate their development in the UK. (See Chapter 4.)

- **People, networks, and skills:** Career structures, pay and incentives must change to allow easier movement between academia, business, and government, so that each of those sectors acquires ready access to the skills and networks of the others. It should encourage universities to make such moves attractive. The Government must encourage the formation of the dense networks between financiers, entrepreneurs, scientists and officials that work so well in Silicon Valley. It should help entrepreneurs navigate the complex landscape and unblock slow decision-making processes by introducing concierge services that can identify high potential science and technology companies and refer them to relevant decision-makers. There is an increasing need for skills training across the Industrial Strategy priority areas; equally, the Government must urgently reform its counter-productive visa policies for global talent and seize the opportunity to attract scientists and technologists from overseas. When talented scientists and entrepreneurs want to move here, the UK should be rolling out the red carpet, rather than red tape. (See Chapter 5.)
- **Research foundations:** The UK has immense scientific and technological potential, but it cannot take its research base for granted. The UK has long vested its hopes in its excellent research base in universities and companies that spin out from them. But this is now under threat due to the unresolved higher education funding crisis, which the Government must resolve before it is too late. Yet, instead of tackling the problem, the Government is proposing counter-productive actions like a levy on international students. (See Chapter 5).

These reforms will require urgent, sustained, and coordinated action across Government if the ambitions of the Industrial Strategy are to be realised. There is a crucial ‘horizontal role’ for the Department for Science, Innovation and Technology to play in promoting, monitoring and evaluating progress across Government on addressing the scale-up problem, and supporting the National Council for Science, Technology and Growth.

But none of this will succeed without leadership from the top to end the strategic drift. There is a rapidly closing window of opportunity to get a grip on this problem. The Government needs to help the entrepreneurs, unlock investment, change the culture around innovation, and organise its efforts to succeed.

The most likely candidate to become the Government’s “trillion-dollar tech company by 2035” probably already exists. The Government must stop the bleeding: convince that company, and dozens of others looking overseas, that the best future for them is in the UK.

Bleeding to death: the science and technology growth emergency

CHAPTER 1: INTRODUCTION

1. The UK has a globally competitive research and development (R&D) base but a number of factors have meant that it has been less effective at commercialising R&D. These include the shift to research taking place in universities and away from public sector laboratories,¹ and the financial and services-sector led growth since the 1980s which went alongside deindustrialisation, leaving few major R&D intensive companies based in the UK outside of the life sciences.² Furthermore, the large R&D spenders are all well-established companies: the UK (and perhaps Europe more broadly) has not been able to develop a globally competitive answer to the large technology companies of the US.
2. In more recent years, government policies to encourage start-up and spin-out companies have led to a relatively healthy ecosystem for early-stage companies, compared to some European competitors, although the UK is still lagging behind the United States. Measured by the number of “unicorns”³ or the amount of venture capital raised,⁴ the UK performs reasonably well,⁵ although this masks a London-dominance and bias towards sectors where the UK does well traditionally, especially in technology companies focused on finance and professional services, and in life sciences.⁶ This position may be at risk due to declining early-mid-stage venture capital (VC) investments and the rise of competitors.⁷
3. Despite the relative health of early-stage investment, science and technology companies struggle to obtain scale-up finance domestically owing in part to the behaviour of the UK’s institutional investors.⁸ This applies to venture-

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- 1 Which often provided “end customers” for basic research and practical applied problems for researchers to solve, a process only partially compensated by universities being encouraged to commercialise their research; see Richard Jones, The Productivity Institute, *Science and innovation policy for hard times: an overview of the UK’s Research and Development landscape*, 16 December 2022
 - 2 The top 10 R&D spenders in the UK are AstraZeneca, GSK, HSBC, Lloyds Bank, Rolls-Royce, Unilever, BT, Shell, NatWest, and Reckitt Benckiser. These are three banks, two pharmaceutical companies, one aerospace/defence, one food, one household goods, one telecoms company, and one oil/gas major company. Of these only AstraZeneca, GSK and HSBC are in the top 100 spenders globally and only AstraZeneca is in the top 20. House of Commons Library, *Research and Development Spending*, [SN04223](#), 11 September 2023
 - 3 Unicorn companies are start-up companies valued in excess of \$1bn.
 - 4 UK companies raised more venture capital than any other country in Europe in 2024. Department for Science, Innovation and Technology, *Science and Technology Framework*, 28 April 2025
 - 5 Startups Magazine, *The UK is the unicorn hub of Europe* [accessed on 18 August 2025]. 59% of Unicorns/Future Unicorns in the EU were in the UK.
 - 6 38% of the valuable start-up companies in the analysis above were in the fintech sector.
 - 7 Financial Times, *The UK is at risk of losing Europe’s tech crown*, 10 June 2024. Recent years have seen a global decline in VC driven in part by higher interest rates and consolidation of funds into a smaller pool of Artificial Intelligence companies.
 - 8 See Chapter 3.

capital backed companies which have moved beyond Series A funding,⁹ as well as to companies that wish to go public, where they encounter limited pools of capital on the London-based stock exchanges, leading many companies to conclude that they will attract higher valuations by listing overseas. Venture-backed companies often seek scale-up funding from abroad, especially the US, where deeper capital pools and a larger market are available.¹⁰ With few large R&D intensive companies based in the UK, when smaller companies are acquired, this will typically be by an overseas buyer. The result is a persistent failure for promising early-stage companies to scale up and remain in the UK.

4. This ‘failure to scale’ is not a new issue for the UK. The ScaleUp Institute was established in 2014 following a report commissioned by the then Government, and has been producing annual reports since.¹¹ The Prime Minister’s Council on Science and Technology has written multiple times on this issue;¹² this Committee covered this and similar issues in its last inquiry¹³ and in 2022;¹⁴ and the Communications and Digital Committee warned of the UK becoming an “incubator economy” as companies fail to scale.¹⁵ Despite this attention the problem remains unresolved, with several significant technology companies moving overseas during this inquiry.¹⁶
5. However, the UK finds itself in a new geopolitical and technological context which increases the urgency of addressing this problem. As the Government’s own Digital and Technologies Sector Plan puts it, “the global context is changing, and we need to redouble our efforts if we want to seize opportunities in an increasingly unstable geopolitical environment where technology is changing at a rapid pace.”¹⁷ This, combined with the Government’s imperative to deliver economic growth, has added a renewed urgency to ensuring that science and technology policy provides maximum benefit to the UK.
6. The Government has acknowledged this in its Industrial Strategy, published in June, which sets ambitions including that the UK should become one of the top three countries in the world in which to “create, invest in and scale-up a fast-growing technology business”, and for the UK to have “a trillion-dollar technology business” by 2035.¹⁸

9 Typically, venture-capital backed companies go through a series of funding rounds by offering a share in the business in exchange for funding. Early rounds are often called “pre-seed” or “seed” and may involve an “angel” individual investor or venture capital group; later rounds are lettered by Series A/B/C/D etc to indicate the first, second, third, or fourth round. See: British Business Bank, [*A guide to equity funding stages for your business*](#) [accessed 3 September 2025]

10 Capital markets and the private finance aspects of why there is less capital available in the UK will be discussed later.

11 ScaleUp Institute, [*The Scale-up Report 2014*](#), November 2014

12 Council for Science and Technology, [*Letter to the Chancellor on scale-up finance for innovative science and technology companies*](#), 7 October 2024

13 Science and Technology Committee, [*Don’t fail to scale: seizing the opportunity of engineering biology*](#) (1st report, Session 2024–26, HL Paper 55)

14 Science and Technology Committee, [*“Science and technology superpower”: more than a slogan?*](#) (1st Report, Session 2022–23, HL Paper 47)

15 Communications and Digital Committee, [*UK risks becoming an ‘incubator economy’ if we don’t take action to support our tech companies to scale up*](#), 3 February 2025; Communications and Digital Committee, [*AI and creative technology scaleups: less talk, more action*](#) (2nd Report, Session 2024–26, HL Paper 71)

16 Including Oxford Ionics being bought by IonQ, Deliveroo being acquired by DoorDash after an initial listing on the LSE that was seen as unsuccessful, and Wise planning to list on the NASDAQ to name a few.

17 HM Government, [*Industrial Strategy: Digital and Technologies Sector Plan*](#), 23 June 2025, p6

18 HM Government, [*Industrial Strategy: Digital and Technologies Sector Plan*](#), 23 June 2025, p7

7. Yet, outside of the slogans and promises, the reality is increasingly stark. The current state of the life sciences sector in the UK is illustrative of a lack of long-term thinking and coordination in Government policy. Professor Sir John Bell, then President of the Ellison Institute for Technology, told us in April 2025 that: “The industry has never been so negative about the UK. The major pharmaceutical companies have said to me, in one form or another, that they are out and are not coming back.”¹⁹ He warned that “if we lose our big pharma companies, the life sciences here is done”²⁰ and noted issues around drug pricing and “lots of promises but no delivery” in areas such as clinical trials and data.²¹ Since that session, Merck has cancelled its £1bn UK research centre, describing the UK as “not internationally competitive”, and there are strong rumours that AstraZeneca has now upgraded its US share listing amidst a rumoured move.²²
8. If the UK loses its most successful science and technology sector, most valuable technology companies, and life sciences expertise, the consequences would be catastrophic. If the UK is to arrest its decline, leadership and coordinated action is needed. This report sets out some of the reforms that we believe are urgently needed to make this possible.
9. Chapter 2 sets out the scaling-up problem and some of the overarching factors behind its persistence, including risk aversion and a lack of attention to the national interest, with the remaining chapters covering these issues in more detail. Chapter 3 covers the role of private sector financing and what the Government can do to encourage private investors to address the scale-up gap. Chapter 4 considers reforms to public procurement in supporting innovative companies, and the roles of the public sector innovation investment bodies, including Innovate UK, the British Business Bank, and the National Wealth Fund. Chapter 5 addresses non-financial barriers to companies scaling, including people and skills, infrastructure, standards and regulation and the urgent need to safeguard and support the R&D base in universities. Chapter 6 discusses cross-government leadership, coordination, monitoring and delivery of efforts to address the scale-up problem.
10. We issued our call for evidence, launching this inquiry, on 20 March 2025.²³ We received over a hundred pieces of written evidence and heard from 40 witnesses in oral evidence. We are grateful to all those who provided their views over the course of the inquiry; a full list of all those who contributed is contained in Appendix 2.

19 [Q 41](#) (Sir John Bell)

20 [Q 45](#) (Sir John Bell)

21 [Q 45](#) (Sir John Bell)

22 Financial Times, [Merck slams UK as it scraps £1bn London drug research centre](#), 10 September 2025; Financial Times, [Investors fret over talk of AstraZeneca US move](#), 2 July 2025; Financial Times, [AstraZeneca’s US listing to leave £200mn UK stamp duty hole](#), 2 October 2025

23 Science and Technology Committee, [Call for Evidence—Financing and Scaling UK Science and Technology: Innovation, Investment, Industry](#)

CHAPTER 2: FAILING TO SCALE IN THE UK

Characterising the scale-up problem

11. Our witnesses set out the context and history of the UK's difficulties with scaling up. As Professor Richard Jones, Professor of Materials Physics and Innovation Policy at the University of Manchester, put it:

“the economic context that we are currently in ... is one of productivity growth having essentially stalled in the mid-2000s. That has had the direct consequence of flatlining wages ever since and the difficult fiscal situation that successive Governments have found themselves in ... we should confront the fact that the UK economy really is not working.”²⁴
12. He added: “We know that productivity growth comes from innovation”, of which R&D is a major part, but that “the private sector will always underinvest in R&D because of the difficulties of capturing all its benefits.”²⁵ He argued that not enough private sector R&D was being done by UK-domiciled companies and that while overseas domiciled companies did still conduct significant R&D in the UK, such companies were “footloose” and more likely to move their operations abroad compared to those based in the UK.²⁶
13. Professor Jones thought that, while it was “unquestionable” that the UK had “internationally competitive discovery science”, and “very effective spin-out and start-up ecosystems” in places like Cambridge, London, and Oxford, this contributed to regional imbalance in the UK economy. Further, “our huge success at discovery science comes at the expense of some neglect of translational research”, which he attributed to “a substantial decrease in government applied research” after the late 1980s, when it was decided that “Government should not be involved in near-market research”.²⁷
14. Nonetheless, witnesses generally felt that the UK had developed a relatively healthy start-up ecosystem. Julia Willemyns, co-founder of UK Day One (now the Centre for British Progress), noted that “we have a lot of start-ups in the UK. The early-stage VC funding ecosystem is quite strong.”²⁸ Rt Hon Greg Clark, former Secretary of State for Business, Energy and Industrial Strategy, said that “we used to fret a lot about start-ups”, but now there were twice as many as in the 1980s: “we turned start-ups around”.²⁹
15. In its Industrial Strategy, the Government noted that the UK has created over 185 unicorn companies and ranks third globally for venture capital investment, ahead of European competitors.³⁰
16. However, witnesses were not universally positive about early-stage venture capital investment. Ian Merricks, Founding Partner of White Horse Capital, noted that “the Q1 of this year [2025] was the lowest quarter for ... seven years.” Both Series A and Series B funding had reduced consistently over

24 [Q 1](#) (Professor Richard Jones)

25 [Q 1](#) (Professor Richard Jones)

26 [Q 1](#) (Professor Richard Jones). As previously noted, only AstraZeneca and GSK appear in the top 100 worldwide R&D spenders.

27 [Q 2](#) (Professor Richard Jones)

28 [Q 15](#) (Julia Willemyns)

29 [Q 64](#) (Greg Clark)

30 HM Government, *Industrial Strategy: Digital and Technologies Sector Plan*, 23 June 2025

those seven years.³¹ This was in the context of a global decline in VC investment after 2022 due to higher interest rates which had left the UK with a larger global proportion of a smaller overall pool of VC investment.³²

17. We also heard from Lord Willetts, Chair of the Regulatory Innovation Office, that “VC has a different function in the UK” compared to the US. He explained that: “In the UK, when companies have VC investors and are then launched on to the market, that is an opportunity for large US investors to buy them, whereas US VCs try to grow their companies in the US.” He warned about the potential that “some of these mechanisms are creating a marketplace for the big guys to come in and buy” UK start-ups, and so the UK needed to ensure that “it should at least be a rational decision for a US investor to leave as much activity as possible in the UK” due to the strength of its R&D ecosystem.³³ The British Business Bank’s analysis shows that the UK venture capital raises more, proportionally, than the US in fintech, but significantly less in life sciences, R&D intensive sectors, and deep tech. The Bank says that “In these sectors, VC investment requires specialist technical and scientific knowledge, as well as large pools of patient capital, areas which remain challenges for UK companies seeking to scale.”³⁴
18. It is important to note that being a venture-backed start-up is not the only route to scaling a science and technology company. Work by Dr David Connell, Senior Research Fellow at the University of Cambridge, and his colleague Professor Bobby Reddy argues that revenue-backed, rather than venture-backed companies, often retain a greater level of founder control, and have ‘anchor customers’ domestically, which give the company significant repeat business in the UK and can therefore help retain these companies domestically.³⁵ Dr Connell explained that there was a need to help founders “get off the ground and build some value without giving away too much equity to the VCs, who will then take more and more until eventually they have control”.³⁶ Because of the nature of venture capital, where only a small number of businesses are successful, the “VCs must sell the ones that are [successful] in order to satisfy their investors”, often to overseas buyers, contributing to “the truncation of further growth in the UK”.³⁷ He noted that successful, founder-controlled companies which remained in the UK to scale (at least initially) such as “ARM, Dyson, Mike Lynch’s Autonomy, Renishaw, Oxford Instruments, Sage and Aveva have all essentially avoided or delayed raising venture capital.”³⁸
19. While access to early-stage finance is in relatively good health, this does not translate to scale-up companies. Irene Graham, CEO of the ScaleUp Institute, illustrated the longstanding discrepancy between start-up and

31 [Q 110](#) (Ian Merricks)

32 British Business Bank, [Press release: UK now the third largest venture capital market in the world, with biggest increase in share of global investment](#), 11 June 2024

33 [Q 152](#) (Lord Willetts)

34 British Business Bank, [Press release: UK now the third largest venture capital market in the world, with biggest increase in share of global investment](#), 11 June 2024

35 He and his co-author, Professor Bobby Reddy, make a range of recommendations around how to help more companies scale in the UK, including diverting some of the R&D tax credit funding to innovative procurement, grants, and SPACs, in “Selling less of the family silver.” CBR, [Selling Less of the Family Silver: Better UK innovation and industrial policies](#), July 2024

36 [Q 65](#) (Dr David Connell)

37 [Q 64](#) (Dr David Connell)

38 [Q 64](#) (Dr David Connell)

scale-up companies. The original Scale-Up Report by Sherry Coutu,³⁹ which led to the creation of the Institute, was commissioned by the Government in 2014 as “the OECD had placed us third in the world at start-ups and 13th in the world at scaling up”.⁴⁰ The Institute’s most recent review in 2024 noted that “many of the same fundamental challenges remain”⁴¹ and the struggles of UK companies to scale up have been widely commented on, including by the reports cited earlier and in the media.⁴²

20. Many witnesses set out concerns around this lack of access to domestic scale-up finance, particularly from risk-averse pension funds, as well as markets for companies to sell into.⁴³ This also applies to the UK’s public capital markets, which provides an incentive for companies to float or list overseas. There is a perception, which may not be entirely borne out, that higher valuations are available on US markets.⁴⁴
21. Louis Taylor, CEO of the British Business Bank, was one of many witnesses to set out the clear negative consequences to the UK of companies moving elsewhere (either physically or in terms of listing venue or ownership):

“a lot of the private money that has been magnetised so far has been overseas money—particularly from US venture capital funds—rather than UK institutional money. The problem has been that companies tend to gravitate towards where their capital came from so, when they have pretty much exclusively US money on their cap table, that is when they start to gravitate towards the US. Just as they are becoming economically interesting, they leave the UK, but we need to retain them.”⁴⁵
22. The Industrial Strategy set out a range of interventions that are intended to address the scale-up problem and the ambitious targets described above. These include the Mansion House reforms intended to increase investment by UK institutional investors in UK technology companies, as well as increasing the funding for public investment bodies such as the British Business Bank and National Wealth Fund, which the strategy tasked with different roles in providing scale-up finance (see Figure 1).⁴⁶ This report discusses these interventions in Chapter 3 and 4 respectively.

39 ScaleUp Institute, *The Scale-up Report 2014*, November 2014

40 [Q 110](#) (Irene Graham)

41 ScaleUp Institute, *Faster, Higher, Stronger: Scaling Together: Scaleup Annual Review 2024 Highlights*, November 2024

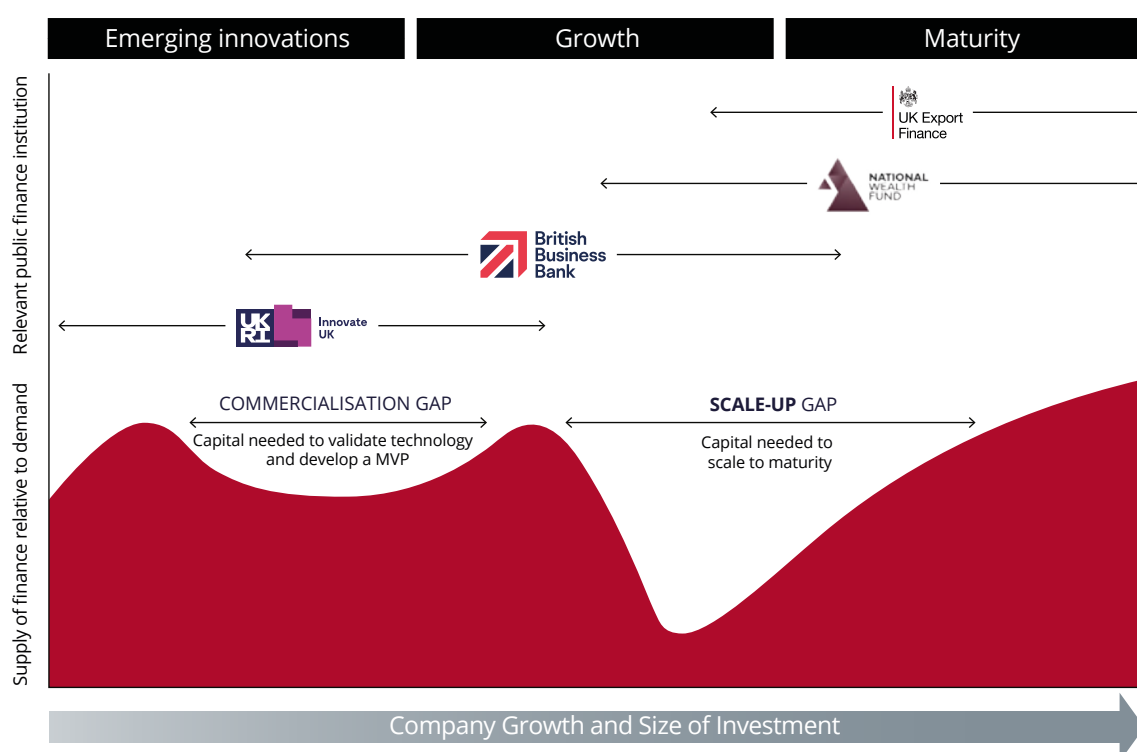
42 Financial Times, *The UK has a problem with corporate scaling*, 10 June 2025; Financial Times, *Europe’s inability to scale start-ups could be disastrous*, 11 June 2025; Tony Blair Institute, *From Startup to Scaleup: Turning UK Innovation Into Prosperity and Power*, 9 June 2025

43 For instance, [Q 19](#) (Stian Westlake)

44 See, for instance, [Q 174](#) (Chris Vann), [Q 92](#) (Sir John Lazar)

45 [Q 203](#) (Louis Taylor)

46 HM Government, *Industrial Strategy: Digital and Technologies Sector Plan*, 23 June 2025

Figure 1: UK Public Financial Institutions

Source: Department for Business and Trade, *The UK's Modern Industrial Strategy*, p 52

23. Despite these policies, however, start-up and spin-out companies have continued to move overseas, even during this inquiry. One prominent example was Oxford Ionics in June 2025, which Tom Adeyoola, Executive Chair of Innovate UK, noted “was bought for \$1 billion by an American company only three weeks ago ... We need to make sure that that does not happen with the rest” of the UK’s promising start-ups, “otherwise we are just subsidising R&D”. He said that “we need to be sure that we have an attractive enough environment that the \$1 billion exit versus staying and scaling are almost on par, if not better.”⁴⁷ OrganOx, an Oxford spin-out creating organ preservation devices for transplant, was sold to a Japanese concern for \$1.5bn in August 2025.⁴⁸ The fintech company Wise also announced in June 2025 that it would move its primary listing to New York, triggering the Financial Times to describe the lack of domestic equity capital as “an emergency for the British economy”.⁴⁹ There were also rumours that AstraZeneca, the largest R&D spender in the UK, was considering a move.⁵⁰ It has since upgraded its US listing.⁵¹
24. A perennial issue with industrial policy is the failure to pursue a long-term strategy. Angus Hanton, co-founder Intergenerational Foundation and author of *Vassal State: How America Runs Britain*,⁵² said that “An industrial strategy probably needs to be cross-party... we have had too much reversal

47 Q 234 (Tom Adeyoola)

48 University of Oxford, *Oxford University spinout OrganOx to be acquired by Terumo for a record \$1.5bn*, 25 August 2025.

49 Financial Times, *Wise’s move to New York is an emergency for the UK economy*, 12 June 2025

50 CNBC, *AstraZeneca CEO doubles down on U.S. amid rumors of listing shift*, 29 July 2025

51 Reuters, *AstraZeneca’s US listing may pull other firms from London in its wake*, 2 October 2025

52 Angus Hanton, *Vassal State: How America Runs Britain* (London: Swift Press, 2024)

when a different ideology takes over.”⁵³ The Government’s Industrial Strategy Council includes a former Conservative minister and witness to this inquiry, Rt Hon Greg Clark, who thought his inclusion “indicates a sense of continuity on a cross-party basis”.⁵⁴

25. Lord O’Donnell, former Cabinet Secretary (and Permanent Secretary of HM Treasury) said that DSIT was the best place to lead on this, but that it needed a version of the National Security Council, a high-profile Cabinet sub-committee chaired by the Prime Minister, in “the economic sphere” to “sort out these big strategic issues.”⁵⁵ He explained that: “We have a constitution that is all about departments, and there is very little about cross-department work. That makes life really hard ... The National Security Council definitely worked, and extrapolating that to lots more areas would be a really good idea.”⁵⁶ Dr David Cleevely suggested that there should be a “Cross-Government Scaling Authority chaired by the Prime Minister and Chancellor”.⁵⁷ Dr Alicia Greated, Executive Director, Campaign for Science and Engineering (CaSE), said that “we need leadership from the very top of Government”.⁵⁸ Dr David Connell said that “in my view, the government machine lacks both the data and, for want of a better word, a brain to oversee the entire policy portfolio, do the analysis, explore options and monitor outcomes.”⁵⁹
26. Witnesses including Stian Westlake, Executive Chair, Economic and Social Research Council (ESRC), UKRI, raised the importance of the Industrial Strategy being consistently followed once in place, while Lord Willetts talked about iterating on the Strategy once it is produced.⁶⁰ Greg Clark and Lord O’Donnell raised the concerns that without industrial and cross-party buy-in the Strategy would be short-lived. Greg Clark said that “we need to crack this question of how it can endure” and welcomed the Industrial Strategy Advisory Council being put on a statutory footing.⁶¹ He also said that the Industrial Strategy “has to be a whole-of-government exercise” which was “integrative” of wider policies, ensuring that “policies being pursued by one department do not conflict with those by another.” There was a need for mechanisms to bring departments together and “broker what the strategy is to be.”⁶²
27. **The UK’s pure research base remains globally competitive. But long-term factors in its R&D ecosystem and economy have hindered companies’ growth. Outside professional services and the life sciences, it lacks large-scale companies.**
28. **The UK is in a ‘doom loop’: its capital pools are shallow, its institutional investors risk-averse, and its technology companies undervalued. Policies to encourage start-ups and spin-outs have fostered more**

53 [Q 25](#) (Angus Hanton)

54 [Q 66](#) (Greg Clark)

55 [QQ 60-61](#) (Lord O’Donnell)

56 [Q 61](#) (Lord O’Donnell)

57 Written evidence from Dr David Cleevely CBE FREng FIET ([SUK0107](#))

58 [Q 2](#) (Dr Alicia Greated)

59 [Q 64](#) (Dr David Connell)

60 [Q 25](#) (Stian Westlake), [Q158](#) (Lord Willetts)

61 [Q 66](#) (Greg Clark). See also HM Government, *Industrial Strategy Advisory Council* [accessed 2 September 2025]. Mr Clark is a member of the Council, as is another of our witnesses, Sir John Kingman.

62 [Q 66](#) (Greg Clark)

early-stage companies, but these then struggle for domestic scale-up finance. Without this finance, the UK's strong R&D base risks supporting an 'incubator economy' of venture-backed start-ups that eventually move overseas in search of funding. The UK needs a clear plan to retain more companies.

29. **The Government's Industrial Strategy seeks to address this problem, but the gap between rhetoric and reality is stark and several significant companies have moved overseas as we took evidence for this inquiry. Historically, UK industrial strategies have been small in scale and have not lasted, particularly due to a lack of cross-party consensus. This undermines attempts at a sustained partnership with the private sector.**
30. **The 'failure to scale' for UK science and technology companies is not new. Its causes have deep roots, both domestic and international. However, it has also been well studied and many policy proposals suggested. Solving this problem will require serious, cross-government, co-ordinated, long-term, and radical efforts. The Government will need to use every lever it has to support UK-based science and technology companies and encourage private investors to do the same. It is essential that there is clear and decisive leadership, especially from the Prime Minister and the Chancellor. Coordinating the urgently needed action across Government will require a forum for this leadership, as existing structures have not stopped the bleeding.**
31. *We recommend that a National Council for Science, Technology and Growth, modelled on the National Security Council, should be empowered to tackle the growth mandate, with a particular focus on science and technology and the scale-up issue. It should include the Prime Minister, Chancellor, DSIT, DBT, the Home Office, MoD, DHSC, DESNZ, DWP, and Department for Education, and the public investment institutions. It should meet frequently to drive through reforms that will support technology for growth and the scale-up of UK companies. We return to this further in Chapter 6 and set out reforms it should implement in the remainder of this report.*

Risk appetite, the Treasury, and long-termism

32. The Treasury has often come in for criticism for lacking focus on economic growth.⁶³ Stian Westlake acknowledged that: "There has always been a challenge that the Treasury has three jobs: it is an economic growth ministry, but also a finance ministry and a budgetary ministry, and it always struggles to prioritise those things. Increasing the resources that the Treasury has to think about economic growth would be beneficial."⁶⁴
33. Lord O'Donnell told us that:

"The biggest problem in the Treasury and the biggest problem for Government as a whole is that you are crucified for failure, and nobody gives a monkey's about success ... the National Audit Office [and Public Accounts Committee] ... does big hearings, and you make your political

63 Financial Times, *Britain's mighty Treasury needs to change*,¹⁴ May 2024; Financial Times, *It is time to rewire 'Treasury brain'*, 15 March 2025

64 [Q 24](#) (Stian Westlake)

career by saying, 'This is terrible. You shouldn't have done this'. It happens all the time, so you have built into the system a massive degree of risk aversion."⁶⁵

He said that the Treasury often has "really poor cost-benefit analysis done. That is either because they are not asking the right questions or do not have enough capacity".⁶⁶ He argued that incentive structures needed to change in order to shift risk appetite:

"if you want to do something fundamental to change the risk aversion particularly among civil servants, can we kindly celebrate some successes? ... If you are going to test and learn, you are going to fail quite frequently, and that is a good thing, not a bad thing. At the moment, the biases are massively towards 'Let us just be safe'."⁶⁷

34. He told us that the Green Book,⁶⁸ the Treasury's guidance on how to appraise policies, programmes and projects, "does not work for innovative projects" and it should be changed to allow for a "portfolio approach" that would allow for a range of projects with different risk appetites.⁶⁹ The Campaign for Science and Engineering (CaSE) argued that: "A culture of risk aversion and the focus of [the Government's] procurement policy on achieving the lowest cost or narrowly defined value for money can hinder access to innovative solutions." Cleantech for UK described Government Value for Money frameworks as "restrictive".⁷⁰
35. Lord Vallance of Balham, Minister for Science, described the National Audit Office (NAO) and House of Commons Public Accounts Committee as "important things that can either clamp down on risk or open up risk taking in an appropriate way". He cited the success of the portfolio approach taken by the Vaccines Taskforce during the COVID-19 pandemic, and said that in the NAO's "new strategy they have been clear that they will accept the risk profile that is presented to them" by Ministers for specific public expenditure projects.⁷¹
36. Risk aversion is not limited to the public sector. Sir John Lazar, President of the Royal Academy of Engineering, said that there was a perception that "investors have a lack of patience, tend to be more risk averse and tend to look for slightly quicker returns" which limited scale-up capital for deep tech companies.⁷² Lord O'Donnell and the Minister for Investment, Baroness Gustafsson, both identified institutional investors and pension funds as "risk averse" for structural reasons that we explore further in Chapter 3, and directly linked this to a lack of investment for UK companies.⁷³
37. Beyond investment, some witnesses suggested that the incentive structures that prevail in the UK economy limited career opportunities for those who might seek to commercialise science and technology, instead incentivising

65 [Q 52](#) (Lord O'Donnell)

66 [Q 53](#) (Lord O'Donnell)

67 [Q 52](#) (Lord O'Donnell)

68 HM Treasury, *The Green Book (2022)*, 16 May 2022

69 [Q 52](#) (Lord O'Donnell)

70 Written evidence from the Campaign for Science and Engineering (CaSE) ([SUK0027](#)) and Cleantech for UK ([SUK0043](#))

71 [Q 287](#) (Lord Vallance of Balham)

72 [Q 90](#) (Sir John Lazar)

73 [Q 221](#) (Baroness Gustafsson)

careers in financial services. Sir John Kingman, Chair of Legal and General and former Chair of UKRI and senior Treasury official, argued that “the Treasury has been covertly pursuing an industrial strategy for a long time” that was focused on the financial sector.⁷⁴ Julia Willemyns thought that the growth of the UK economy being led by the financial sector had consequences for the distribution of talent:

“I had a friend who did a PhD in fusion engineering ... He graduated and where did he go? He went to a quant hedge fund. Why? Because it makes sense to go to a quant hedge fund. If you are someone who is profit-driven, and that should not be a dirty thing to be, you will go where the profits are or to areas that are not blocked in terms of growth.”⁷⁵

She thought “the cultural point” in comparing UK entrepreneurship to that of the US “is overstated ... I do not believe that British people are inherently less ambitious ... it is more about the structural incentives that exist in our economy.”⁷⁶

38. There are signs that organisations are taking steps to attempt to address historic risk aversion. The Treasury’s Green Book is being revised, including “an independent review of the Green Book discount rate to make sure that the government is taking a fair view of the long-term benefits that arise from transformational investments” as well as “greater clarity on the role of the benefit-cost ratio in appraisal”.⁷⁷ However, Lord O’Donnell noted of the Green Book that “the biggest problem is great guidance not being used [by other departments] ... the cost-benefit analyses that are done... are generally quite poor. Quite often that is because it is not clear what the desired outcome is.”⁷⁸
39. **UK science and technology is held back by low risk appetite across institutions, from the Government in procurement, through institutional investors such as pension funds, and even in career choices. There is little incentive to take calculated risks, and often significant disincentives.**
40. *The incentive structures holding back innovation must change. The Government should explore ways to incentivise and reward experimentation with technology, particularly that which supports the growth of UK science and technology companies. It should celebrate successes and provide more direct incentives for risk-taking. Ministers should explicitly encourage innovation within their departments, giving time, space and political cover for officials who innovate and setting up structures in which fear of criticism does not hinder considered risk-taking.*
41. **We heard concerns about how the Treasury assesses the return on investment for R&D projects. The cost-benefit analysis approach of “value for money” does not always capture the wider benefits of R&D investment or innovative government expenditure. This**

74 [Q 83](#) (Sir John Kingman)

75 [Q 11](#) (Julia Willemyns)

76 [Q 11](#) (Julia Willemyns)

77 HM Treasury, *Policy Paper: Green Book Review 2025: Findings and actions*, 11 June 2025

78 [Q 52](#) (Lord O’Donnell)

could be exacerbated by a lack of analytical or policy capacity to pursue economic growth alongside its traditional finance role. *The Government Chief Scientific Adviser and Head of the Government Economic Service should collaborate on revising this approach.*

42. ***Behaviour in the Treasury must change if it is to deliver long-term economic growth. The Treasury must take responsibility for driving growth across the economy, supporting the aims of our proposed National Council. As an example, the review of the Green Book provides an opportunity, which should be seized, for the Treasury to expand its work on understanding R&D and its impact on growth, particularly for investments where the long-term benefits are not captured by standard analysis of project-level value for money.***

Science and technology companies and the UK national interest

43. Marcus Stuttard, Head of AIM and UK Primary Markets, London Stock Exchange Group, told us that: “Time and time again, we see that companies that receive funding from international investors [at] the early stages, tend to gravitate towards that source of finance over time, and then we lose some of the benefits for the UK economy.”⁷⁹ Angus Hanton told us that one of the problems with the UK economy was “the extent to which we have allowed our companies to be taken over in a way that other countries would not—America and Europe do not allow it”, particularly in technology companies. He cited “DeepMind, ARM and Sophos” as examples.⁸⁰
44. Saul Klein, co-founder, Phoenix Court, Non-Executive Director, DSIT and a member of the Council for Science and Technology, set out the consequences of these changes of ownership and the lack of domestic investment: “It means that 80% of the economic value goes to a teacher in Ontario, the Singapore metro system, the Saudi royal family, nurses in Denmark and all the other non-domestic sources of capital that are delighted to invest in our innovation economy”.⁸¹ Written evidence from Oxford Science Enterprises explained that companies moving overseas “diminishes the long-term benefits for the UK economy, including the reinvestment of capital into new ventures and the cultivation of the next generation of entrepreneurs.”⁸²
45. Some of this domestic investment could be provided by public investment banks, but the UK’s are smaller than overseas comparators (see Box 2, Chapter 4).⁸³ For instance, Dr Patrick Nédellec, Science and Technology Counsellor, Embassy of France to the UK, told us that in France, Bpifrance was taking “a more central role in investments for companies ... with €12 billion for loans, €4 billion for equity investments and €7 billion for innovation programmes.”⁸⁴ We also heard from Aftab Mathur, Managing Director, Investment (Innovation) and Emerging Technologies, at Temasek, one of Singapore’s state-owned investment funds, which has assets of around \$340bn.⁸⁵

79 [Q 256](#) (Marcus Stuttard)

80 [Q 16](#) (Angus Hanton)

81 [Q 100](#) (Saul Klein)

82 Written evidence from Oxford Science Enterprises (OSE) ([SUK0059](#))

83 [Q 103](#) (Saul Klein)

84 [Q 135](#) (Patrick Nédellec)

85 Temasek, [Our Portfolio](#) [accessed 9 September 2025]

46. Some witnesses commented on individual decisions; for example, Lord O'Donnell told us "I was surprised that ARM was allowed to be sold. I thought that was a strategic interest."⁸⁶ Angus Hanton noted that "the British have sold out three defence companies in the last five years—Cobham, Meggitt and Ultra—to American acquirers", noting that "in recent weeks ... people have suddenly started saying that it would be rather nice if we were buying from firms we completely trust that are not under the influence of a foreign Government."⁸⁷
47. Jakob Mökander, Director, Science and Technology Policy, Tony Blair Institute, spoke of the return of geopolitical competition: "Science and technology policy can no longer—if it ever could—be viewed in isolation. Nation states really have to look at this as a matter of fitness, co-operation and competition."⁸⁸ Angus Hanton also highlighted the impact of the changing geopolitical circumstances on the UK's policy: "we should be shifting to becoming an independent country, not a dependent one, particularly ... as we have become technically dependent on the Americans".⁸⁹
48. The National Security and Investment Act 2021 (NSI Act) requires the Government to be notified when significant takeovers or major investments in UK companies happen, and empowers the Government to review significant overseas investments on national security grounds.⁹⁰ Lord O'Donnell suggested that the Act "could be used to control things" and perhaps applied more broadly.⁹¹
49. Greg Clark also noted that the NSI Act could be used to prevent some acquisitions, but said he was "nervous about sending a signal that a firm founded in the UK may not be able to be sold in the future" and instead said that the UK needed to create "an environment in which ... companies can find capital here ... to scale up and do not have to go overseas."⁹² The Minister, Lord Vallance of Balham, said "You cannot force companies to stay; once you get into that, either you end up killing them, because they cannot get investment, or they will go anyway and accept that there will be a bit of pain when they leave."⁹³ Angus Hanton thought entrepreneurs should be encouraged not to think of "an exit strategy", but "growth strategies", so investors would think of the long term.⁹⁴
50. We heard some conflicting views around how the UK should approach foreign direct investment. Angus Hanton told us:

"In relation to inward investment what I found, which was quite disturbing, was that it is not measured properly at all. I spoke to the ONS [Office for National Statistics], which was very open about the fact that it completely mixes up into one bucket two things that, to my mind, are chalk and cheese: the inward investment that is real investment in plant and research, and inward investment that is the taking over of

86 [Q 56](#) (Lord O'Donnell)

87 [Q 19](#) (Angus Hanton)

88 [Q 9](#) (Jakob Mökander)

89 [Q 26](#) (Angus Hanton)

90 [National Security and Investment Act 2021](#); Norton Rose Fulbright, *The UK's new NSI regime: What do you need to know?*, June 2022

91 [Q 56](#) (Lord O'Donnell)

92 [Q 65](#) (Greg Clark)

93 [Q 299](#) (Lord Vallance of Balham)

94 [Q 19](#) (Angus Hanton)

existing British companies. It treats them all the same ... We should be insisting that the ONS separates these and does a lot more work on the different sorts of inward investment.”⁹⁵

51. Alongside this, he argued that:

“We ought to welcome [private capital and foreign ownership] in certain circumstances ... not accepting foreign ownership without question. In Europe, there is a big strand of ... caution about foreign takeovers; you just cannot imagine the middle-sized German companies being taken over in the same way”.⁹⁶

He warned against the “sharks who are in the water” in terms of US private equity firms that buy up technology companies cheaply.⁹⁷

52. Baroness Gustafsson, the then Minister for Investment, said that she would be “careful about preventing” the acquisition of UK technology companies by overseas buyers, saying that “she would not be entering into a situation where we are preventing businesses being acquired”.⁹⁸ Instead, she said that the UK should “think about how we can retain and preserve the thing that we really cherish—the centre of gravity of a business” by making sure that “growth is felt in the UK and we keep all those high-value jobs here.”⁹⁹ When asked whose responsibility it was to step in and try to secure technology companies to remain in the UK, Ceri Smith, Director General, Office for Investment, Department of Business and Trade, said that “it is nobody’s responsibility ... We are an open economy, and some firms will come and some will go”, arguing that the benefits of this outweighed the costs and that the UK had been able to retain some economic activity in the UK from companies that moved overseas.¹⁰⁰
53. Angus Hanton said that part of the issue was that foreign takeovers were not well-tracked. He said:

“I am not sure if we ask enough questions ... government departments did not know how many British workers were working for American corporations, and did not have a good record of the number of takeovers by US and other foreign countries of British companies ... when a company is taken over, there is no evaluation of what happened and no asking the shareholders why they sold or the managers why they recommended a sale. It all just happens, and the company is lost.”¹⁰¹

He thought: “We should be interviewing those individuals and companies who leave and asking why they do so.”¹⁰²

54. **The UK has seen many promising companies listing overseas or being acquired by overseas buyers. This results in a reduced UK ‘home bias’ for these companies, cutting UK employment, investment, and tax revenue. Geopolitical factors such as the rise of global conflicts and rapid technological development have meant that critical**

95 [Q 17](#) (Angus Hanton)

96 [Q 22](#) (Angus Hanton)

97 [Q 23](#) (Angus Hanton)

98 [Q 216](#) (Baroness Gustafsson)

99 [Q 216](#) (Baroness Gustafsson)

100 [Q 222](#) (Ceri Smith)

101 [Q 16](#) (Angus Hanton)

102 [Q 20](#) (Angus Hanton)

technologies and companies are increasingly seen through the lens of national interest, if not national security. This requires a shift in policy.

55. The Government has taken a notably laissez-faire approach to the acquisition of UK technology companies, as well as foreign direct investment more broadly. Ministers were reluctant to support any sort of intervention to prevent companies from being acquired by overseas buyers, instead hoping to make the UK the most attractive place for companies to retain high-value jobs.
56. *Too often, in recent years, a laissez-faire approach by the Government and reliance on foreign investment to plug gaps in domestic investment has hurt the UK's long-term interest. This must change if we are, in the Minister's words, to 'cherish' our companies. The new fiscal rules introduced in 2024 provide an opportunity to revitalise domestic investment and correct chronic underinvestment. As part of this:*
 - *The Office for Investment, when seeking foreign investment, should make a clear distinction between foreign direct investment that supports the creation of new infrastructure, and that which involves a transfer of ownership, control, and management to overseas owners. ONS reporting should more clearly distinguish between these two types of foreign direct investment.*
 - *When science and technology companies are listed on an overseas stock market or acquired by foreign investors, the Department for Business and Trade should conduct an 'exit survey' of those companies and 'exit interviews' of the founders, to establish the reasons why this was done and whether any interventions could have prevented it.*
 - *Our proposed National Council for Science, Technology, and Growth should have a view about which technologies the UK needs sovereign control over and intervene to ensure that this is the case. The Government should examine other countries' policies to retain domestic ownership of strategically important science and technology companies. For example, it should use public investment bodies, like a scaled-up National Wealth Fund, to take meaningful equity stakes in companies, as overseas sovereign wealth funds have done.*

CHAPTER 3: ENABLING PRIVATE SECTOR FINANCING

57. For businesses to grow they need access to investment. As we have seen, there appears to be a lack of UK-based capital available to science and technology companies seeking investment in the hundreds of millions, aiming to become significant players in the UK economy. This leads companies to seek that investment from outside the UK, moving the centre of gravity of the operation to where its capital originates.
58. We heard that there were several factors behind this, including the unwillingness of UK pension funds to invest in the sector, a perception that greater returns are available through listing on US markets, and a lack of skilled specialist investors in the UK. This chapter covers proposed reforms in those areas as well as the impact of the R&D tax credits scheme on business investment in research-intensive activities.

Pension funds and the Mansion House reforms

59. Over £2 trillion in assets are managed by UK workplace pensions schemes.¹⁰³ The Mansion House reforms, first instigated by former Chancellor of the Exchequer, Rt Hon Sir Jeremy Hunt MP, seek to unlock this capital to “boost returns and improve outcomes for pension fund holders whilst increasing funding liquidity for high-growth companies”.¹⁰⁴ This effort has continued under the current Chancellor, Rt Hon Rachel Reeves MP, with a review of pensions resulting in measures announced in May¹⁰⁵ and the introduction of the Pension Schemes Bill, currently in the House of Commons.¹⁰⁶
60. Professor Sir John Bell summarised the issue:

“the biggest single problem is the lack of scaling capital. The explanation for that is very simple: the decision to put defined benefit pension schemes on the balance sheet of companies meant that they had little choice but to put those in safe, secure investments, which meant gilts. So, where pension schemes used to account for 60% of the holdings of public companies in the London Stock Exchange, they now account for 2%. That amount of money adds up to trillions of pounds, which is now all sitting in gilts.”¹⁰⁷
61. This is starkly illustrated by the graph in Figure 2, showing the decline in the percentage of UK pension fund investment in listed equities on UK public markets.

103 HM Government, *Pensions Investment Review—Final Report*, May 2025, p 9

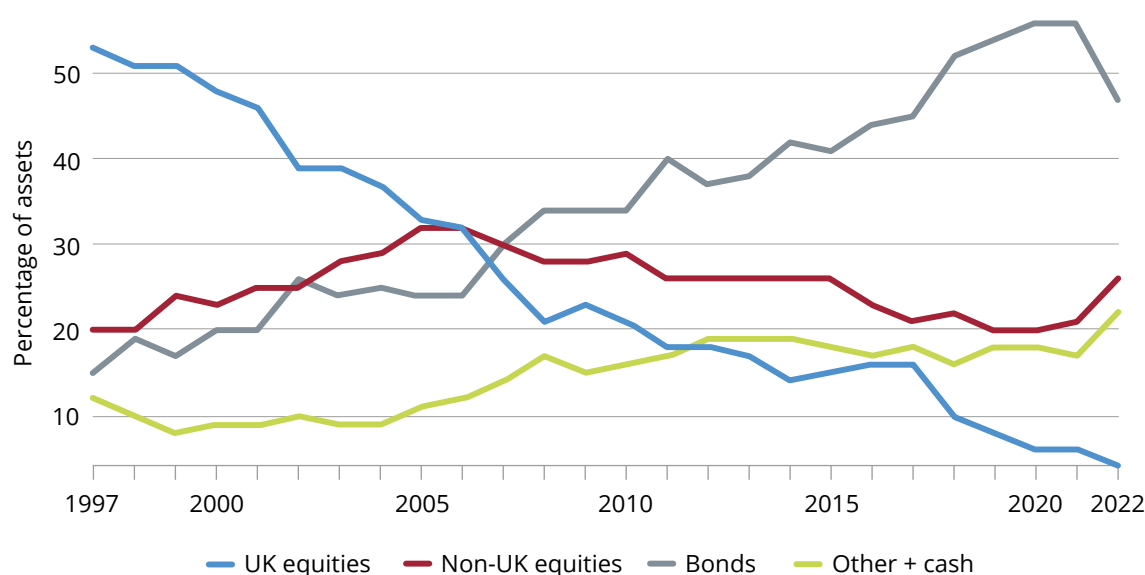
104 HM Treasury, *Chancellor Jeremy Hunt’s Mansion House speech*, 10 July 2023

105 HM Government, *Pensions Investment Review—Final Report*, May 2025

106 *Pension Schemes Bill* [Bill 255 (2024–25)]

107 *Q 41* (Sir John Bell)

Figure 2: Percentage allocation of UK pension funds in UK equity 1997–2022



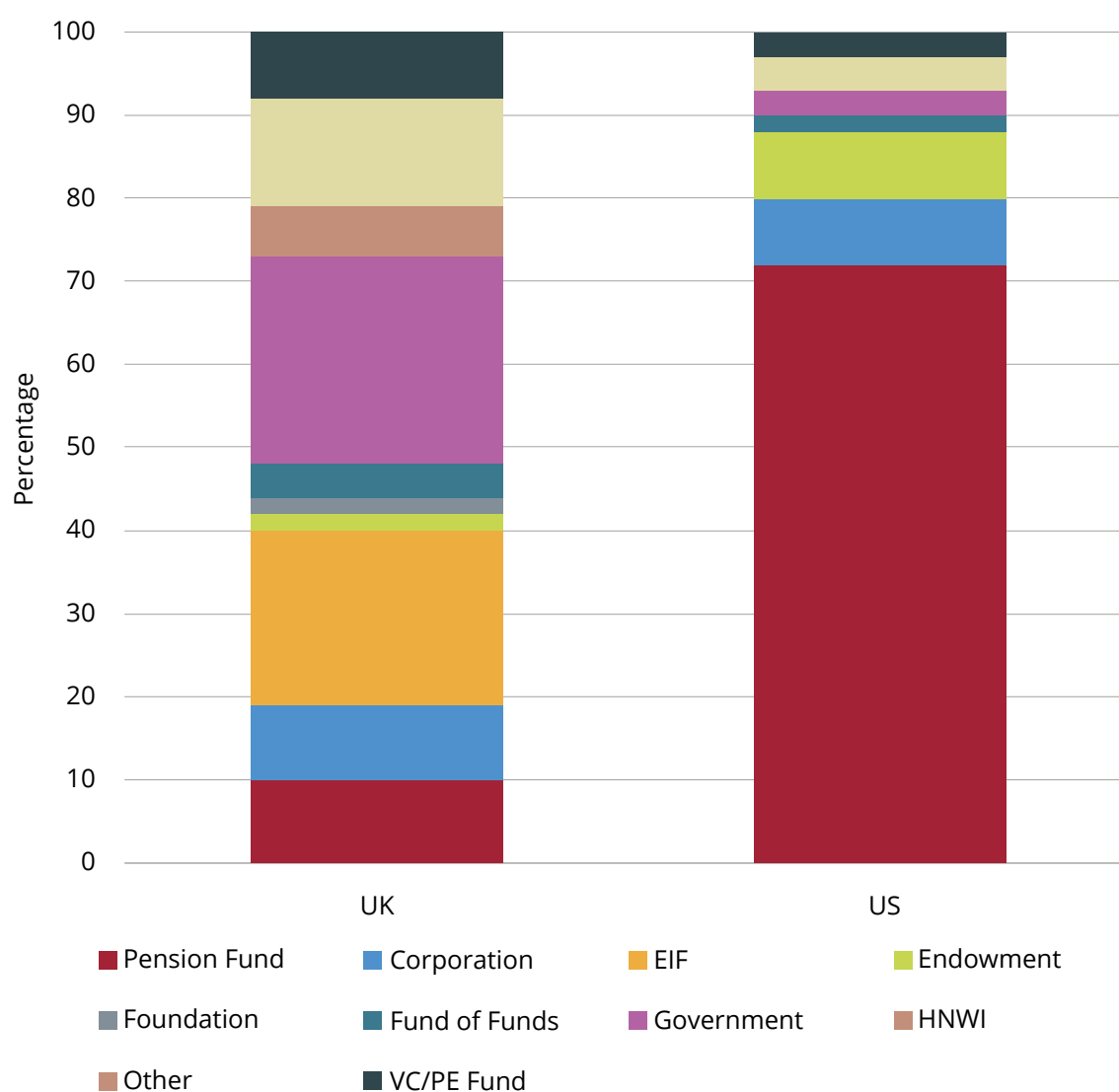
Source: Financial Times, [UK pension funds' allocations to British stocks hit historic low](#), 6 September 2024; New Financial, [Unlocking the capital in capital markets](#), March 2023; New Financial, [Comparing the asset allocation of global pension systems](#), September 2024

62. The situation is similar for investment in unlisted UK companies. As of September 2024, defined-contribution schemes were allocating 2% of their holdings to unlisted British equities, with private-sector defined-benefit schemes allocating 5% and local government pension schemes 10%.¹⁰⁸ Compared to many other countries, UK pension fund investment in domestic companies, both in public and private markets, is low.¹⁰⁹
63. There is also a striking difference between the UK and US in the amount of venture capital, essential to scaling-up science and technology businesses, sourced from pension funds. In the US, 72% of venture capital funding comes from pension funds; in the UK, pension funds contribute only 10%, a smaller proportion than the Government does directly (see Figure 3).¹¹⁰

108 Financial Times, [UK pension funds' allocations to British stocks hit historic low](#), 6 September 2024

109 Financial Times, [UK pension funds' allocations to British stocks hit historic low](#), 6 September 2024; Q 259 (Marcus Stuttard) quoted some figures from the Capital Industry Markets Taskforce comparing the amount of domestic investment in pension funds across the UK with nations like Canada, Australia and France where pension funds disproportionately invest in their home countries.

110 Written evidence from British Business Bank ([SUK0061](#))

Figure 3: Sources of venture capital funding in the UK and the US

Source: Centre for British Progress, *UK Pensions: Funding the Future of UK Science and Technology*, 22 July 2024; drawing on British Business Bank, *Small Business Equity Tracker 2022*, June 2022

64. Overall, according to Government figures, the amount that UK defined contribution schemes invest in the UK has fallen from 50% to 20% in the last 10 years. The Local Government Pension Scheme (representing the bulk of public sector defined benefit) invests around 28% in the UK, with a declining amount in UK equities.
65. The Government proposes to address this through:
- Various measures under the Pension Schemes Bill to encourage the consolidation of defined contribution schemes, including a requirement that master trusts have at least £25 billion assets under management by 2030.
 - The introduction of a value for money framework under the Pension Schemes Bill, including the publication of metrics, to encourage schemes to focus on returns rather than costs.¹¹¹

111 HM Government, *Pensions Investment Review—Final Report*, May 2025, p 14

- The Mansion House Accord (building on the previous Government’s Mansion House Compact), in which 17 pension providers have agreed to invest 10% of their defined contribution portfolios in private assets that boost the economy, such as infrastructure, property and private equity, with at least 5% ringfenced for the UK.¹¹²
- The inclusion in the Pension Schemes Bill of a reserve power for the Government to mandate investment targets for schemes should the Accord not deliver the expected results.¹¹³
- The pooling of assets under the defined benefit Local Government Pension Scheme (estimated to grow to £1 trillion by 2040).
- The creation of a market of private capital funds specifically accredited for investment by defined contribution schemes, modelled on the NOVA proposal.¹¹⁴

Consolidation of funds: scale and skills

66. The scale of pension funds was highlighted by our witnesses. Stian Westlake thought that fragmentation reduced the resources available to each fund, making it hard for schemes “to do the due diligence required to invest in venture capital”.¹¹⁵ This was echoed by Douglas Brion, founder and CEO of Matta.ai, who argued that “the talent and skill to allocate funds to venture capital is a very specific skill” but warned that: “You can consolidate all this capital ... but who is going to lead that? Who has experience in dealing with venture versus other asset classes?”¹¹⁶ Professor Dame Fiona Murray, Associate Dean of Innovation Policy at the MIT Sloan School of Management, also argued that “a very particular kind of expertise” was required to evaluate early stage venture capital, which UK pension funds might not possess: “It would be very difficult in a smallish pool of capital to have an expert in every particular area” but “as we consolidate some of our pension funds, scale now works in our favour.”¹¹⁷
67. One attempt to remedy this lack of skilled investors is the Science and Technology Venture Capital Fellowship, introduced by DSIT in 2024 and delivered by Imperial College London and the Royal Academy of Engineering. The scheme aims to improve “investor capability in identifying and deploying capital into high-potential, scalable, life science and deep tech ventures.”¹¹⁸ Lord Vallance of Balham thought the scheme was needed because when investment in science and technology “goes wrong, it goes

112 HM Treasury, *Pension schemes back British growth*, 13 May 2025

113 HM Government, *Pensions Investment Review—Final Report*, May 2025, p 16; *Pension Schemes Bill* [Bill 255 (2024–25)], clause 38

114 This is based on France’s “Tibi scheme” and has been promoted by the British Private Equity and Venture Capital Association (BVCA). The idea appeared in the 2024 Labour manifesto. See BVCA, *Industry leaders call on the Government to support a new programme to put private capital in the ‘shop window’ for UK pension fund investment*, 2 April 2025 and Labour, *Labour Party Manifesto 2024: Our plan to change Britain*, 13 June 2024. On 10 September 2025 the Chancellor announced that the scheme would be introduced in the next Budget, scheduled for November: Financial Times, *Reeves vows to ‘take out’ more regulators amid growth push*, 10 September 2025.

115 Q 19 (Stian Westlake)

116 Q 179 (Douglas Brion)

117 Q 273 (Dame Fiona Murray)

118 Department for Science, Innovation and Technology, *Science and Technology Venture Capital Fellowship*, 28 March 2024; Royal Academy of Engineering, *Science and Technology Venture Capital Fellowship* [accessed on 27 August 2025]

horribly wrong. Generalist investors investing in this area often find it very difficult”.¹¹⁹

68. Sir John Kingman had a slightly different view on skills in the pension industry, arguing that fund managers such as Legal and General provided such expertise. He thought the issue was more “a nervousness about risk” among pension funds and the cost of managing those investments, though “additional returns ... justify the additional cost.”¹²⁰ Speaking more broadly about cultural differences between the UK and US financial sectors he acknowledged that “there is much more investing expertise in [the science and technology] space in the United States ... people have made an enormous amount of money doing it. That has created incentives for people to do it both in the private spaces and in listed markets.”¹²¹
69. Aside from specialist investment expertise, Sir John Bell argued that bigger schemes could diversify their asset allocation, allowing them to invest more in venture capital and private equity and, with a long-term view, deliver returns for investors of 10% a year. He pointed to the success of the large Canadian and Australian funds as evidence (see Box 1).¹²²
70. Saul Klein also made the international comparison:

“We are now talking about local authority pension funds getting to the scale of £25 billion, plus or minus. That is tiny. In our latest fund cycle, we have a Korean local authority pension fund that invested in our funds, which is £80 billion. To my knowledge, there is no UK institution that is £80 billion, and this is a local authority pension fund in an incredibly dynamic economy but a smaller economy than our own. Scale really matters, and that is what Australia, Singapore, Canada and the Middle East have understood. With scale comes the ability to build specialist teams that actually know how to provide the optimal allocation mix.”¹²³
71. The then Minister, Baroness Gustafsson directly linked the issue of companies moving overseas to the scale and consolidation of pension funds saying: “To mitigate [companies moving overseas], you would need the price in the London market to be equally competitive with the price in the US. To get that, you need greater pools of liquidity within UK markets; and to get that, you need [to] consolidate pension pots and get to those bigger pots of money, and ... encourage them to think about domestic deployment of that capital.”¹²⁴

119 [Q 285](#) (Lord Vallance of Balham)

120 [Q 81](#) (Sir John Kingman)

121 [Q 81](#) (Sir John Kingman)

122 [Q 43](#) (Sir John Bell). The Ontario Teachers’ Pension Plan alone had net assets of CAD255.8 billion in August 2024: Ontario Teacher’s pension plan, *Ontario Teacher’s delivers positive return in first half of 2024*, 13 August 2024. Australia’s largest fund, AustralianSuper, has over AUD365 billion assets under management: AustralianSuper, *AustralianSuper is the fund for all Australians* [accessed 18 August 2025].

123 [Q 102](#) (Saul Klein)

124 [Q 63](#) (Lord O’Donnell), [Q 221](#) (Baroness Gustafsson)

Box 1: Consolidation of pension funds—international comparisons

Under the Mansion House reforms and Pension Schemes Bill, there is a target for defined contribution pension schemes to consolidate to a scale of at least £25 billion by 2030. This is based on research published by the Department for Work and Pensions, *Pension fund investment and the UK economy*, which suggests that many of the benefits of scale can be realised at this level.

The paper notes that the UK's largest workplace defined contribution providers have around £100bn in bundled assets under management, but that this remains smaller than many other countries. The lack of consolidation is noted in that the Local Government Pension Scheme stands at £392bn which would be the 7th largest global fund as a single unified fund, but it is instead spread across 87 different funds.

It notes that Australia and the UK have comparable pensions markets, but Australian funds, due to mergers and longer times of operation, are larger in scale. The AustralianSuper fund holds over £100bn in assets, whereas the UK's largest comparable fund in NEST has around £40bn. Looking globally, the largest pension funds in Japan and Norway manage over £1trn in assets while the report identifies 10 funds in excess of £200bn across Norway, Japan, South Korea, the US, the Netherlands, Singapore, China, and Canada.

As well as the scale of pension funds, overseas comparisons give an example for how larger pension funds can allocate a greater fraction of their assets to venture capital. For example, the Ontario Teacher's Pension Plan has around \$270bn in assets under management overall, which allows it to operate a Venture Capital fund, Teachers' Venture Growth, which invests in Series B or later funding of companies (total investment sizes of \$50-250m) for a total net investment of \$10bn.

Source: Department for Work & Pensions, *Pension fund investment and the UK economy*, November 2024; (OTPP), Ontario Teachers' Pension Plan, *Investing to make a mark* [accessed 18 September 2025]; Ontario Teachers' Pension Plan, *Teachers' Venture Growth (TVG)*. [accessed 18 September 2025]

Speed of progress and mandation

72. Under the Mansion House Accord, fund managers have committed to investing more of their assets in the UK. Some commentators have questioned how this can be aligned with those organisations' fiduciary duty to generate maximum returns for policyholders.¹²⁵ One solution would be to override the duty by legally mandating certain asset allocation decisions. Although the Accord remains voluntary, the Pension Schemes Bill includes a power for the Government to do this if needed.¹²⁶ Witnesses expressed a variety of views over the desirability or need for mandation, while also often emphasising the need for funds to start flowing quickly. For instance, Sir John Lazar thought that the reforms were "great, it has really moved things along, but we really need the money to flow, and soon."¹²⁷
73. Sir John Kingman was against the Government "mandating our pension fund clients about how they invest their money". Though he was concerned about the pace at which the Mansion House reforms had been embraced,

125 See, for example, Pensions expert, *Fiduciary duty and the Mansion House Accord: Members must come first, say experts*, May 2025.

126 HM Treasury, *Press release: Pension plan to double £25 billion+ megafunds, boost investment and improve returns for savers*, 29 May 2025. "The Government will take a reserve power in the Pension Schemes Bill to set binding asset allocation targets."

127 [Q 91](#) (Sir John Lazar)

he thought the answer was for the Government to help fund managers to “encourage our clients to rethink their approach to how their members’ pensions are invested. We are totally up for that”.¹²⁸ He added that fund managers were “trying to produce good risk-adjusted returns. The conservatism that I observe is in the trustees of the pension schemes.”¹²⁹

74. Sir Jonathan Symonds, Chair of GSK and a member of the Capital Markets Industry Taskforce, noted that for publicly owned schemes, such as the Local Government Pension Scheme, the Government could allocate assets how it liked. For private schemes, however, “with the size of the industry and the skill of the people in there, they need to conclude for themselves what the optimal asset mix is.”¹³⁰ Saul Klein agreed, and thought the scale of funds was the key point. He argued that the Treasury should instead provide transparency on how the voluntary Accord was working.¹³¹ Sir Jonathan later made a similar point and argued that the Government needed to “move as fast as possible and then hold the institutions transparently to account for what they are doing.”¹³²

75. Sir John Bell was less sanguine:

“to be crystal clear, anybody who thinks this is going to be fixed by Mansion House needs their head examined, and the evidence is there, nothing has happened. A firm handshake is not going to get you to where we need to be; it needs to be something else.”¹³³

76. He thought the solution to conservatism in the industry needed to be more “dramatic”, for instance by altering tax rates for companies that failed to consolidate.¹³⁴ Elsewhere he argued that:

“the pension industry in this country and the people who have pensions get a terrific tax benefit for doing so ... if you are going to offer all these benefits, you would hope that the money would be used to build capacity in the economy in the UK, make jobs for the next generation and grow scaling companies. There is a virtuous circle here, if you could get it to fly.”¹³⁵

77. Louis Taylor similarly suggested that “rather than necessarily mandating ... if your manager does not invest a portion of that in the UK, you start to claw back some of that tax benefit” that applies to pension contributions.¹³⁶

78. However, witnesses also argued that there was no conflict and that investing in high-potential firms would increase returns. Louis Taylor thought investing “low single-digit allocations to growth” was a sensible strategy in its own terms:

“We are talking about an asset class that can produce strong returns as a proportionate part of an overall pension scheme with a mix of assets.

128 [Q 81](#) (Sir John Kingman)

129 [Q 82](#) (Sir John Kingman)

130 [Q 102](#) (Sir Jonathan Symonds)

131 [Q 102](#) (Saul Klein)

132 [Q 102](#) (Sir Jonathan Symonds)

133 [Q 42](#) (Sir John Bell). It should be noted that Sir John was speaking in April 2025, before the latest Mansion House measures had been announced.

134 [Q 43](#) (Sir John Bell)

135 [Q 41](#) (Sir John Bell)

136 [Q 205](#) (Louis Taylor)

That is not incompatible at all with the fiduciary duty of trustees both to generate the return, which is their fundamental purpose, and to do it in a risk-mitigated way.”¹³⁷

79. According to a report from the State of European Tech 2024, venture capital represents just 0.007% of assets under management for UK/Ireland pension funds.¹³⁸ Increasing this to 0.1% would therefore represent a major step change in the scale-up capital available from pension funds without requiring huge risks.
80. Sir John Bell noted that the equivalent Canadian and Australian schemes generated 10% per year¹³⁹ while Sir John Kingman also noted “clear evidence of additional returns which justify the additional cost [of managing private assets]” and pointed to a diversification benefit.¹⁴⁰
81. Even if funds alter their allocations in line with the Mansion House Accord, there is a question as to how much of that investment will find its way to science and technology companies. The commitment is to allocate 10% to “private markets” (with 5% for UK private markets)—this means unlisted “equities, property, infrastructure and debt/credit”.¹⁴¹
82. Irene Graham, CEO of the ScaleUp Institute, noted that “there is ... a worry that this will just go into infrastructure because that is the understood asset.”¹⁴² Louis Taylor made a similar point:

“venture is by far the most difficult. So, even if we get sign-up from all the pension funds to invest in private market assets, my bet would be that infrastructure and real estate are where they will go first, and then private equity. Venture is quite a hard sell.”¹⁴³
83. Saul Klein had also said that funding would be allocated to infrastructure and real estate first because the Mansion House signatories were stronger in assessing risk and investing in those areas rather “than venture capital, where they are really beginning their journey”. He was at pains to emphasise, however, the importance of those asset classes: “Infrastructure and real estate are two sets of assets that do not move. Human capital moves.”¹⁴⁴ This appears to have been borne out in a recent development on the Accord. On 20 October it was announced that Legal and General, AustralianSuper and National Employment Savings Trust (Nest) had committed to £3 billion of investment, mostly in infrastructure.¹⁴⁵
84. Public investment bodies such as the British Business Bank have established funds such as the British Growth Partnership and LIFTS which will invest institutional investor money into UK science and technology companies. We discuss these more in Chapter 4. A range of proposals to support institutional investors to invest in science and technology companies, such as an equivalent to the Tibi initiative in France, or the BVCA’s NOVA proposals, have been

137 [Q 205](#) (Louis Taylor)

138 State of European Tech 24, [Investors](#) [accessed 18 September 2025]

139 [Q 43](#) (Sir John Bell)

140 [Q 81](#) (Sir John Kingman)

141 Pensions expert, [The full text of the Mansion House Accord](#), 13 May 2025

142 [Q 113](#) (Irene Graham OBE)

143 [Q 206](#) (Louis Taylor)

144 [Q 101](#) (Saul Klein)

145 Financial Times, [Pension giants announce £3bn of investment in UK private markets](#), 20 October 2025. According to the article, only £100 million of this, provided by Nest, is earmarked for UK companies.

suggested, and the Government has announced that it will create one in the forthcoming Budget.¹⁴⁶

85. As we have seen, the Government is keen for funds to consolidate and to invest in growth areas and has put in place policies with that intention. Baroness Gustafsson, Minister for Investment, emphasised the shift that was needed:

“Think about what it is to be a pension fund that is incredibly risk averse. For decades, they have been measured on how much they spend rather than how much they return. They are culturally embedded in a very defensive posture. The Government are saying, ‘You now have to take a lot more risk. You have to shift between value and not just cost. Then you have got to deploy that money—those pensioners’ money—in things on which you have been trained not to take any risk.’ That is so much more than a government steer; it is an entire change of culture of the individual making the decisions and the organisation in which they operate, and that takes time.”¹⁴⁷

86. When asked about monitoring success, Lord Vallance of Balham, Minister for Science, told us “I am not sure it is our job to measure the exact amounts going in through pension funds but I think it will be looked at as part of the overall industrial strategy.”¹⁴⁸ He said that he expected investment to start as “a slow trickle followed by a sudden acceleration”.¹⁴⁹ He argued that it was important for funds not to change their strategy too quickly for fear of mistakes causing funds to “clam up”, but that once that “pivot point” had arrived there would be a fear of missing out amongst investors and that “when one gets going, others start coming in quickly”.¹⁵⁰ He added that “I do not think there is much more that needs to be done today to free up pension capital. We cannot and should not force people to do it.”¹⁵¹
87. On whether the funding would be allocated to science and technology firms, Lord Vallance agreed that the “reflex” among funds would be to allocate to infrastructure, arguing that “political pressure will be important”.¹⁵² and he hoped, the Chancellor would be meeting those concerned. Hannah Boardman, Director of Emerging Technologies and Regulatory Innovation at DSIT, added that, while there was potentially a bias toward infrastructure, “the Government ... have a big opportunity now to be consistent in the messaging about what we want to see the industrial strategy translate into in the growth of S&T business.”¹⁵³
88. **UK pension funds and other institutional investors have substantially underinvested in UK equities and venture capital compared to international equivalents to a quite shocking degree. Their investment in the UK has severely declined over decades, in part due to successive**

146 French Expert in Ireland, *The Tibi Initiative—A French Approach to Financing Tech Scale-Ups*, 9 May 2025; BVCA, [NOVA: Driving investment in UK growth opportunities](#) [accessed 18 September 2025]; Written evidence from the British Venture Capital Association (BVCA) ([SUK0106](#)); Financial Times, *Reeves vows to ‘take out’ more regulators amid growth push*, 10 September 2025

147 [Q 221](#) (Baroness Gustafsson)

148 [Q 282](#) (Lord Vallance of Balham)

149 [Q 283](#) (Lord Vallance of Balham)

150 [Q 283](#) (Lord Vallance of Balham)

151 [Q 283](#) (Lord Vallance of Balham)

152 [Q 285](#) (Lord Vallance of Balham)

153 [Q 285](#) (Hannah Boardman)

governments' policy. They are no longer playing the vital role they should in investing in the UK economy. The result is a dearth of long-term, patient UK scale-up capital and the resulting scale-up crisis. We believe this is not in the interests of UK pension-holders or the UK economy more broadly, but it can and should be reversed.

89. Fragmentation, especially of defined contribution (DC) pension funds, means that they do not have the scale to allocate significant assets to high-risk, high-reward investments in science and technology companies. Comparators in Australia and Canada show what is possible with consolidation. UK pension funds have focused on minimising fees rather than maximising return for a variety of regulatory, institutional and cultural reasons.
90. Witnesses agreed that the Mansion House reforms were critical. If successful, they will help provide the domestic scale-up capital that UK science and technology companies need. However, there are concerns about the speed of reform, the need to upskill investors, and the risk that institutional investors focus on infrastructure rather than scale-up capital. There is an ongoing debate about whether pension funds should be mandated to invest if they do not fulfil their voluntary commitments.
91. *We welcome the Mansion House reforms as essential measures to accelerate growth. It is critical that they result in capital flows to the next generation of growing UK science and technology companies. If not, those companies will be forced to seek funding and likely relocate abroad. The Government should:*
 - *Insist on the consolidation of DC pension schemes, and lead by example with the consolidated Local Government Pension Scheme pools, making significant allocations to domestic science and technology funds, including the British Business Bank's vehicles and approved private funds, to crowd-in institutional investor money;*
 - *Use its convening power with the major institutional investors to encourage them to invest in UK technology companies. Support transparency and disclosures as part of the Mansion House Accord, and track the amount invested in UK science and technology companies as one of its key progress metrics;*
 - *Encourage transparency between providers and pension-holders, setting out the returns of different DC pension schemes and what proportion of their assets are in UK companies or infrastructure. Following the provision of this information, pension funds should survey their members, asking what percentage of assets they would like to be invested in the UK, and incentivised to act on any desire to see increased investment in the UK. The Government should set out that pension fund investment in the UK benefits everyone's quality of life;*
 - *Maintain the reserve power to mandate pension funds to follow their Mansion House commitments in the Pension Schemes Bill. The Government should set targets for the percentage of*

assets allocated under the Mansion House reforms overall by the end of 2027, as well as for the scale-up capital allocated to UK technology companies, and reconsider mandation if these targets are not met;

- *Explore possibilities short of mandation—for example, a clawback on tax relief for pension schemes that do not invest enough capital in the UK, or additional incentives for leading pension schemes;*
- *Support and expand training schemes like the Venture Capital Fellowships scheme that bring science and technology experts together with VCs to enable the creation and sharing of investment expertise.*

92. *The Minister for Pensions, CEO of the British Business Bank, and Minister for Science and their teams should co-ordinate to identify ways to ensure that the Mansion House reforms benefit innovative UK science and technology companies in addition to other asset classes.*

UK capital markets

93. The Mansion House reforms are aimed at increasing investment in private assets, but there is also an issue with public markets: companies are increasingly choosing to list overseas. For instance, in June it was announced that Wise, a UK based fintech company, would transfer its listing to New York,¹⁵⁴ while chipmaker ARM, having previously been listed in London before its acquisition by Japanese investment fund SoftBank, decided in 2023 to list on the NASDAQ.¹⁵⁵ In July, AstraZeneca, among the largest companies on the London Stock Exchange with a market capitalisation in May 2025 of £159 billion¹⁵⁶, suggested it too might move its listing to New York and it upgraded its New York listing in September.¹⁵⁷ There has been a drought of companies going public on the London exchanges in 2025; as of October 2025, listings on the UK exchanges had raised less money than the Angolan stock market.¹⁵⁸
94. Chris Vann, Chief Operating Officer of Autolus Therapeutics, explained why his company decided to float on NASDAQ: “we went to NASDAQ because that is where the capital in our sector aggregates”. He added that the investors Autolus dealt with were more comfortable dealing through NASDAQ and that the investors were larger and thoroughly researched companies.¹⁵⁹ Similar comments were made in written evidence.¹⁶⁰ Marcus Stuttard of the London Stock Exchange Group (LSEG) made a similar point: he thought a lot of science and technology companies had raised investment from international investors at an early stage, and this had influenced decisions to be acquired by an overseas company or to list outside the UK. The listing decision was

154 Financial Times, [UK fintech Wise to switch main listing to New York](#), 5 June 2025

155 Financial Times, [Skyrocketing Arm share price shows need for UK reform](#), 17 February 2024

156 Statista, [Largest companies listed on the London Stock Exchange \(LSE\) in May 2025, by market capitalisation](#) [accessed 18 August 2025]

157 Financial Times, [Investors fret over talk of AstraZeneca US move](#), 2 July 2025; Financial Times, [AstraZeneca's US listing to leave £200mn UK stamp duty hole](#), 2 October 2025

158 Financial Times, [UK set to exempt newly-listed company shares from stamp duty](#), 1 October 2025

159 [Q 174](#) (Chris Vann)

160 For instance, written evidence from James Eaton, CEO and co-founder IONETIC ([SUK0075](#)) and IP Group plc and Parkwalk Advisors ([SUK0086](#))

therefore linked to the earlier availability of UK capital, particularly from pension funds.¹⁶¹

95. In contrast, Sir John Lazar explained the thinking behind Raspberry Pi's decision to float on the London Stock Exchange: "there was a received wisdom that we would get a better valuation on NASDAQ, but when we did our homework, we did not believe that". He added that the company had received good support from the LSEG and that "the stock exchange is changing the rules. We need to tell these stories more positively."¹⁶² Indeed, this 'received wisdom' may not be borne out. Marcus Stuttard argued that non-US companies listing in New York had underperformed: of the 20 UK companies that had listed on the NYSE or NASDAQ in the last decade and raised over £100 million, only three were currently above their Initial Public Offering (IPO) price,¹⁶³ 10 had delisted and seven were 75% below their IPO price.¹⁶⁴
96. In 2024, rules in London were reformed in order to encourage listing. This included merging the previous standard and premium listing segments, adopting a disclosure-based rather than rules-based approach to increase flexibility and encouraging the use of dual-class share structures to increase the control of companies by founders and early-stage shareholders.¹⁶⁵ Dr David Connell supported the encouragement of dual-class shares as a way for founders to prevent the sale of their companies.¹⁶⁶ In a slightly different context the Minister, Baroness Gustafsson, illustrated the issue. Describing the overseas sale of her former company, Darktrace, she said:

"Darktrace is a listed company and the share price is trading at a particular value. If an offer comes in for a different value, you are obligated—it is not a choice—to present that to your shareholders ... and you leave that open to a shareholder vote."¹⁶⁷
97. While these 2024 reforms were generally welcomed by witnesses, some highlighted the continued attractiveness of the US, due to its depth of capital and prevalence of dual-class shares.¹⁶⁸ Oxford Nanopore Technologies, a company that successfully listed in London in 2021, argued that for some life sciences companies in biotechnology or medicine, analyst coverage was thinner and risk appetite lower in the UK, pushing companies abroad. They welcomed the 2024 reforms and looked forward to the forthcoming prospectus rule changes¹⁶⁹, which they thought would make the London Stock Exchange more attractive.¹⁷⁰
98. Sir Jonathan Symonds also welcomed the reforms: stating that they meant "UK capital markets genuinely are no longer at a regulatory disadvantage",

161 [Q 257](#) (Marcus Stuttard). But see also Mr Stuttard's defence of the London markets elsewhere in this section.

162 [Q 92](#) (Sir John Lazar)

163 The price per share when the company was first listed on the public markets.

164 [Q 257](#) (Marcus Stuttard). See also, Financial Times, *US listings often fail to boost European companies' valuations*, 17 March 2025

165 London Stock Exchange, *UK Capital Market Reforms*, July 2024; Financial Conduct Authority, *FCA overhauls listing rules to boost growth and innovation on UK stock markets*, 11 July 2024

166 [Q 71](#) (Dr David Connell).

167 [Q 220](#) (Baroness Gustafsson)

168 Written evidence from IP Group and Parkwalk Advisors ([SUK0086](#))

169 See, Financial Conduct Authority, *FCA lowers costs for business raising capital in support of growth*, 15 July 2025

170 Written evidence from Oxford Nanopore Technologies ([SUK0105](#))

but “if we do not have vibrant markets with high liquidity and research capabilities that can properly price and value these companies, the markets will always be more attractive in the US.”¹⁷¹

Other reforms: PISCES and cash ISAs

99. Further reforms have been proposed or are in train. These include a proposal under consideration to reduce the cash ISA limit to encourage retail investment in equities¹⁷², a scrapped proposal for a British ISA that would allow tax-free investment in UK shares,¹⁷³ and suggestions from the City to scrap stamp duty on shares, resulting in a proposed move to eliminate it for IPOs in the November budget.¹⁷⁴
100. Another reform is the creation by the London Stock Exchange of the PISCES platform¹⁷⁵ which will allow wider trading in shares in privately-held companies.¹⁷⁶ Marcus Stuttard explained that PISCES was intended to address companies being sold too early, which often happens to provide an exit or liquidity to investors, founders or employees; instead, they will now be able to sell their privately-held shares through PISCES. He characterised it as a “secondary liquidity venue rather than a capital-raising venue”.¹⁷⁷ PISCES was welcomed by Saul Klein and Sir Jonathan Symonds, though Mr Klein warned that it would not, alone, increase the availability of capital.¹⁷⁸ Oxford Nanopore argued that it would help retain “key long-term talent essential to a company’s continued development.”¹⁷⁹
101. Official statistics put the total amount held in cash ISAs in December 2024 at around £300 billion.¹⁸⁰ There was speculation in early 2025 that the Chancellor was planning to reduce the annual allowance for cash ISAs, to encourage people to invest in UK equities instead.¹⁸¹ The plan was not, as expected, announced at the Chancellor’s 2025 Mansion House speech on 15 July, with some industry figures having argued that the plan would not encourage investment from a risk-averse public and would reduce amounts available for lending from banks and building societies.¹⁸² At the time of writing, this proposal appears still to be under consideration.
102. Witnesses were broadly keen on encouraging more retail investment in stocks and shares. Saul Klein described investing in cash ISAs as “the equivalent of putting the money under your bed” and argued that the disinclination of UK retail investors to invest in UK companies had led to others, such as the Ontario Teachers’ Pension Plan, to profit from UK innovation.¹⁸³ Marcus Stuttard quoted figures that if those who had invested in cash ISAs had

171 [Q 100](#) (Sir Jonathan Symonds)

172 BBC, [Plans for cash Isa changes on hold after backlash](#), 11 July 2025; Financial Times, [Rachel Reeves revives plans to overhaul cash Isas](#), 14 October 2025

173 City AM, [Autumn Budget 2024: Reeves scraps British ISA plans](#), 30 October 2024

174 Money Week, [City bosses call for stamp duty on shares to be scrapped to save UK stock market](#), 9 July 2025, Financial Times, [UK set to exempt newly-listed company shares from stamp duty](#), 1 October 2025

175 The Private Intermittent Securities and Capital Exchange System. See FCA, [PISCES: platforms for trading private company shares](#), 26 May 2025

176 See also HM Government, [Financial Services Growth and Competitiveness Strategy](#), 21 July 2025.

177 [Q 267](#) (Marcus Stuttard)

178 [Q 104](#) (Saul Klein and Sir Jonathan Symonds)

179 Written evidence from Oxford Nanopore Technologies ([SUK0105](#))

180 HM Revenue and Customs, [Official Statistics: Commentary for Annual savings statistics: September 2024](#), 4 December 2024, para 1.3

181 Financial Times, [Rachel Reeves set to cut cash Isa allowance](#), 30 June 2025

182 FT Adviser, [‘Cutting Cash Isa won’t get people investing’, industry tells chancellor](#), 10 July 2025

183 [Q 100](#) (Saul Klein)

instead invested in equities they would have been collectively £500 billion better off.¹⁸⁴ The Business Growth Fund supported making ISAs conditional on a minimum allocation to domestic equities.¹⁸⁵

103. This final point is key, as any mechanism to shift investment from cash to stocks and shares ISAs would increase domestic investment only if savers were discouraged from investing in overseas equities. For instance, the UK FTSE 100 share index has risen by about 15% since the late 1990s, while the US S&P 500 share index has tripled,¹⁸⁶ so it may be more rational to invest in the latter market, especially for someone using a passive tracker fund.
104. **The declining attractiveness of the UK as a place to list public companies is extremely worrying. Many promising UK science and technology companies have floated in the US rather than on the London stock exchanges. They are attracted by deeper capital pools, greater analyst coverage, and a perception that they will attract a greater valuation overseas. Reforms to address this problem will have to counter long-term trends towards passive and globally diversified investment.**
105. **We have heard that capital availability is the main problem, followed by a lack of investment research into smaller companies. The Government has considered proposals to increase investment, but none has yet been implemented. The ISA is fundamentally a tax break, designed to encourage saving, but there is merit in coupling that tax advantage with a responsibility to invest in ways that benefit the UK economy.**
106. *The Government should therefore undertake reforms to encourage capital flows into the UK markets. This could include changes to the ISA limits, such as reducing the cash limit in favour of stocks and shares, taxation such as the proposed stamp duty holiday for IPOs, or creating additional savings vehicles and incentives for UK savers to invest in domestic science and technology companies. The Government should encourage financial literacy campaigns to encourage investors and pension-holders to shift their allocation away from cash where this makes sense for them.*

R&D tax credits

107. In 2022/23 the UK spent around £7.5 billion on R&D tax credits.¹⁸⁷ These provide tax relief on expenditures classed as R&D to encourage investment by the private sector. In written evidence, the Government told us that the Research and Development Expenditure Credit (RDEC) scheme incentivises £1.40 to £2.70 of additional R&D for every £1 of public money spent; the Small and Medium Enterprise Relief (SME) scheme incentivises

184 [Q 263](#) (Marcus Stuttard)

185 Written evidence from the Business Growth Fund ([SUK0080](#))

186 Bloomberg UK, *Three Good Reasons to Invest in the UK*, 24 February 2023

187 HM Revenue and Customs, *Accredited official statistics—Research and Development Tax Credits Statistics: September 2024*, 26 September 2024. “R&D tax credits” were hitherto two schemes—the Small and Medium Enterprise Relief scheme and Research and Development Expenditure Credit (RDEC), available to larger companies. The rates were different depending on the scheme. The two schemes were merged in 2024 but most statistics relate to the earlier arrangement. We mostly refer to them collectively in this report.

an additional £0.60 to £1.28.¹⁸⁸ The overall government expenditure on these schemes has risen from around £4 billion in 2015/16, though has most recently decreased slightly.¹⁸⁹

108. To put this into context, UK Research and Investment (UKRI) has an annual budget of around £9 billion to provide directed support to UK research, of which Innovate UK—which provides support to innovating businesses—comprises £948 million.¹⁹⁰ R&D tax credits are undirected as businesses decide where to spend their R&D money and then claim the credits.
109. In recent years, R&D tax credits have been reformed due to concerns around fraud, with HMRC investigating claims more closely. Government estimates now suggest that levels of error and fraud may have fallen—figures for 2022/23 show overall error and fraud at 17.6% (or £1.3 billion); less robust figures for 2023/24 estimate 7.8%.¹⁹¹ Some businesses have raised concerns that increased checks for fraud are now delaying their ability to claim R&D tax credits.¹⁹²
110. Witnesses acknowledged the issues with fraud and error. Angus Hanton pointed to “a lot of expenditures that might or might not be considered research and development” and pointed to his first-hand experience of pressure to reclassify expenditure as such.¹⁹³ Stian Westlake described it as “opaque and we do not know where the money is going”.¹⁹⁴ Lord O’Donnell thought targeting of the relief was poor and questioned whether it was “the right way to spend those billions of pounds”.¹⁹⁵ Greg Clark thought “the level of fraud, complexity and misapplication has to be first understood and then challenged ... we should not grab at a reform without carefully understanding it.”¹⁹⁶ Sir John Kingman also thought there should be more analysis of the scheme and that HMRC should be “hard” on abuse.¹⁹⁷
111. We heard mixed evidence around the effectiveness and importance of R&D tax credits. Entrepreneurs and business like them because they are relatively simple to claim (compared to grants) and agnostic as to the type of research activity. As an example, Chris Vann raised them as very important for Autolus Therapeutics.¹⁹⁸ From a Treasury point of view, they are simple to administer—we heard there are only two officials in the Treasury in charge of R&D tax credit policy.¹⁹⁹ Some witnesses warned that reducing R&D tax credits below the level of other nations could make the UK uncompetitive. For instance, Sir John Kingman argued that:

188 Written evidence from the Department for Science, Innovation and Technology ([SUK0108](#)). Although Dr David Connell and Professor Bobby Reddy dispute these figures in *Selling Less of the Family Silver*.

189 HM Revenue and Customs, *Accredited official statistics—Research and Development Tax Credits Statistics: September 2024*, 26 September 2024, Figure 2

190 UKRI, *2025–26 budget allocations for UK Research and Innovation*, 4 April 2025

191 HM Revenue and Customs, *Corporate report—Approach to Research and Development tax reliefs 2023 to 2024*, 30 October 2024, Table 1

192 Financial Times, *HMRC undermining innovation by failing to award R&D tax credits, say start-ups*, 1 April 2025

193 [Q 16](#) (Angus Hanton)

194 [Q 16](#) (Stian Westlake)

195 [Q 60](#) (Lord O’Donnell)

196 [Q 65](#) (Greg Clark)

197 [Q 80](#) (Sir John Kingman)

198 [Q 170](#) (Chris Vann)

199 [Q 74](#) (Dr David Connell). Though many more at HMRC doing compliance checks etc.

“essentially every country in the developed world has an R&D tax credit now ... so, for a country that wants to attract and nurture a lot of science-based industry, severely to cut back or to abolish tax credits seems to me to be a very high-risk move that we should approach with great care.”²⁰⁰

112. Jakob Mökander characterised the credits as “a direct subsidy” for technology companies, “where R&D is the bread and butter of the business”, that might “prevent the weeding out of” unsustainable companies. He suggested a review.²⁰¹
113. Witnesses suggested various other reforms. Stian Westlake proposed a public register of claims to provide further information about what R&D tax credits were supporting.²⁰² Angus Hanton proposed restricting the relief to UK-owned, rather than merely UK-based, companies.²⁰³
114. Dr David Connell argued that tax credits were helpful for venture capital backed start-up companies that had the underlying funding to conduct research, but were of little use to those without that investment. He favoured focusing the regime and reducing expenditure by around 30% to use the money saved for innovative procurement contracts, grants, Special Purpose Acquisition Companies (SPAC)s for floating promising technology companies on the stock market, and other schemes that might be more tailored to help address the scale-up problem.²⁰⁴ However, Sir John Kingman urged caution:

“I encourage you to be really careful about the notion that there is a huge thing that you can easily raid and it would be great for scaling up and financing the sorts of businesses you are caring about in this inquiry, because for the UK to make itself an outlier on the downside internationally would be a bit crazy.”²⁰⁵
115. **Witnesses, including entrepreneurs, told us that R&D tax credits were highly valuable to R&D intensive businesses, and the Treasury has committed to maintain their levels throughout this Parliament, but there are also significant reforms underway due to concerns about fraud.**
116. ***Companies are best placed to decide how R&D money should be spent and tax credits efficiently allocate this funding. They must be maintained at current levels. While fraud remains a concern, the answer is to tackle that fraud rather than to recast the scheme. Money recovered by the elimination of error or fraud could be reused for other schemes for instance grants and initiatives to support scale-up funding. This would diversify government support while maintaining the amount of funding used productively through the tax credits scheme.***

200 Q80 (Sir John Kingman). For an overview of international R&D tax credit schemes see OECD, [*R&D tax incentives continue to outpace other forms of government support for R&D in most countries*](#), 22 April 2025.

201 [Q 13](#) (Jakob Mökander)

202 [Q 24](#) (Stian Westlake)

203 [Q 16](#) (Angus Hanton)

204 [Q 64](#) (Dr David Connell). Much more detail about his proposed rebalancing of innovation policy away from R&D tax credits can be found in the CBR, [*Selling Less of the Family Silver: Better UK innovation and industrial policies for economic growth*](#), July 2024; CBR, [*Is the UK's flagship industrial policy a costly failure?*](#), May 2021.

205 [Q 80](#) (Sir John Kingman)

CHAPTER 4: PUBLIC SECTOR INVESTMENT AND PROCUREMENT

Public procurement

117. Public procurement refers to the purchase by governments and state-owned bodies of goods, services, and works. In the UK, gross spending on procurement was £434bn in 2024/25.²⁰⁶ Witnesses repeatedly raised the issue of public procurement as a means of supporting innovative science and technology companies.²⁰⁷ For example, Saul Klein told us that “the biggest driver of innovation is not investment but procurement ... the most valuable thing for any company we can invest in is not us investing more in that company; it is the company getting a purchase order.”²⁰⁸ He said that the state could “use data and AI” to “reform public sector procurements and to allow” smaller companies, which he referred to as “micro-primes”, to participate in public procurement. He argued that “once you have a contract with the public sector, the ability to raise either further equity or credit and to bring in commercial banking is massively increased.”²⁰⁹
118. Dr David Connell, in oral and written evidence and in his report, *Selling Less of the Family Silver*, made the case that companies that were able to adopt a revenue-led, rather than a venture-led, growth model were more likely to stay and scale up in the UK.²¹⁰ He explained that, of VC-backed businesses, “very few are successful, and VCs must sell the ones that are in order to satisfy their investors”, often leading to ownership moving overseas. This raises the importance of public procurement providing early revenue for small, innovative companies, allowing them to grow without transferring ownership to investors.
119. Despite consensus around the importance of procurement for supporting growing companies, progress in this area has been slow. Dame Fiona Murray said that the UK procurement for innovation was often “slow and not sufficiently large”.²¹¹ Irene Graham, whose ScaleUp Institute has tracked policy progress on scaling up companies in the UK for over a decade, said that procurement was an area where policy “has not progressed” and “has often been seen as a problem too difficult to solve”,²¹² though the Council for

206 House of Commons Library, *Procurement statistics: a short guide*, 28 July 2025

207 Procurement to stimulate innovation was the theme mentioned most often in our inquiry’s written evidence, according to an AI analysis of its major themes, including some important discussions in [SUK0002](#), [SUK0006](#), [SUK0011](#), [SUK0017](#), [SUK0021](#), [SUK0025](#), [SUK0027](#), [SUK0028](#), [SUK0035](#), [SUK0036](#), [SUK0037](#), [SUK0038](#), [SUK0042](#), [SUK0047](#), [SUK0048](#), [SUK0080](#), [SUK0107](#), [SUK0105](#) and [SUK0112](#) many of which make similar recommendations to those in this chapter.

208 [Q 101](#) (Saul Klein)

209 [Q 101](#) (Saul Klein)

210 [QQ 64-74](#) (Greg Clark and Dr David Connell); Supplementary written evidence from David Connell ([SUK0113](#)). From the written evidence: “Indeed the emphasis in UK innovation policy on university spin outs needs to be challenged. Though university spin outs can sometimes raise significant amounts of venture capital and publicity, success rates are low and usually lead to trade sales. The UK start-ups with the most significant long-term successes have been based on scientific and/or engineering expertise and the entrepreneurial drive of their founders, with early stage funding from customers, rather than breakthrough academic research financed by multiple rounds of venture capital. That is to say, “revenue led” rather than “investment led” strategies.” CBR, *Selling Less of the Family Silver: Better UK innovation and industrial policies for economic growth*, July 2024

211 [Q 270](#) (Dame Fiona Murray)

212 [Q 111](#) (Irene Graham)

Science and Technology gave extensive advice on it in 2022.²¹³ Lord Willetts described the UK as “way behind the Americans” on public procurement, noting that “I hope the opportunities of that new legal framework [the Procurement Act 2023] for public procurement are taken as part of industrial strategy.”²¹⁴

120. As already highlighted in Chapter 2, part of the issue is risk aversion and the incentive structure for civil servants and ministers alike, which Lord O'Donnell summarised in the old phrase: “No one ever got fired for buying IBM.” COVID-era scandals loom large, but we can also learn from the pandemic. Lord O'Donnell said that he would:

“change the procurement rules to make them much more like they were during COVID ... accepting the fact that we will take more risks in this space and back some small-scale people, and some of them will go bust. We would not then be hauled and crucified in front of Parliament.”²¹⁵
121. There is a need for procurement authorities to have “very specific sectoral knowledge”, as Stian Westlake put it. He said that departments need to be intelligent customers that “build the capability” and set out “specific technological needs that they know they want” which companies can then shape their products to fulfil.²¹⁶ Individual procuring departments were highlighted as problems by some witnesses, with Sir John Bell describing the NHS as “bulletproof to innovation”²¹⁷ and Dame Fiona Murray saying that “it is still hard for our companies to find the right front door into the MoD.”²¹⁸
122. The Procurement Act 2023 has given some more flexibility to procuring authorities, but they may be unwilling to use this flexibility without ministerial backing. Stian Westlake said that what was needed was “a really clear steer from Ministers about their innovation needs and their willingness to back that with a chunk of the budget that comes from their department.”²¹⁹
123. Value-for-money rules, which are easier to apply than taking strategic decisions over companies and sectors to back, may not always favour UK companies.²²⁰ Lord O'Donnell said that lessons could be learned from how procurement for vaccines was managed during COVID-19 and apply this to other strategically important technologies.²²¹ Sir John Kingman also said that the model used by the COVID-19 Vaccine Taskforce, which went outside the usual processes to “empower an individual” in Dame Kate Bingham, could be successful.²²²
124. Angus Hanton argued that “there should be a default to buy British”,²²³ but noted that “the Crown Commercial Service ... makes no reference to this in its policy”, and that the NHS was unable to “break down its suppliers by

213 Council for Science and Technology, *Letter to the Prime Minister on delivering national priorities through public procurement*, 7 October 2022

214 [Q 158](#) (Lord Willetts)

215 [Q 57](#) (Lord O'Donnell)

216 [Q 22](#) (Stian Westlake)

217 [Q 43](#) (Sir John Bell)

218 [Q 274](#) (Dame Fiona Murray)

219 [Q 28](#) (Stian Westlake)

220 [Q 19](#) (Angus Hanton); Written evidence from Damian Horton, Director of Eloy ([SUK0006](#)) and Cleantech for UK ([SUK0043](#))

221 [Q 52](#) (Lord O'Donnell)

222 [Q 83](#) (Sir John Kingman)

223 [Q 28](#) (Angus Hanton)

country of ownership”.²²⁴ He maintained that the UK exhibited less home bias in its procurement than the US or EU.²²⁵ Stian Westlake argued that the UK had missed the boat when it came to “commodity products” like big enterprise software solutions, but that procurement could play a role for “new and emerging technologies ... as a tool to spark innovation”.²²⁶

125. The US has a scheme called the Small Business Innovation Research program (SBIR) which means that, for many agencies, a minimum of 3.2% of their procurement budget should be spent on US-based SME suppliers to support innovation.²²⁷ Sir John Kingman described the “SBIR programme, which this country has several times tried and failed to emulate” as one of the US policies that the UK should “learn from”.²²⁸ Dr Connell said that “programmes like the \$6 billion a year US SBIR programme”, which provides contracts for R&D, are “much more appropriate” for supporting scale-up than venture capital investment alone.²²⁹
126. The UK has a programme modelled on this, the Small Business Research Initiative (SBRI) (now called Contracts for Innovation), but it is small. The US SBIR is now \$6.2bn a year, around 8% of eligible federal contracts.²³⁰ The UK’s SBRI has funded £1.5bn over 20 years of its existence.²³¹ Dr David Connell, in written evidence, characterised “25 years of bodged policy making” in UK attempts to introduce a ‘UK SBIR’, which was first attempted in 2001; he noted that the total value of the UK’s Contracts for Innovation was only £42m across Government in 2024/25.²³² He suggested that “spending departments failed to respond to ... requests to Permanent Secretaries for participation by [the] Prime Minister”.²³³ In oral evidence, he described it as “an attempt to get something introduced ... still bubbling away ... with lots of very small projects.”²³⁴
127. Dr David Cleevly, in written evidence, proposed “challenge-led procurement demonstrators” rather than prescriptive contracts which might exclude innovation. He suggested that these contracts should “adopt stage-gated”²³⁵ models, iterative feedback, and higher tolerance for experimentation—particularly when outcomes are uncertain or not easily specifiable”.²³⁶ Dr Connell, in his written evidence, proposed establishing “two significant, lead customer innovation contract programmes using a phased US SBIR type model”.²³⁷
128. The Industrial Strategy made some commitments on reforming public procurement to support innovation, including a new National Procurement Policy Statement which requires consideration of how procurement can be used to support growth, a new online platform publishing upcoming procurement activity, and a forthcoming public consultation that may result

224 [Q 19](#) (Angus Hanton)

225 [Q 19](#) (Angus Hanton)

226 [Q 26](#) (Stian Westlake)

227 Dr Connell discussed it extensively, and the issues with the UK version, in [Q 65](#) (Dr David Connell)

228 [Q 76](#) (Sir John Kingman)

229 [Q 64](#) (Dr David Connell)

230 GovSpend, *Understanding SBIRs/STTRs Federal Contract Spend*, 20 June 2024

231 UKRI, *Innovate UK Contracts for Innovation*, 5 August 2024

232 Supplementary written evidence from David Connell ([SUK0113](#))

233 Supplementary written evidence from David Connell ([SUK0113](#))

234 [Q 65](#) (Dr David Connell)

235 For example, additional funding or contracts are released when certain conditions are met.

236 Written evidence from Dr David Cleevly CBE FREng FIET ([SUK0107](#))

237 Supplementary written evidence from David Connell ([SUK0113](#))

in setting three-year targets for procurement spend with SMEs and annual publication of progress. The Government has also established an explicit target of 10% of the MoD's equipment procurement budget for novel technologies and a new Commercial Innovation Hub which it says will "trial new approaches to service design and procurement".²³⁸

129. The Ministry of Defence has recently published its Defence Industrial Strategy, which recasts its approach to procurement. It includes some measures that could be adopted more widely, such as a target for spend with SMEs, a forecast of planned procurements to signal demand, and reforms to processes intended to reduce bureaucracy and provide pathways for SMEs.²³⁹
130. **Public procurement is a crucial lever for supporting innovative science and technology companies. It is not functioning as it should due to a combination of risk aversion, lack of expertise, and a tendency to favour large and often overseas incumbents. Contracts provide domestic revenue that can encourage further private investment and reduce reliance on overseas money. Despite this, innovative SMEs find public procurement very difficult to access. Procurement authorities need to develop their relationships with innovative SMEs, and their ability to run innovative procurement processes—stage-gated, outcome-based, rapid—that they can take part in.**
131. The US Small Business Innovation Research scheme has been very successful, but the UK equivalent—Contracts for Innovation—is far smaller. The MoD's procurement reforms and decision to allocate a percentage of its equipment budget for SMEs to drive innovation are examples other departments can follow. It is positive that the Government has committed to review procurement for innovation as part of its industrial strategy.
132. *Public sector procurement practices need to change; this needs explicit political commitment from the top of government and action across departments. We recommend that:*
 - *The Government should set a target for each department and local authority for a mandatory percentage of procurement budgets to be spent on innovative, UK-based SMEs. This should rise over time to 3%, around the US SBIR level. A cross-government committee that brings together the Minister for Procurement in the Cabinet Office with the Minister for Science, the Department for Business and Trade, and delivery departments should oversee the development of this innovative procurement function. The Government must monitor and publish annually progress towards these targets.*
 - *The UK should increase the amounts allocated through Contracts for Innovation (formerly the Small Business Research Initiative, SBRI), and create a central database for these contracts that is easier to navigate for SMEs.*

238 Department for Business and Trade, *The UK's Modern Industrial Strategy*, June 2025, [CP1337](#), summary section: page 152

239 Ministry of Defence, *Defence Industrial Strategy: Making Defence an Engine for Growth*, 8 September 2025, [CP 1388](#)

- *Departments should signal further in advance and in more detail precisely the kinds of outcomes they need.*
- *Outcome-based procurement, where departments specify what their end goals are, rather than setting onerous requirements on the product, should be used to provide flexibility with SMEs. Stage-gated procurement can support smaller companies with funding in stages to develop and scale up their processes. An expanded Contracts for Innovation scheme could be used to support these more innovative and less bureaucratic processes.*
- *Ministers should celebrate and reward public procurement that has supported innovative companies. The Government should back ministers and officials who procure innovative domestic solutions even if not all of the goals are delivered: failure is a necessary part of innovation. There is no reward without some risk: ministers need to specify appropriate risk profiles for their projects and take clear accountability for doing so. Civil servants will not be empowered to take risks without explicit political cover from ministers from excessive auditing. There should be cross-party consensus on this issue and on the importance of a healthy appetite to risk.*
- *The UK should consider a presumption in favour of buying British, especially when it concerns new and emerging technologies, even if narrow value-for-money considerations would not allow this. It must take the wider benefits to the economy of domestic procurement into account.*
- *For critical frontier technologies, particularly where there is a desire for UK sovereignty and control over the technology, the Government should consider using Vaccine Taskforce-style procurement to ensure they can be developed in the UK.*

Public sector investment bodies

A 'leaky pipeline'?

133. This section will focus on three major public sector investment bodies—Innovate UK, the British Business Bank (BBB), and the National Wealth Fund (NWF). The Industrial Strategy sets out the respective roles of these bodies in supporting technologies across readiness levels and businesses at different scales. (See Figure 1: UK Public Financial Institutions). Innovate UK focuses on relatively small grants for SMEs and start-up companies in the early stage of technological and product development. The British Business Bank provides equity, guarantees and debt financing to small businesses as they start to scale. The National Wealth Fund, reconstituted from the UK Infrastructure Bank, has been given a new 'growth investment mandate' which may involve it taking part in equity finance for companies in funding rounds of more than £25m. The National Wealth Fund suggests that this would support growth and mature companies with technologies at readiness level 7-9 (commercial products).²⁴⁰

240 National Wealth Fund, *Financing the Future a statement of intent by the National Wealth Fund*, June 2025, p 19

134. Witnesses regularly told us that it was important that these three agencies should be more joined-up. Sir John Kingman told us that the British Business Bank and Innovate “are trying to make a difference in this space but are not always joined up and do not necessarily have a coherent view of how they work together to reduce friction for the companies”.²⁴¹ Sir John Lazar said it was important that “BBB, BPC,²⁴² Innovate UK and all the other bodies that are flowing here are joined-up and make it easy to crowd-in other investment.”²⁴³
135. These agencies have nominal responsibility for different parts of the pipeline. Ian Merricks noted that the BBB and Innovate UK have an “MoU for collaboration”, but that it was still “very much siloed” and there was a need for greater collaboration with the VC industry. He talked about the responsibility for scale-up support for businesses often being unclear, with “pinballing around” between “disjointed” agencies to understand “who within government and the public finance initiatives is supporting companies on their scale-up journey”. He argued that the MoU “does not solve the problem”.²⁴⁴
136. John Flint of the National Wealth Fund set out some of the challenges facing the bodies in coordination, noting “we are part of that continuum in the provision of public money. However, it is really dislocated ... the notion of a seamless service that we can engineer across that landscape is false ... you have to confront the reality that competition law today means that organisations cannot talk to each other about something as basic as pricing.” He said that closer coordination was “probably the right ambition”, but “we just are not organised for it ... if anything, the landscape has become more, not less complicated.”²⁴⁵
137. As previously noted, several witnesses, such as Irene Graham,²⁴⁶ told us that Innovate UK needed to be given the ability to “follow on and join up”. She said the government could look at the “referrals mechanism” under the Small Business, Enterprise and Employment Act 2015 that would refer companies to further stages of support or future investors.²⁴⁷
138. The Government recently announced a new Strategic Public Investment Forum which will bring together the CEOs of the public financial institutions with a view to “improving coordination” between them, including in supporting the Industrial Strategy and growth missions.²⁴⁸ The Government

241 [Q 83](#) (Sir John Kingman)

242 British Patient Capital, which is now a fund run by the British Business Bank.

243 [Q 99](#) (Sir John Lazar)

244 [Q 114](#) (Ian Merricks). Mr Merricks’ full quote illustrates the issue: “One of the tasks of our ScaleUp Investment Mission work was to understand who within government and the public finance initiatives is supporting companies on their scale-up journey, with investor readiness and guidance around what the investment milestones might be. The Treasury thought it was the British Business Bank; the DBT thought it was the British Business Bank or Innovate UK; the British Business Bank said, “We don’t have a mandate for that; we don’t have any specific company support programmes”. DSIT said, “Do keep us in the loop; we’re working with Innovate UK to consider this”, and Innovate UK said, “Much greater effort is definitely needed to drive this system integration, we’ll need partners to help deliver”. That I describe as my pinball onepager. It was that difficult—I had to go through 10 painful meetings to get to that. If that pinballing around of public finance initiatives’ support for scaling companies on their funding journey—quite a basic set of milestones and metrics—is this disjointed within government, an MoU between two public finance institutes, forgive me, does not solve the problem.”

245 [Q 253](#) (John Flint)

246 [Q 112](#) (Irene Graham)

247 [Q 114](#) (Irene Graham)

248 HM Treasury, *Policy Paper: Launch of the UK Strategic Public Investment Forum*, 19 March 2025

provided a “high-level guide” mapping the remit, stages of commercial maturity, and types of support provided by each of the institutions alongside this. Lord Vallance described the meetings as “an important step”, calling on Innovate UK, the BBB, and the NWF to share information and due diligence more effectively.²⁴⁹ He agreed that “there are lots of fragmented schemes” but believed that “the business growth service in the [Department for Business and Trade] is supposed to be the front door for all of it. Its aim is to be the place that stops you having to navigate further because it will do the navigation for you and put you in the right place.”²⁵⁰

Scale and consolidation

139. Despite recent increases in funding to the public investment bodies, the UK’s NWF and BBB combined are still far short of the scale of sovereign wealth funds internationally with which they compete [see Box 2]. These organisations are still relatively new; the British Business Bank was set up in 2014, the UK Infrastructure Bank in 2021 and it was reconstituted as the National Wealth Fund in 2024.
140. Before the announcements in the Spending Review, witnesses had called for the NWF and BBB’s scale to be increased. For example, Saul Klein told us that the “British Business Bank and what is now the National Wealth Fund have been on a really good journey for the last two or three years, but they are still too small.”²⁵¹ John Flint of the National Wealth Fund noted that it was “only four years old ... it will take more years of building the balance sheet and proving we can do this”, but that “assuming that we can finish proving the model, there is every reason why it should get bigger.”²⁵² Dame Fiona Murray emphasised the importance of larger investments, saying that it was necessary to make sure “public money goes to amplify scale instead of giving little bits of money to everybody and spreading it like butter across the system.”²⁵³

Box 2: International public investment bodies

There are a wide range of public investment bodies in other countries. They have varying sizes, scales, roles in the economy, objectives, tools and means for delivering on those objectives, and models of governance, and different influence or control by the relevant governments over their activities. Some of the larger overseas sovereign wealth funds and public investment banks have existed for many decades, while the NWF and BBB are relatively new. A comprehensive survey of all of the international sovereign wealth funds and public investment bodies is beyond the scope of this report, but we briefly describe here some of the public investment bodies mentioned in our evidence.

249 [Q 281](#) (Lord Vallance of Balham)

250 [Q 293](#) Lord Vallance of Balham)

251 [Q 103](#) (Saul Klein)

252 [Q 247](#) (John Flint)

253 [Q 273](#) (Professor Dame Fiona Murray)

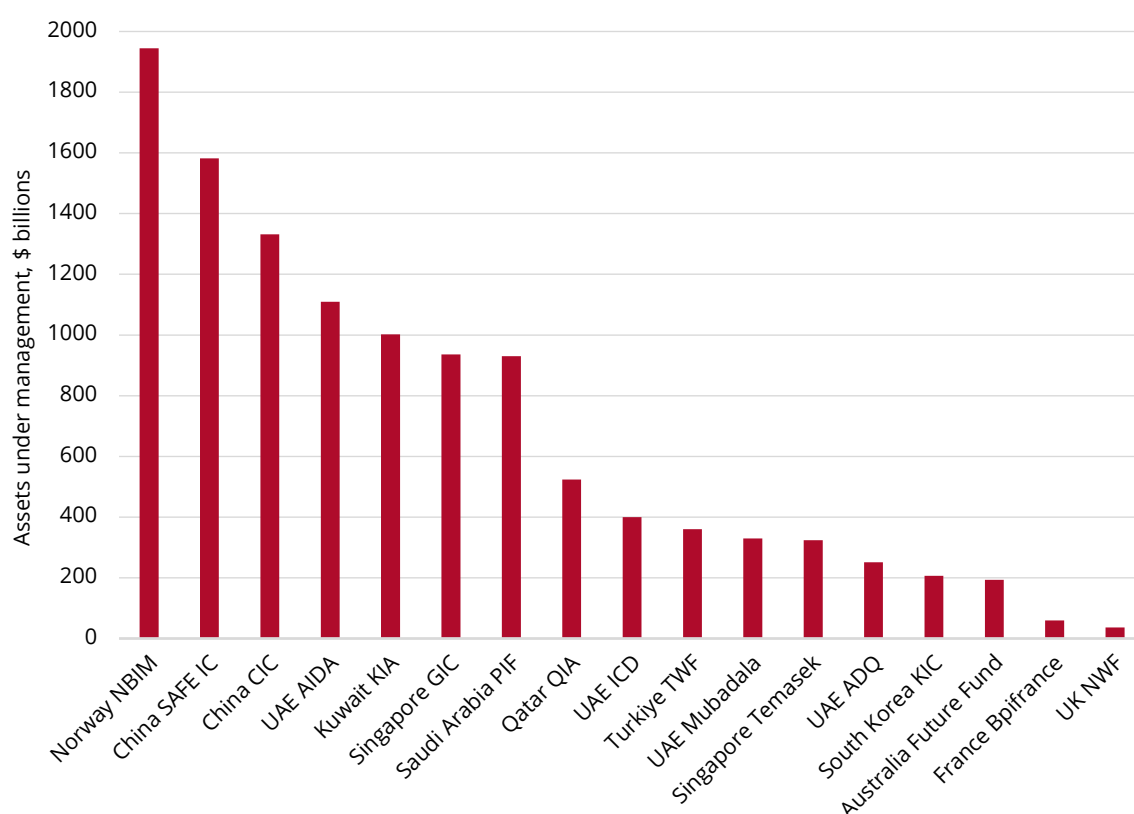
Bpifrance operates as France's national investment bank. It was formed in 2012 by the merger of previous public investment bodies, and is wholly owned by the French State and the main French state bank Caisse des Dépôts. It offers direct equity investments into technology companies at all stages, co-investments with private VCs and institutional investors, loans, loan guarantees and innovation grants, export finance support, and dedicated funds for frontier technologies. It reported that across these instruments, it injected €60 billion into the French economy in 2024. Its equity holdings involve managing over €36 billion in assets. Amongst a 1,000-company portfolio, Bpifrance has taken significant stakes in large French companies, including at one time holding 10% of Orange, 12% of Peugeot, 13% of ST Microelectronics and 20% of Eutelsat. France also maintains the Caisse des Dépôts as a financial institution that manages its publicly held and nationalised industries.

Germany's KfW (formerly Kreditanstalt für Wiederaufbau) is the German state-owned investment and development bank, first formed after the Second World War as part of the Marshall Plan. It invests in housing and the environment, small and medium enterprises through the KfW Mittelstandsbank, development aid, export and project finance, and as a state shareholder for Germany. For SMEs, it provides loans, equity, and mezzanine financing. In 2024, the KfW provided €79 billion of financing in 'domestic promotional business' (which excludes the export, project, and development financing activities). Its total assets stood at €545 billion at the end of 2024. KfW also invests directly in VC funds through KfW Capital, which invested €1.3 billion directly into VC funds in 2022.

Singapore's wealth funds are significant. The two main sovereign wealth funds are GIC and Temasek. Temasek was initially founded in 1974 with a portfolio of state-owned companies; it now operates as an active shareholder and investor multinationally with a net portfolio of \$288bn. It invests mainly in equities, and owns many assets and companies outright. While it is a multinational investor, it retains a focus on Singapore; 27% of its portfolio is held in Singapore by underlying assets, and 52% of the companies it invests in are headquartered in Singapore, as of 2025. This represents a significant home bias. GIC is less transparent about its holdings, according to the Financial Times, but they consist of a mix of equities, bonds, and assets, with a goal of generating a return.

Global SWF hosts a league table of all state-owned investors, including Central Banks, Sovereign Wealth Funds, and Public Pension Funds. UK institutions appearing in the top 200 of that global league table are the Bank of England (59th with \$194bn estimated assets), the Border to Coast Pensions Partnership (local government pension fund pool), 115th with \$81bn in assets, Northern LGPS (122nd with an estimated \$88bn in assets), London CIV at 149th with \$58bn under management, and the National Wealth Fund at 184th with an estimated \$36bn in assets available to it. The top ten institutions on the list all manage over \$1 trillion. While this is a crude comparison between very different institutions, it does illustrate that the UK's 'public sector' institutional investors are much smaller in scale than many comparable bodies from overseas.

Source: Written evidence from Boardwave ([SUK0053](#)) (on Bpifrance); Bpifrance, [2024 activity report: €60 billion injected into the French economy and €896 million in estimated net income](#), 13 February 2025; Bpifrance, [Sovereign Wealth Funds and Long-Term Investors](#) [accessed 18 August 2025]; International Forum of Sovereign Wealth Funds (IFSWF), [International Forum of Sovereign Wealth Funds \(IFSWF\)](#), [Bpifrance](#) [accessed 18 August 2025]; Caisse des Dépôts Groupe, [Rapport annuel 2022; KfW Promotional Figures 2024](#), 21 March 2023; KfW, [Press release: Financial statements 2024: KfW in a strong position as it enters 2025](#), 3 March 2025; KfW, [KfW Capital in 2022](#) [accessed 18 August 2025]; SWF, [Ranking](#) [accessed 18 August 2025]; Financial Times, [How Singapore's wealth fund punted its way to prosperity](#), August 15 2025; Temasek, [Our Portfolio](#) [accessed 18 August 2025]

Figure 4: Global Sovereign Wealth Funds by size

Source: Data taken from GlobalSWF.com. Figure shows the 15 largest SWFs, as well as the National Wealth Fund and Bpifrance. Excludes other categories such as Central Bank reserves and pension funds.

141. Irene Graham described the importance of “long-term, at-scale interventions” and “long-term institutions that are present throughout and permanent”, such as Germany’s KfW, the US Small Business Administration, or France’s Bpifrance. She noted that: “We have the equivalent here in the British Business Bank, in our development banks in devolved nations, and in Innovate UK, but are we making them permanent ... ?”²⁵⁴
142. Other witnesses talked about different powers for the public investment bodies. Chris Vann suggested that more loan financing might be helpful for scaling-up companies, saying that “people always think companies like mine are looking for cash injections ... but for the manufacturing facility, for example, it could have been given as a loan ... some form of future tax relief ... would have been equally appealing to us ... Frankly though, the types of loans that we would need to support building a factory just did not exist for us from the UK Government or the National Wealth Fund.”²⁵⁵
143. John Flint, CEO of the National Wealth Fund, suggested that there could be a role for consolidation of the public investment bodies: “the public finance landscape is very complicated ... The change in the fiscal rules that happened towards the end of last year has enormous potential but there is a very complicated ecosystem around it that could be made to work better.”²⁵⁶ He compared this unfavourably to other countries: “we still have a very fractured landscape here. Bpifrance has brought a lot of this together under

254 [Q 110](#) (Irene Graham)

255 [Q 179](#) (Chris Vann)

256 [Q 247](#) (John Flint)

one roof; the KfW is a single organisation that provides public finance across a landscape that is currently served in this country by multiple different sources.”²⁵⁷

144. Elaborating on this, he explained that the Government needs to become “good at being a lender” and that the government should “go from multiple public finance institutions to one”. He explained that this should include “anything that involves ... what banks normally do—lending, investing or committing risk capital—where there is a hope or an expectation that you get it back.” He noted that this would not necessarily include Innovate UK and UKRI: “The Government’s machinery is brilliant at grant pots. That does not need to change”. Instead, he argued that consolidation would make the Government’s relationship with companies at different stages “so much easier” as one could “have a division that does early-stage capital provision for technology priorities.” Companies would then be “on the balance sheet; it is therefore in that entity’s interests to see the value maximised through the life of the company. Currently, its interests end with, ‘Well, the grant has been given, or the Series A funding has been given, so we have done our job’.” He added that consolidation would “get all the diversification benefits and risk aggregation benefits that the private sector searches for and which regulators supervise.”²⁵⁸
145. Lord Vallance told us that he did “not agree” that “the National Wealth Fund, the BBB and Innovate should all be one thing” because “they have very different skill sets and objectives.”²⁵⁹ The Government has said that it will establish the NWF on a statutory footing in the National Wealth Fund Bill, which was announced alongside the King’s Speech in 2024 but has yet to be introduced.²⁶⁰
146. **The UK economy has suffered from chronic underinvestment in recent decades, which has impacted science and technology. The Government sees public sector investment bodies such as Innovate UK, the British Business Bank and the National Wealth Fund supporting scale-up for science and technology companies and crowding in private sector finance. But the public investment landscape remains fragmented, overly complicated, and small in scale. Businesses want a ‘single front door’ to understand the support available at each stage, but it is unclear which of these organisations is responsible for that, or whether the business growth service in the Department for Business and Trade will do this. At the moment there is too often a ‘leaky pipeline’ where companies fall between the cracks.**
147. *To provide a clear pipeline of support, Innovate UK, the British Business Bank and the National Wealth Fund must at the very least work together much more closely, aligning on priority sectors and companies with direction set by the Industrial Strategy. The Strategic Public Investment Forum provides an opportunity to deepen this coordination. The demarcation of responsibility between these bodies must be made clear to industry to avoid a ‘leaky pipeline’*

257 [Q 251](#) (John Flint)

258 [Q 254](#) (John Flint)

259 [Q 294](#) (Lord Vallance of Balham)

260 Farrer and Co, [Government announces £7.3 billion National Wealth Fund](#), 24 July 2024; House of Commons Library, [2024 King’s Speech: progress of legislation](#), 2 October 2025 [accessed 23 October 2025]

where co-investment stops at a certain funding size or technology readiness level. Each of the organisations should track successful referrals (for example, from a successful Innovate grant to scale-up funding via the British Business Bank) as a key performance indicator. They should each continue to work on simplifying and scaling up the offers they have and providing clear guidance.

148. **More investment is needed and the 2024 change to the fiscal rules provides some latitude to provide this. We welcome the increases in capital for the British Business Bank and National Wealth Fund, but both combined are still tiny compared to overseas equivalents such as Bpifrance of France, KfW of Germany, or Temasek of Singapore, let alone the larger sovereign wealth funds; in particular, the NWF is far smaller than overseas public investment bodies. As relatively new bodies, there are also concerns around their longevity.**
149. *At a minimum, the British Business Bank should be put on a statutory footing alongside the National Wealth Fund to help ensure permanence and both operations should be significantly scaled up. But to achieve a properly integrated, diversified and well-resourced public investment landscape, the various government lending and investing bodies such as the NWF and BBB should be consolidated. There is a strong case for including Innovate UK in this structure. This would allow them to act more strategically, benefit from diversification and risk aggregation, and provide pooled expertise and continuity of support, reducing the overall complexity of the system.*
150. *Public sector investment bodies can make more use of debt and guarantees to unlock private capital. The UK should recognise that other countries, such as France, Germany, and Singapore, have more established public development financing, and the Strategic Public Investment Forum should study in detail what lessons can be learned from international comparators.*

Innovate UK

Streamlining and speeding up grants

151. Innovate UK is the main mechanism by which the Government awards grants to private companies for commercialisation. Under the Higher Education and Research Act 2017 it was brought under the umbrella of UK Research and Innovation (UKRI) alongside the research councils.
152. Greg Clark was in favour of Innovate UK remaining with UKRI, but worried that it had “adopted too much of the research councils’ culture” in terms of speed of issuing grants, which he thought was too slow.²⁶¹ He called for “much greater agility” which will “include more risk” in deployment of funds as grants and less fear of audit culture for Innovate UK when grants were unsuccessful.²⁶² Tom Adeyoola, Executive Chair of Innovate UK, told us that efforts were being made to improve the speed of award for grants: “Between 2022 and now they have reduced the cycle time by 32%, so it has

261 [Q 68](#) (Greg Clark)

262 [Q 68](#) (Greg Clark)

gone down from 173 days to 118 days from end of competition to money received.”²⁶³

153. Sir John Kingman, who was Chair of UKRI at the time, defended Innovate UK’s inclusion under UKRI as helping to “broaden out the work of the research councils”.²⁶⁴ However, he warned that “there are businesses around Innovate that have learned how to operate Innovate’s processes to get money ... If, in the end, a business cannot attract private money, that is not a great sign”.²⁶⁵ Sir John Lazar similarly cautioned against creating “a class of what we call grantpreneurs, who are always going back to Innovate UK “. ²⁶⁶
154. Despite concerns, many witnesses praised Innovate UK’s grants as playing an important role in the ecosystem. Douglas Brion of Matta.ai said that “Innovate UK has been fantastic for us” and that the “risk that Innovate UK took on us at the early stage is the reason why we are here today and have brought in infinitely more private capital from VCs than it put in”. He said under its new leadership that it should retain “that pro-risk mentality for backing entrepreneurs in the super early stages, because that is when it is most effective.”²⁶⁷ Sir John Lazar said that Innovate UK had provided “life-changing” grants for companies at the earliest stages.²⁶⁸ Tom Adeyoola told us that “when you meet start-ups ... it feels like nearly everyone in the room has had Innovate UK money in some way, shape or form.”²⁶⁹
155. Chris Vann warned Innovate UK against being too bureaucratic, saying that “the challenge is the administrative burden ... we have to be really careful in the UK not to swamp people with red tape.”²⁷⁰ Douglas Brion told us that “there is an awful lot of documentation, not just in the application process ... every quarter there are presentations and reports that you have to fill out.”²⁷¹
156. Part of this is due to the range of funding opportunities available. The Communications and Digital Committee, in its report on scaling up, highlighted this “spaghetti” of well-intentioned government schemes, and argued that the Government should “resist the urge to launch new schemes, and instead focus on consolidating and streamlining existing programmes for maximum impact.”²⁷² DSIT themselves told us in written evidence that “the large number of programmes [Innovate UK] now delivers ... risks spreading its interventions too thinly.”²⁷³ The Startup Coalition called for Innovate UK to “streamline its plethora of grant programmes”.²⁷⁴
157. There are a number of third-party firms (grant writers or consultants) that will help companies apply for Innovate UK grants due to the onerousness

263 [Q 238](#) (Tom Adeyoola)

264 [Q 75](#) (Sir John Kingman)

265 [Q 87](#) (Sir John Kingman)

266 [Q 91](#) (Sir John Lazar)

267 [Q 170](#) (Douglas Brion)

268 [Q 91](#) (Sir John Lazar)

269 [Q 241](#) (Tom Adeyoola)

270 [Q 179](#) (Chris Vann)

271 [Q 179](#) (Douglas Brion)

272 Communications and Digital Committee, *UK risks becoming an ‘incubator economy’ if we don’t take action to support our tech companies to scale up*, 3 February 2025

273 Written evidence from Department of Science, Innovation and Technology ([SUK0108](#))

274 Written evidence from Startup Coalition ([SUK0068](#))

of the forms and range of grants.²⁷⁵ Many of the grants are significantly oversubscribed; Innovate paused its flagship Smart Grants as less than one in ten applicants were being funded.²⁷⁶ Tom Adeyoola told us that the “grant writing industry is obsolete ... because ChatGPT can pass a grant application today” and that the entire grant application process needed to be “rebuilt from the ground up” because of Artificial Intelligence (AI). He said this would “end up with more human-to-human contact: we are going to need to meet the applicants who get through the filtering process and understand that they are able to execute the plans that they are putting forward.”²⁷⁷

158. **Innovate UK and its grants have a difficult but vital role to play in supporting companies in the early stages: many successful companies have benefitted from them. However, the grants are substantially oversubscribed and Innovate UK has historically been slow and bureaucratic in providing awards, leading to frustration. If Innovate is to remain within UKRI, it must move at the speed of business—as one of the Government’s main interfaces with SMEs.**
159. **In addition, Innovate UK allocates many schemes and pots of money with specific, often well-intentioned criteria, adding to complexity, bureaucracy, and difficulty for SMEs in determining which schemes they should apply for. This contributes to time wasted in applications that are unlikely to succeed. AI will require a rebuild of the grant allocation process, which provides an opportunity to address these issues.**
160. *The rebuilding of Innovate UK’s grant allocations provides an important opportunity to streamline, simplify, consolidate, and speed up the delivery of grants. Fewer but faster programmes would benefit everyone and the Government should resist the temptation to task Innovate UK’s funding with too many subsidiary goals. Innovate UK must work to make eligibility for different grants clearer—for example, through a simplified online portal with a questionnaire. It must continue to work on reducing the turnaround time for its grants.*

Innovate UK as a ‘due diligence’ body?

161. Several witnesses suggested that Innovate UK’s role should include due diligence for technologies, which gives confidence to private and public investors. Dr Darja Isaksson, Director General of Vinnova, Sweden’s innovation agency, said that “investors [in Sweden] notice start-ups that got support from Vinnova and see that as a sign of excellence.”²⁷⁸ Louis Taylor of the British Business Bank told us that he hoped Innovate UK could “provide us with a pipeline of tech-diligenced opportunities across the lines of the eight industrial strategy sectors” as it “has the expertise ... to do due diligence on the technology”,²⁷⁹ noting that “companies that get serial support through the stages from Innovate to us actually perform far better than ones that do

275 Part of this has led to the recent pausing and major review of SMART Grants, which were oversubscribed by a ratio of 10:1–20:1. Business Matters, *Innovate UK pauses flagship grants scheme for SMEs amid major review*, 31 January 2025

276 The Times, *Innovate UK puts grant scheme on hold for small businesses*, 29 January 2025

277 Q 239 (Tom Adeyoola)

278 Q 124 (Dr Darja Isaksson)

279 Q 207 (Louis Taylor)

not”.²⁸⁰ This was the ambition that Tom Adeyoola set for Innovate, saying that “I hope we can become that due diligence engine which shortens the timeframe for deep tech ... to reach funding.”²⁸¹

162. While individual grants were praised, concerns were raised about the overall picture for Innovate UK’s grants. Dr David Connell told us that “Innovate UK no longer publishes an annual report or any information at all on the £670m expense with businesses.”²⁸² The new Executive Chair, Tom Adeyoola, has said that he wants to be more transparent and monitor more metrics around Innovate UK’s spending.²⁸³ He also said he wanted Innovate UK to be “more outcome focused” than focused on inputs. In evidence to us, he conceded that: “Trying to understand from our side who we have put money into, who the good companies are, and which are the ones we should be following is quite a hard question for the organisation to answer.”²⁸⁴
163. **Whether it remains part of UKRI or not, Innovate UK should become a ‘due diligence’ body that crowds investment into science and technology companies. Its grants should give confidence to follow-on investors in the private and public sector that a technology has potential, and confidence to businesses that there is a real likelihood of follow-on investment. To achieve this will require much more transparency to build trust in its processes. Innovate UK does not publish an annual report and, while it collects a lot of data on the companies and projects it backs, this is hard to access and could benefit from deeper analysis.**
164. *Innovate UK should aim to become a ‘due diligence’ body with grants that are widely respected. It must play a more active role in identifying the highest-potential technologies and companies. It should increase its referrals to the British Business Bank and other sources of scale-up finance. The number of referrals, as well as the long-term private scale-up funding raised by the companies supported by Innovate UK, should be tracked as key performance indicators as part of a shift to outcome-based reporting. It should publish an annual report which sets out more details around the sectors and businesses it supports in line with the Industrial Strategy.*

British Business Bank

Convening institutional investors

165. The British Business Bank was given a 66% increase in its funding as part of the Spending Review so that it will now have a total financial capacity of £25.6bn and an aim to increase investments to around £2.5bn a year.²⁸⁵ The BBB said that:

280 [Q 208](#) (Louis Taylor)

281 [Q 234](#) (Tom Adeyoola)

282 [Q 64](#) (Dr David Connell)

283 House of Commons Science, Innovation and Technology Committee, *Pre-appointment hearing for Innovate UK chair*, 8 April 2025, [QQ 1-37](#) (Tom Adeyoola). In his pre-appointment session with the Commons SITC, Mr Adeyoola said that his main priorities in post were:

- Introducing metrics to understand the impact that Innovate UK is having
- Defining an “economic model” with which to evaluate future projects
- Measuring and improving speed and efficiency of delivery
- Measuring and improving the perception of both internal and external stakeholders.

284 [Q 241](#) (Tom Adeyoola)

285 London loves, Business, [British Business Bank total financial capacity increased to £25.6bn](#), 12 June 2025

“The British Business Bank is the largest investor in UK venture and venture growth capital funds. Our equity programmes have supported more than half of the UK’s current unicorns—22 UK unicorns have been supported by the Bank’s equity programmes, representing 56% of all current UK unicorns.”²⁸⁶

166. Sir Jonathan Symonds said that the BBB “used to be the last resort because it was bureaucratic, slow, and inefficient and would eliminate risk”, but that: “Now we have a vehicle that is competent and ambitious, has capital and a track record, and can become a meaningful partner to deployment of capital.”²⁸⁷ Ian Merricks acknowledged that the British Business Bank was now the largest limited partner investor in the UK, but he wanted them to accelerate the Enterprise Capital Fund scheme extension which backs early, emerging VC funds.²⁸⁸
167. The Long-term Investment for Technology and Science initiative (LIFTS) is an investment vehicle created by the BBB which enables private investors, such as the Mansion House accord institutional investors, to co-invest in UK science and technology companies. However, it is relatively small in scale, currently just £500m, with £250m of private sector investment from one pension fund (Phoenix Group) so far.²⁸⁹ Louis Taylor told us that they “contemplated it being up to £1 billion ... we are not near £1 billion but we are at more than £500 million. There are two partners now and we hope that more still will join that endeavour.”²⁹⁰
168. There is also the British Growth Partnership, another BBB co-investment vehicle, which Saul Klein mentioned as a way that the BBB could “take on third-party capital”.²⁹¹ He described it as “extremely well thought out” and hoped that “some of the Mansion House group say, ‘Okay, here’s a great vehicle that we can participate in alongside Treasury’”.²⁹²
169. Louis Taylor said that “institutions” were “looking at the potential for investing” in the British Growth Partnership, which would start to make investments by the end of 2025. He told us that “that individual fund is not going to solve the whole problem but it will create an opportunity for a number of influential pension funds to get into the market and to understand what it is to own these scale-up companies.”²⁹³
170. However, Saul Klein also stressed that even local authority pension funds in the scale of “£25 billion” would be “tiny”, arguing that we need “pools of capital in the hundreds of billions”.²⁹⁴ Mr Klein said that “whether it is LIFTS, the British Growth Partnership or £25 billion local authority funds, they are all tiny and are all rounding errors. Until we are routinely talking

286 British Business Bank, [British Business Bank total financial capacity increased to £25.6bn](#), 11 June 2025

287 [Q 101](#) (Sir Jonathan Symonds)

288 [Q 114](#) (Ian Merricks)

289 British Business Bank, [Long-term Investment for Technology and Science \(LIFTS\)](#) [accessed 18 August 2025]

290 [Q 206](#) (Louis Taylor)

291 British Business Bank, [British Growth Partnership](#) [accessed 18 August 2025]. The distinction is that LIFTS invests BBB money into a fund that is managed by a third party, Schroders Capital, while the British Growth Partnership involves the institutional investors contributing to a fund that is managed by the BBB itself. Both vehicles are set up to encourage Mansion House institutional investors to invest in UK science and technology companies.

292 [Q 104](#) (Saul Klein)

293 [Q 204](#) (Louis Taylor)

294 [Q 103](#) (Saul Klein)

about vehicles that are at least £100 billion in scale, we are not doing justice to our own innovation economy.”²⁹⁵ Mr Taylor acknowledged that there could be more potential later, saying that he wanted to “have a fund that is sized in a way that is commensurate with the market’s ability to absorb the money in a relatively short space of time, such that we can go back for a second fund.”²⁹⁶ In terms of persuading more institutional investors to invest in the fund, Mr Taylor said that “the demonstration of the track record” of their investments was important.²⁹⁷

171. **We welcome the announced increase in funding for the British Business Bank, although it is still too small. The Bank’s efforts to create vehicles for private sector capital, such as the British Growth Partnership and LIFTS, are commendable, but small in scale relative to the problem.**

172. *The Government should use its convening power to encourage more institutional investors to take part in funds that provide scale-up capital into UK science and technology companies. The Bank should publicise the success of these funds as they become established. Its additional funding could be used in part to increase the scale of the Bank’s investment in these funds. The Bank should also have targets to create follow-on funds for LIFTS and the British Growth Partnership to expand their size over time.*

National Wealth Fund

173. The National Wealth Fund, formerly the UK Infrastructure Bank, was recapitalised with an additional £5.8bn in 2024, taking its total capitalisation to £27.8bn. It set out some of its investment principles in a June 2025 *Statement of intent*.²⁹⁸

Clarifying the new role of the NWF

174. John Flint said that the National Wealth Fund would have “a role to play” in supporting science and technology companies to scale up, but did not want to “overstate that role.” He explained that:

“[the Fund’s] mandate has expanded from financing only the infrastructure required for net zero, or for local and regional economic growth, to supporting a much broader set of the Government’s industrial policy objectives. We now have priority sectors defined as clean energy, which have, to date, occupied more than half of our capital: transport; digital technologies; and advanced manufacturing. In addition, we have been asked to explore the role we can play in life sciences, the creative industries and dual-use technologies with defence applications. We also have permission to continue to be active in wastewater and natural capital, so there is a lot of ground to cover there.”²⁹⁹

He described this as “a very broad waterfront to cover.”³⁰⁰

295 [Q 104](#) (Saul Klein)

296 [Q 204](#) (Louis Taylor)

297 [Q 204](#) (Louis Taylor)

298 National Wealth Fund, *Financing the Future a statement of intent by the National Wealth Fund*, June 2025

299 [Q 243](#) (John Flint)

300 [Q 243](#) (John Flint)

175. He noted that the NWF was “already committing direct equity into science and technology companies” and that there was “a list of transactions and technologies that we have supported.”³⁰¹ He explained that: “Our minimum ticket size is £25 million; we prefer not to consider technologies below a [Technology Readiness Level] TRL of 7.”³⁰²
176. Aftab Mathur, of Singapore’s Temasek, explained that having late-stage financing from a long-term backer gave these companies “runway” so that “they can then really break out.”³⁰³
177. Written evidence from IP Group and Parkwalk Advisors highlighted that “the NWF’s equity investment function is still evolving, with its earliest commitments concentrated in infrastructure-related areas rather than deep tech. Without clear policy direction, there is a risk [institutions including the NWF] drift toward lower-risk, generalist investments.” They suggested that the public sector investment bodies “should each publish target allocations for investment into science and technology companies”, alongside “appointing scientific and technical advisors to support investment teams, along with secondment programmes between UKRI, Catapults, and public funders ... potentially with private sector deep tech fund managers.”³⁰⁴
178. **The National Wealth Fund has a very wide remit and has historically concentrated on infrastructure and net zero investments. Providing late-stage capital for growth companies is a new area for the NWF, and it is unclear how much funding it will allocate to this area compared to its primary responsibilities, yet it is precisely the late-stage capital that the NWF is supposed to deploy where the UK has the biggest gaps. Its role is to invest amounts in excess of £25m at a time and to coinvest alongside the private sector.**
179. *The National Wealth Fund should have a specific target for the number of late-stage (Series C+) scale-up funding rounds for UK science and technology companies it will support during each Parliament. It should consider ring-fencing some of its annual fund commitment target to this goal. Innovate UK, the British Business Bank, DSIT, and private sector venture capital should help the National Wealth Fund identify companies that are suitable for scale-up financing in sectors identified by the Industrial Strategy. Secondments between these organisations should be established to bring scientific and technological expertise into the National Wealth Fund. The NWF should also deepen its relationship with private sector venture funds.*

Risk appetite and the long-term UK interest

180. When asked about how the National Wealth Fund could ensure that its investments benefited the UK, John Flint told us that there was “a good range of examples of where we have made our capital financing contingent on the company committing to maintain its capital expansion and jobs in the UK or to maintain its head office in the UK.”³⁰⁵ On other occasions, finance

301 [Q 244](#) (John Flint)

302 [Q 243](#) (John Flint). This would exclude early-stage technologies, for example those with no demonstrated prototype. UKRI, [Eligibility of technology readiness levels \(TRL\)](#) [accessed 18 September 2025].

303 [Q 131](#) (Aftab Mathur)

304 Written evidence from IP Group plc and Parkwalk Advisors ([SUK0086](#))

305 [Q 255](#) (John Flint)

was made contingent on a company listing or re-domiciling in the UK.³⁰⁶ He noted that “at the point at which we are about to put public money into something, we have significant leverage.”³⁰⁷

181. He noted that when it came to risk appetite, the NWF had “a significantly different risk appetite to the commercial sector—we are taking roughly four times as much risk as the banks right now—but we also need to get to a point where we are modestly profitable, and we are not there yet.”³⁰⁸ In evidence to the House of Commons Treasury Select Committee, he said that: “If we can get to a state where we are taking risk—and we will be taking losses along the way, but getting to a position where the National Wealth Fund is not a drain on the taxpayer—that is a solid foundation for future growth ... It will take several more years to get to a point where we know whether we are profitable.”³⁰⁹ Saul Klein explained that “innovation is a long-term asset class. It plays out over 20 to 30 years, not over parliamentary cycles ... it is really important to keep a long-term perspective here because, if we are looking for overnight success, we are going to be disappointed.”³¹⁰
182. **The National Wealth Fund has made financing contingent on companies maintaining capital expansion, jobs, or head offices in the UK. This is an important tool. The National Wealth Fund has a significant risk budget, but it also has a mandate to ensure a positive return to the Treasury. It may be difficult to assess that return for long-term science and technology equity investments.**
183. *The National Wealth Fund should assess its return on investment in science and technology venture equity on a sufficient time horizon to avoid risk aversion. It should continue to explore ways to ensure that its late-stage scale-up finance supports companies with a serious commitment to scaling up in the UK. It should have an important role in assisting with the sharing and reducing of risk, for example through guarantees and loans as well as equity investments.*

306 [Q 255](#) (John Flint)

307 [Q 255](#) (John Flint)

308 [Q 247](#) (John Flint)

309 House of Commons Treasury Select Committee, *Inquiry into National Wealth Fund*, 1 July 2025; [Q 195](#) (John Flint)

310 [Q 101](#) (Saul Klein)

CHAPTER 5: NON-FINANCIAL BARRIERS TO SCALING

184. While access to finance of various forms is key for businesses to scale, witnesses also pointed to a range of non-financial barriers. These included the availability of skills, the environment for standards and regulation and a lack of networks within the UK. As Professor Charlotte Deane, Executive Chair of the Engineering and Physical Sciences Research Council, put it, the Government’s ambition to nurture a trillion-dollar technology company will need to be underpinned by “skills, infrastructure and discoveries.”³¹¹

People and skills: visas, skills, career trajectories

Visas

185. This Committee has an ongoing correspondence with the Government about the issue of visas for scientists; in particular, the impacts of high up-front visa costs on the ability of the UK to attract scientists and technologists. We first wrote to the then Home Secretary, the Rt Hon Suella Braverman MP, in June 2023³¹² and then subsequently to the current Government in January and May 2025.³¹³ The most recent of these letters was due to the increasing global competition for science, technology, engineering and mathematics (STEM) talent as a result of the science funding policies of the US administration, and in the context of the then forthcoming Immigration White Paper. Each of the letters has raised concerns about the high up-front fees required for scientists who wish to immigrate to the UK, which deplete research funding and can result in young researchers being faced with up-front costs of £20,000 to bring a family of four over for five years on a Global Talent Visa before relocation costs are even considered.
186. Our letter of 30 January 2025 described the UK’s current visa policy as “an act of national self-harm”. We have consistently called for the UK to rethink its attitude towards the most skilled migrants and, recognise that it is in a global race for talent, as well as for more flexibility as to how migrants can pay the Immigration Health Surcharge. This last measure has been rejected by the Home Office under the previous and current Governments.³¹⁴
187. Our most recent letter quoted evidence from this inquiry. Sir John Bell described US science funding policy to us as a “massive opportunity” for the UK to attract scientists, especially as the most severe cuts fall precisely in the areas of health and life sciences where the UK has historic strengths:

“Almost everyone I know who are leaders in the biomedical research space—in fact, I am talking a lot to MIT from the point of view of recruiting people from MIT to the Ellison Institute—are the best people

311 [Q 229](#) (Professor Charlotte Deane)

312 Correspondence, [Letter from Rt Hon Suella Braverman KC MP, then Home Secretary, to Baroness Brown of Cambridge, Chair of the Science and Technology Committee](#), 3 August 2023; Correspondence, [Letter from Baroness Brown of Cambridge, Chair of the Science and Technology Committee to Rt Hon Suella Braverman KC MP, then Home Secretary](#), 13 June 2023

313 Correspondence, [Letter from Lord Mair, Chair of the Science and Technology Committee to Rt Hon Yvette Cooper, MP, Home Secretary and Rt Hon Rachel Reeves MP, Chancellor of the Exchequer and Lord Vallance of Balham, Minister for Science](#), 30 January 2025; Correspondence, [Letter from Lord Mair, Chair of the Science and Technology Committee to Rt Hon Sir Keir Starmer, Prime Minister, Rt Hon Yvette Cooper, MP, Home Secretary and Rt Hon Rachel Reeves MP, Chancellor of the Exchequer and Lord Vallance of Balham, Minister for Science](#), 6 May 2025

314 Correspondence, [Letter from Seema Malhotra MP, Minister of Migration and Citizenship to Lord Mair, Chair of the Science and Technology Committee](#), 19 June 2025:

in the best universities in America and they are all saying, 'When can we move?'"³¹⁵

188. Similarly, Nobel Laureate Professor Sir Paul Nurse, Chief Executive and Director, The Crick Institute, told us that now was the time to “put science at the centre of [the] agenda and shout about it from the rooftops ... We will be enormously attractive.”³¹⁶
189. The importance of this issue was reiterated by several witnesses. Dr Alicia Greated set out the situation: “Imagine you are a family of four ... You would have to pay over £20,000 up front, which is totally unacceptable ... Our visa costs are 17 times higher than those in other research-intensive countries we compared.”³¹⁷ Douglas Brion told us that “they need to look at their visa system. We sponsor some people on the standard work visa, and it took us six to eight months to get through the process—at the time, that was half the lifetime of a company.”³¹⁸
190. Jakob Mökander told us that policy was going in the wrong direction: “It is definitely the case that the increasingly stringent visa and immigration rules ... are further constraining our ability to attract top talent, which then stays in the UK to do business and innovates on that basis.”³¹⁹ Julia Willemyns proposed going beyond just making visa requirements less arduous and “headhunting top 1% talent from abroad.”³²⁰ Irene Graham recommended that “we also need to change the language around ... ways in which we are currently talking about the importance of” attracting global talent.³²¹ Lord Vallance told us that “we are linking the Global Talent Fund to a taskforce that can act as more of a concierge service to help some of this work at the senior level, but it is at all levels where we need to have immigration to support the innovation and science and technology.”³²²
191. In a one-off evidence session Sir Adrian Smith, President of the Royal Society, told us that we have “a visa cost system, which is, on average, 17 times more expensive than any other country. It is insane. Again, it keeps going back to the lack of joined-up stuff across Government. DSIT will say, ‘We want global talent’, and the Home Office will say, ‘We will try to put you off’.”³²³
192. Irene Graham’s organisation recommended that “you need a scale-up visa” in 2014 to bring in individuals with specific business or technical skills that are needed for companies to scale up. The Scale-up Worker visa was launched in 2022,³²⁴ but Irene Graham told us that “one of the big issues is awareness of it ... we also need to make sure it is designed for what it was

315 [Q 49](#) (Sir John Bell)

316 [Q 38](#) (Sir Paul Nurse)

317 [Q 1](#) (Dr Alicia Greated)

318 [Q 180](#) (Douglas Brion)

319 [Q 11](#) (Jakob Mökander)

320 More details in this proposal. Centre for British Progress, *Establishing an Exceptional Talent Office for National Competitiveness*, 8 May 2025. Interestingly, the UK did say it would set up a post-Brexit Office for Talent in No 10 back in 2020 to bring over exceptional scientists, but it seems to have sunk without a trace.

321 [Q 111](#) (Irene Graham)

322 [Q 290](#) (Lord Vallance of Balham)

323 Science and Technology Committee, *Oral evidence from the President of the Royal Society*, 9 September 2025, [Q14](#) (Sir Adrian Smith). Sir Adrian’s evidence was taken separately from this inquiry and we have therefore not listed him as a witness in Appendix 2.

324 Home Office, *Scale-up visa will propel high-growth businesses*, 22 August 2022

meant to do, which is speed up the process”.³²⁵ In 2024, only 44 Scale-up Worker visas were awarded, despite there being an estimated 34,000 scale-up companies in the UK.³²⁶

193. The Government has announced a Global Talent Fund of £54m in response to the changing circumstances around visas, which it says is “designed to attract a total of 60–80 top researchers (both lead researchers and their teams) to the UK”.³²⁷ Net migration to the UK fell by 430,000 between 2023 and 2024, so this could be significantly expanded without having any meaningful impact on the Government’s desire to reduce net migration.³²⁸ The Immigration White Paper also commits to expanding the Global Talent Visa route, although is short on details as to how this will be achieved,³²⁹ while the Government has recently said it aims to double the number of people coming to the UK on high-skilled routes.³³⁰ However, Sir John Kingman was unimpressed: “I have read the White Paper ... but that section is very short and rather grudging. My own experience of the Home Office is that their idea of the sort of talent we might want begins with Nobel prize-winners ... It is the young people—and their families—that you want.”³³¹ Lord Vallance noted that “The Global Talent Visa was singled out by the Chancellor ... we need to make the routes to it easier.”³³²
194. Since we concluded taking evidence there have been significant shifts in the environment for global talent. On 19 September President Trump announced a \$100,000 fee for the US H1-B skilled worker visa, which is likely to have an impact on the global availability of such workers and the relative attractiveness of the UK as a destination for them.³³³ In a separate development, it appears that the Government, prompted by the Global Talent Taskforce, may finally be considering abolishing visa fees for certain high-potential individuals.³³⁴ It remains to be seen how either of these developments will progress. The Royal Society’s most recent analysis indicates that UK immigration costs are still too high for scientists.³³⁵
195. **Visas for scientists remains a critical area where policy must change urgently if the Government is serious about growth. This Committee has repeatedly set out to the Home Office the need for a pro-active policy to attract global scientific and technological talent, in particular by addressing the high up-front costs for even those visas reserved for Global Talent.**

325 Q 111 (Irene Graham)

326 Visa statistics from the Home Office adding up Q1-4 2024, Home Office, *Immigration System Statistics*, 22 May 2025; Scale-up estimate from the Scale-up Institute: *Scaleups in the UK*, June 2024

327 Department for Science, Innovation and Technology, *Leading lights of UK research spearhead search for world’s best talent*, 18 July 2025

328 Stats from the Migration Observatory from y/e December 2023/4. The Migration Observatory, *Net migration to the UK - Migration Observatory*, 10 June 2025

329 House of Commons Library, *Changes to UK visa and settlement rules after the 2025 immigration white paper*, 20 August 2025

330 Home Office, *Migrants will be required to pass A Level standard of English*, 14 October 2025

331 Q 75 (Sir John Kingman)

332 Q 291 (Lord Vallance of Balham)

333 The Guardian, *Trump’s £100,000 H1-B visa fee could hurt US growth, economists warn*, 22 September 2025

334 Financial Times, *UK explores plan to drop visa fees for top global talent*, 22 September 2025

335 Financial Times, *Scientists charged too much to come to work in UK, says Royal Society*, 21 October 2025; The Royal Society, *UK immigration costs: an international comparison of skilled worker, researcher and student visas in 2025*, 21 October 2025

196. **The UK has a unique opportunity to attract global talent, particularly from the US, yet the Home Office’s historic unwillingness to review the barriers for high-potential talent is an absurd act of national self-harm. The UK Government is lagging behind other countries in this respect. It should be rolling out the red carpet instead of red tape. The Committee welcomes the establishment of the Global Talent Fund, commitments to increase numbers for highly-skilled visa routes, and recent news that fees may be reconsidered, but the scale of resources allocated to the Fund are tiny compared with the scale of the opportunity.**
197. *The Government should urgently use its new Global Talent Taskforce and significantly increased funding for the Global Talent Fund to seize this unique opportunity to attract the scientists and entrepreneurs of the future to the UK. It is critically important that the recently hinted abolition of fees for certain global talent is not blocked by Home Office intransigence.*
198. *In addition, the Global Talent Taskforce must find creative and flexible ways to address the high up-front visa costs more generally for those it attracts. Independently of other measures, the Government must change its policy on the Immigration Health Surcharge, allowing it to be repaid over time. The Home Office should embed the mission to attract more global talent as a primary goal alongside reducing net migration. The Scale-up Worker Visa is in need of review as uptake has been very limited.*

Skills

199. The Government acknowledges the importance of skills to the economy. The Industrial Strategy describes the skills pipeline in an environment transformed by AI as “critical for attracting globally mobile investment and transforming businesses.”³³⁶ It has also established a new executive agency, Skills England.³³⁷
200. Over summer 2025 Skills England published analyses of the skills required in the sectors prioritised by the Industrial Strategy. These analyses highlighted, among other things, demand for digital and technology skills in an era of AI-driven technological change,³³⁸ and degree level training and above in STEM subjects.³³⁹
201. The fundamental UK research base is strong but there is scope to maintain and enhance it. Sir John Lazar thought that not enough domestic students were doing STEM PhDs: “We must find a way to maintain our R&D base to maintain our lead and then, in a judicious way, attract top talent where we need it.”³⁴⁰ While Stian Westlake cited research indicating no shortage of STEM graduates (as demonstrated by relatively low wages in the field), he acknowledged that there might be a problem at the elite level, with effectively two markets for talent.³⁴¹

336 Department for Business and Trade, *The UK’s Modern Industrial Strategy*, June 2025, [CP1337](#), p 64

337 Department for Education, *Press release: Skills England to transform opportunities and drive growth*, 22 July 2024

338 Department for Education, *Skills England: Sector evidence on the growth and skills offer*, June 2025, p 7

339 Department for Education, *Skills England: Sector evidence on the growth and skills offer*, June 2025, p 8

340 [Q 99](#) (Sir John Lazar)

341 [Q 18](#) (Stian Westlake)

202. However, there is a wider issue about the skills needed to found and scale a technology business. Greg Clark said that scale up was partly about “acquiring or developing the skills, attributes and wisdom, as it were, to grow.”³⁴² Chris Vann thought there were “not too many people who have taken products all the way through. We sometimes need to resource things such as global commercial development resources outside the UK.”³⁴³
203. Dr Arati Prabhakar, a former Director of DARPA, spoke of US agencies’ success at “coaching researchers at universities on entrepreneurship and helping them to become bilingual, not just in research and science but in business.”³⁴⁴ Dr Stefanie Tompkins, Provost at the Colorado School of Mines and also a former Director of DARPA, echoed this. Coaching was needed because university researchers were often “abysmally ignorant about what constitutes a business, what has market value and how to scale it beyond the one or two prototypes that they know how to make.”³⁴⁵
204. A similar point was made by Dame Fiona Murray about the MIT curriculum: “We really focus on education and training around entrepreneurship and innovation on our graduate students.” She drew a distinction between the amount of time available for this broader curriculum in a typical five-year US PhD course, compared to a shorter UK one, but thought it was possible to incorporate some elements, along with “a culture in which it is acceptable to think about turning your PhD into a business”.³⁴⁶
205. Airbus emphasised the need for “skills pipelines” necessary to commercialise innovations:
- “There currently exists a critical shortage of skilled workers in emerging technologies such as: alternative fuel systems, material sciences, cyber and digital, robotics, data analytics, and artificial intelligence (AI). Without strategic planning, these shortages are likely to be exacerbated by the rapid pace of innovation required by the industry to decarbonise.”³⁴⁷
206. Irene Graham also spoke about pipelines:
- “If you take the schools environment, certainly our scale-up leaders want to see more alignment of where the opportunities are in the future economy and where their needs are ... Are we training the cyber digital skills in a consistent way? How are we leveraging the private sector into that? How are we using the maths curriculum to train for the modern era, including venture capital?”³⁴⁸
- She added that, while schemes such as the Science and Technology Venture Capital Fellowship were valuable, such skills were needed earlier.³⁴⁹ Lord Vallance acknowledged that skills needed to be part of an integrated approach to scale-up.³⁵⁰ In October 2025, the government published its Post-

342 [Q 64](#) (Greg Clark)

343 [Q 175](#) (Chris Vann)

344 [Q 144](#) (Dr Arati Prabhakar)

345 [Q 144](#) (Dr Stefanie Tompkins)

346 [Q 275](#) (Dame Fiona Murray)

347 Written evidence from Airbus ([SUK0077](#))

348 [Q 111](#) (Irene Graham)

349 [Q 111](#) (Irene Graham)

350 [Q 280](#) (Lord Vallance of Balham)

16 education and skills white paper.³⁵¹ The White Paper was mostly focused on 16–24 year olds rather than adult reskilling.

207. **Skills England has made sector-specific assessments of skills needs as part of the Industrial Strategy. Despite this, and the widely stressed importance of skills policy, it remains an underfunded area regularly shuffled between departments. Developments in AI will require substantial and expanding retraining programmes, both in using the technology and if it results in workforce reduction across sectors.**
208. *The Government should ensure that the training it funds as part of the Industrial Strategy is commensurate with the skills needs identified by Skills England. It should accept that investment in the UK workforce will be an ongoing and growing requirement in this decade and is key to any technological productivity gains.*
209. *The Government should also consider whether there are sufficient entrepreneurial skills in the science and technology research community. Undergraduate courses and PhD training should include entrepreneurial training, and particularly placements with business, wherever possible in order to ensure every student is exposed to industry. Universities must make better use of links with their business schools.*

Career permeability

210. As well as scientists and technologists needing entrepreneurial skills, business needs scientific skills and government needs both. Chapter 3 covered some of the issues around innovation investment and therefore technology expertise in the pensions sector, for instance. Sir Paul Nurse spoke of a lack of “permeability” between “the discoverers, the translators and the applied or commercial sector” who did not speak to each other enough.³⁵² Lord O’Donnell drew a distinction with Singapore and France, where civil servants more routinely move between public service and business.³⁵³
211. One issue was cultural, as exemplified by the restrictions put on departing civil servants by the Advisory Committee on Business Appointments (ACOPA), which he thought could be handled more helpfully to encourage people to move in and out of the civil service.³⁵⁴ Another major issue was pay. Lord O’Donnell said “we have the dumbest pay system you could imagine” and continued:

“Imagine if you are a young scientist thinking of joining the Treasury and you are going to live in London because that is where Westminster and things are. Your pay is pathetic but you have got this great pension. You go to the building society. Are they going to give you a mortgage? No

351 HM Government, *Post-16 Education and Skills*, October 2025, [CP1412](#)

352 [Q 37](#) (Sir Paul Nurse)

353 [Q 53](#) (Lord O’Donnell)

354 [Q 62](#) (Lord O’Donnell). In 2023 the Constitution Committee considered porosity between business and the Senior Civil Service and noted the importance of the role of ACOPA in setting expectations for those wishing to join the Civil Service but move back to the private sector later. Constitution Committee *Permanent secretaries: their appointment and removal* (17th Report, Session 2022–23, HL Paper 258), para 93. Since we took evidence, it has been announced that ACOPA has been abolished, with responsibility for departing civil servants moving to the Civil Service Commission: The Guardian, *Post-ministerial jobs watchdog closes as part of UK government ethics shake-up*, 13 October 2025.

- chance. They do not pay any attention to your pension. If we switched one thing, it would be to switch the pay/pension stuff.”³⁵⁵
212. Sir Paul Nurse made a similar point about pay in government research institutions: “we are still under this silly Treasury restriction. If you are in a university, there are no restrictions. If you are in a PSRE or laboratory such as the MRC Laboratory of Molecular Biology at Cambridge ... it is pathetic what salaries they pay.”³⁵⁶
213. Angus Hanton thought that the UK political class had less business experience than its US counterparts and suggested a systematic secondment scheme for senior civil servants to spend time in business: “We need to stop politicians, civil servants, and indeed businesspeople operating in such narrow silos where they do not understand each other’s challenges and motivations.”³⁵⁷
214. In academia, the incentive structures can make pursuing an interdisciplinary career difficult. Sir John Lazar said the UK needed to work out: “How do you make it easy for an academic to spend time in industry and not destroy their academic career when they come back? This is happening well in some universities but not so well in others.”³⁵⁸ Saul Klein said that “We need to look at the balance between research ... [and] the knowledge exchange elements” of academia. He elaborated that: “If I am a professor at a university in the US, if I move into business, I get accreditation in my academic career. I do not get that here in the UK. We need to look at that incentivisation”.³⁵⁹
215. The Industrial Strategy acknowledged some of the challenges around getting business experience into government, including a commitment to build commercial skills in government through an in-house business academy and a new approach to business placements which aims to make it easier to bring industry expertise into government and to place civil servants into industry.³⁶⁰
216. **Witnesses emphasised the importance of career permeability between academia, entrepreneurship, industry, and government, yet the incentive structures in each of these sectors makes building portfolio careers difficult. All sectors need to value cross-cutting experience more for the new ideas, networks, and experience it can give. Pay structures in the civil service inhibit its ability to attract and retain top talent, particularly in STEM.**
217. *The Government, universities and research funders should encourage and incentivise careers that involve moving in and out of the civil service, academia, and industry, work to align incentives and improve the availability of temporary secondments. The Government and research funders should create more secondments, fellowships, and placements with business, and set targets to increase the number of these opportunities substantially. Initiatives like the Venture Capital Fellowships should be expanded.*

355 [Q 53](#) (Lord O’Donnell)

356 [Q 35](#) (Sir Paul Nurse)

357 [Q 24](#) (Angus Hanton)

358 [Q 98](#) (Sir John Lazar)

359 [Q 111](#) (Saul Klein)

360 Civil Service World (CSW), *Industrial strategy: Civil service reforms aim to build ‘enduring partnership’ with business*, 23 June 2025

218. *To attract young professionals, the civil service should consider whether its pay offer delivers the highest calibre officials and benefits to the wider economy. This could include rebalancing the total compensation away from pensions, providing more performance-based pay and flexibility in pay scales and developing incentives to retain specialist talent and expertise. A greater approach to flexibility in careers that allows greater movement between academia, industry and government will also help in recruitment and retention for top talent. This could result in fewer but better-paid civil servants.*

Networks

219. Douglas Brion had a striking anecdote about the power of networks:

“The other difference that I have found in the UK, compared to time I have spent in the US, is around networks and convening ... I have genuinely landed in San Francisco airport, met someone over coffee two hours later and then been taken to a party for hardware VCs by a stranger. Can you imagine that happening in the UK? ... That is the ecosystem that we are trying to compete against.”³⁶¹

220. We heard of the value and power of networks from several witnesses. Sir John Lazar discussed the “unbelievably efficient network” of Silicon Valley which fostered strong connections between financiers, entrepreneurs, academics and universities.³⁶² Sir John said that the Oxford-Cambridge-London golden triangle was starting to approach this level of efficiency,³⁶³ but there was more to do to join up professional networks elsewhere.³⁶⁴ Douglas Brion also pointed to the success of Station F, a campus in Paris with 1,000 start-up companies and hundreds of VCs, intended to build connections. He thought this was significant in encouraging growth in France despite their smaller level of VC investment compared to the UK.³⁶⁵

221. Dame Fiona Murray told us that the US innovation economy was highly concentrated in very few areas:

“Silicon Valley, Boston, Pittsburgh, Los Angeles and Boulder, Colorado. These are not all huge. Silicon Valley is unusually large, but it is highly concentrated. Less than 10 economic areas across the hundreds in the US make up a very significant amount of the innovation activity.”

She thought that the UK would need to replicate that in five to seven regions but recognised the political difficulty of that.³⁶⁶ On Silicon Valley in particular she noted the presence there of large funds and very high-net-worth individuals who relied on social networks and connectivity to get market signals quickly.³⁶⁷

222. Stian Westlake made a related point about networks and capital: “over time, we would want to see networks of cashed-out entrepreneurs who are able to

361 [Q 171](#) (Douglas Brion)

362 [Q 89](#) (Sir John Lazar)

363 [Q 96](#) (Sir John Lazar)

364 Sir Paul Nurse also talked about hosting parties at the Crick for the same purpose; [Q 37](#) (Sir Paul Nurse).

365 [Q 173](#) (Douglas Brion)

366 [Q 271](#) (Professor Dame Fiona Murray)

367 [Q 273](#) (Professor Dame Fiona Murray)

reinvest in the next generation of businesses as angels³⁶⁸, and pension funds and other institutional investors that increasingly got the taste for investing in VC because their previous vintages of investments did well.”³⁶⁹ Dr Darja Isaksson made a similar point about Sweden:

“We had that culture change early on with the first and second waves of entrepreneurs who, ever since, have been reinvesting. We see successful ecosystems of new start-ups coming from early employees and founders of companies such as Klarna and Spotify.”³⁷⁰

223. The Government recognises the value of networks, or clusters. Lord Vallance noted that “pretty much everything” in Cambridge, Massachusetts, including VCs, was in walking distance: “when somebody goes into a company as a young researcher: if that company falls over, they do not really care that much, because they can walk next door and join that one instead.”³⁷¹ The Government is mapping clusters, such as the Oxford-Cambridge corridor, with the Industrial Strategy identifying 19 separate clusters, but Lord Vallance noted a lack of local VCs in many of those clusters.³⁷² In Cambridge, Massachusetts “VCs are local. Although they can invest internationally, they do not; they invest locally. They want to walk to the lab, look the scientists in the eyes, and check that they are doing what they think they are doing and that they are high quality.”³⁷³
224. **Witnesses pointed to the power, efficiency, and speed of the science and technology network in Silicon Valley. Strong connections exist there between financiers, entrepreneurs, and universities, reducing the time taken to make the connections needed to scale up. Similar connectivity has been achieved at MIT which provides a highly effective model for UK universities. The issue brings together most of the problems we have been considering in this report: availability of capital where it is needed, expertise for investors, entrepreneurial skills for researchers, permeability between different fields. Improving each of them will create networks; fostering networks will in turn improve those elements.**
225. One way of fostering networks was suggested by Dr David Cleevely. He thought a decentralised “concierge service” could help build the connections we have been discussing.³⁷⁴ This would provide 50–100 selected firms with relationship managers, drawn from industry and with “authority to coordinate across government departments and agencies on issues such as regulation, talent, public procurement, export support and finance.”³⁷⁵ He said that this would not be “a new body but ... a new system and a new set of processes that would use the resources of existing bodies ... and would [connect] them so they can make better use of their resources”.³⁷⁶

368 An angel investor is described by the British Business Bank as “someone who invests their own money in a small business in exchange for a minority stake”. British Business Bank, [Angel investors](#), [accessed on 2 September 2025]

369 [Q 19](#) (Stian Westlake)

370 [Q 124](#) (Dr Darja Isaksson)

371 [Q 297](#) (Lord Vallance of Balham)

372 Department for Business and Trade, *The UK’s Modern Industrial Strategy*, June 2025, [CP1337](#), pp 106–08

373 [Q 297](#) (Lord Vallance of Balham)

374 [QQ 182–183](#) (Dr David Cleevely)

375 Written evidence from Dr David Cleevely CBE FREng FIET ([SUK0107](#))

376 [Q 183](#) (Dr David Cleevely)

226. Similar proposals were made in written evidence, including from the Academy of Medical Sciences, Vertical Aerospace and Oxford Nanopore Technologies.³⁷⁷ Vertical Aerospace noted that:
- “In other countries, businesses benefit from economic development agencies that offer integrated support. In the UK however, the support ecosystem is split across institutions like the Office for Investment, UK Export Finance, the National Wealth Fund and the British Business Bank. Government should consider streamlining this architecture or introducing a chaperone function that helps companies and investors navigate it.”³⁷⁸
227. Irene Graham described the challenge as “actually writing to our emerging growth and innovation businesses and pinpointing them towards a range of the services that are available in government? We are not actually joining that up yet”. She compared it to “the concierge-type service that you see in Bpifrance], the account management we see in Ireland, in the Small Business Administration in the US, in Denmark, and indeed in Scotland, which is working well”.³⁷⁹
228. Dr David Cleevely set out his proposals in detail in written evidence to the Committee.³⁸⁰ He noted that a version of the concierge service was included in the Industrial Strategy, although this, under the Office for Investment, appears to be aimed more at international investors.³⁸¹ A different scheme, anticipated by Lord Vallance in oral evidence, appears in the Government’s *Life Sciences Sector Plan*. Action 23 is the establishment of “a dedicated service to support 10–20 high-potential UK companies to scale, invest and remain domiciled in the UK”.³⁸² The companies would be selected and “a small team in the Office for Life Sciences will help people navigate the system and will give a bespoke service to those companies to help them get to the next stage.”³⁸³ It would “not be permanent; it will be to overcome certain things, and then they will withdraw.” Lord Vallance mentioned the creation of a business growth service in DBT under the Industrial Strategy and said that this “is supposed to be the front door for all of it. Its aim is to be the place that stops you having to navigate further because it will do the navigation for you and put you in the right place”.³⁸⁴
229. **Several witnesses have suggested the idea of a ‘concierge service’ for high-potential technology companies to help them navigate the complexities of government support and regulation, and unblock issues preventing them from scaling. The concierge service proposed in the Government’s Life Sciences Sector Plan is a promising initiative, but it is restricted to life sciences.**

377 Written evidence from the Academy of Medical Sciences ([SUK0072](#)), Oxford Nanopore Technologies ([SUK0105](#)), and from Vertical Aerospace ([SUK0058](#)). Vertical Aerospace describe it as a “chaperone function”.

378 Written evidence from Vertical Aerospace ([SUK0058](#))

379 [Q 111](#) (Irene Graham)

380 Written evidence from Dr David Cleevely CBE FREng FIET ([SUK0107](#)); Supplementary Written evidence from Dr David Cleevely CBE ([SUK0112](#))

381 Department for Business and Trade, *The UK’s Modern Industrial Strategy*, June 2025, [CP1337](#), pp 15, 51, 71, 137,153

382 HM Government, *Life Sciences: Sector Plan*, 16 July 2025, p 31

383 [Q 293](#) (Lord Vallance of Balham)

384 [Q 293](#) (Lord Vallance of Balham)

230. *There is a clear role for a ‘concierge service’ to identify high-potential science and technology companies and refer companies on a fast-track basis to decision-makers in bodies, such as regulators, the Regulatory Innovation Office, public sector investment bodies and the Office for Global Talent, and to guide them through the scaling up process. The concierge service must not only provide advice but also be empowered to intervene swiftly to clear blockages. The Government could choose to deliver this through DBT’s business growth service or its proposed Life Sciences concierge service. The key is that the concierge service must be authoritative and have the power to intervene and speed up processes and decision-making.*
231. *The Government must strengthen the density and connectivity of the UK science and technology network, particularly in specific clusters. These networks need a concentration to reach critical mass; it is better to focus on a smaller number of them. This could include creating start-up campuses like France’s Station F, fostering its own network of ‘scale-up champions’, which could be venture capital investors or technologists, or hosting regular convening events.*

Standards and regulation

232. Products and services need to conform to the relevant standards and regulatory requirements. Navigating those is one of the challenges facing scaling-up businesses with innovative products and one of the reasons why initiatives such as the concierge service have been proposed. Standards are important for bringing new or revised products to market, helping to build cohesion in emerging technologies and enabling innovators to demonstrate to customers features, benefits and risks of their product and to demonstrate systematically its advantages of competitors.
233. The British Standards Institution (BSI) argued that, used strategically, standards will shorten the innovation cycle, help bridge the ‘valley of death’ and build trust with investors.³⁸⁵ This encompasses not only the product itself but also the process of innovation. For instance ISO 56001 offers a systems approach to reduce uncertainty and increase the likelihood of successful innovation, while ISO 56002 includes eight innovation management principles.³⁸⁶ The National Measurement Laboratory made a similar point: metrology and standards “play a key role in de-risking/ supporting [commercialisation and manufacturing], by ensuring that raw materials, prototypes/products and processes are ‘as claimed’, reproducible, fit-for-purpose and safe.” It argued that metrology and standards should be embedded in the Industrial Strategy and the UK’s leading position in the field should be maintained with long-term support, investment and industry collaboration.³⁸⁷
234. Saul Klein characterised standards and regulation as being about “creating conditions for people to feel safe to innovate.”³⁸⁸ Chris Vann of Autolus Therapeutics made this more concrete: “we need guidelines that are

385 The “valley of death” refers to the gap between early-stage research, often funded by governments, and commercial technologies which can be sold. See, for example, House of Commons Science and Technology Committee, *Bridging the “valley of death”: improving the commercialisation of research* (Eighth Report, Session 2012–13, HC Paper 348)

386 Written evidence from the British Standards Institution ([SUK0110](#))

387 Written evidence from the National Measurement Laboratory ([SUK0032](#))

388 [Q 103](#) (Saul Klein)

international so we can move our products across borders, apply the same standards and so forth.”³⁸⁹ He added that Autolus was directly engaged in setting standards in order to “take away some of the complexity to deliver the product.”³⁹⁰

235. Witnesses thought that the UK was already in a strong position as an international standard setter. Jakob Mökander argued that the UK could be a force for the harmonisation of standards internationally in a fragmenting geopolitical landscape, pointing to the work of the AI Security Institute,³⁹¹ while the Institution of Engineering and Technology (IET) argued that there was an opportunity for the UK to take a leading role in standards setting for quantum technologies.³⁹² The Association of Innovation, Research and Technology Organisations (AIRTO) drew attention to the capability of its members in collaborating in the process.³⁹³
236. Dr Scott Steedman, Director-General, Standards, BSI Group characterised standards as an “information scaffold for start-ups to scale up” and thought that historically the UK had been “dismissive” of standards as an engine of growth. He thought it was important to change that mindset and for people in the UK to set “standards, including regulations, [as] part of the landscape of business information that companies need to understand and exploit in order to be successful.”³⁹⁴ He pointed to a lack of education in business schools, in contrast with Korea, where standards are taught from primary school.³⁹⁵
237. Lord Vallance argued that:
- “If you do that and get the standards right, you become quite attractive to companies because, although companies do not like rules that stop them, they like things that give them some certainty so they have a level playing field.”³⁹⁶
238. **Standards can be potential enablers for start-up companies with new technologies to gain a significant competitive advantage if they are involved with the process of international standard-setting. The UK has significant standards bodies (especially the British Standards Institution) and public sector laboratories (such as the National Physical Laboratory) that can help in the underlying measurements and would benefit from greater participation in international standards-setting meetings.**
239. In our previous report on engineering biology, we concluded that:
- “If the UK is to become a leading nation in engineering biology, it needs world-leading regulators that can anticipate areas where regulatory clarity is needed, and set out a very clear regulatory path to market for new technologies with swift timelines for assessment and approval.”³⁹⁷

389 [Q 175](#) (Chris Vann)

390 [Q 178](#) (Chris Vann)

391 [Q 14](#) (Jakob Mökander)

392 Written evidence from Institution of Engineering and Technology (IET) ([SUK0017](#))

393 Written evidence from AIRTO ([SUK0023](#))

394 [Q 152](#) (Lord Willetts)

395 [Q 153](#) (Dr Scott Steedman)

396 [Q 296](#) (Lord Vallance of Balham)

397 Science and Technology Committee, *Don't fail to scale: seizing the opportunity of engineering biology* (1st Report, Session 2024–25, HL Paper 55), para 122

240. The issue goes wider than engineering biology. All innovative companies need a flexible, open and predictable regulatory environment in which to flourish. The Government recognises this. In October 2024 it announced the creation of the Regulatory Innovation Office (RIO) to “reduce the burden for businesses hoping to bring new products and services to the market in some of the UK’s fastest-growing sectors.”³⁹⁸ Lord Willetts was announced as its Chair in March 2025.³⁹⁹ It has been described by techUK as “a 20-person strong directorate within DSIT.”⁴⁰⁰
241. The RIO was set up to help innovative regulation proceed. It set out its initial areas of focus as drones, engineering biology, space and AI in healthcare.⁴⁰¹ Saul Klein said that he welcomed the establishment of the RIO which should be about “creating conditions for people to feel safe to innovate.”⁴⁰²
242. Witnesses such as Sir John Bell,⁴⁰³ Lord O’Donnell,⁴⁰⁴ Sir John Lazar,⁴⁰⁵ Dr Patrick Rose, of Germany’s SPRIND,⁴⁰⁶ and Douglas Brion⁴⁰⁷ raised the speed and stability of regulation as a key issue. Julia Willemyns illustrated the point:
- “If you have a bioengineering company and it is going to take you three years to go through the MHRA, when the market in the UK is much smaller than anywhere else, you are going to go elsewhere to try to scale your company.”⁴⁰⁸
243. Start-ups and other companies have expressed a desire to see a single ‘front door’ to understand the regulatory implications of any new products.⁴⁰⁹ Lord Willetts, though, was unclear about whether the RIO would be able to do this, saying that “we are quite a small, low-cost operation. At the moment there is no single, easy front door where people can just go to a website and leave us a regulatory problem that we then engage with. That would be an increase in our role, and we do not have the staff or capacity to do it”.⁴¹⁰ Instead, it would act as a “convener” between regulators, in fields like engineering biology where many can potentially be involved.⁴¹¹ Nonetheless, he did say that the RIO could act as a “shortcut. When there are specific companies that have a specific problem, we can say, ‘Hang on, how can you possibly defend regulation X? We really need to do something about it.’”⁴¹²

398 Department for Science, Innovation and Technology, *Press release: Game-changing tech to reach the public faster as dedicate new unit launched to curb red tape*, 8 October 2024

399 Department for Science, Innovation and Technology, *Press release: Former Science Minister appointed as innovative regulation Chair to bring game-changing tech like drone medicine deliveries to the public faster*, 10 March 2025

400 TechUK, *What is the Regulatory Innovation Office? And what is it not*, 27 June 2025

401 UK Parliament, Written Statement, [HCWS111](#), 8 October 2024. Interestingly Lord Willetts ([Q 157](#)) told us it had already worked to address the issue of drones needing to be kept within the line of sight which was raised by Julia Willemyns ([Q 9](#)) at the start of our inquiry.

402 [Q 103](#) (Saul Klein)

403 [Q 45](#) (Sir John Bell)

404 [Q 52](#) (Lord O’Donnell)

405 [Q 90](#) (Sir John Lazar)

406 [Q 121](#) (Dr Patrick Rose), [Q 125](#) (Dr Patrick Rose)

407 [Q 178](#) (Douglas Brion)

408 [Q 15](#) (Julia Willemyns)

409 See, for instance, Startup Coalition, *A Pro-Innovation RIO: A Driver of Economic Growth*, May 2025, pp 11–12

410 [Q 166](#) (Lord Willetts)

411 [Q 166](#) (Lord Willetts)

412 [Q 157](#) (Lord Willetts)

244. He told us that regulators regularly ask for more resources to be able to engage with small businesses, and the RIO has a limited budget to provide this, as it incorporated the previously existing Regulators' Pioneer Fund which provided funding for regulators to encourage innovation.⁴¹³ It has done so for the Food Standards Agency to help it regulate alternative proteins.⁴¹⁴ Lord Vallance described the RIO as an "un-blocker of things".⁴¹⁵
245. In parallel to the efforts undertaken by RIO, there is an effort led by the Treasury to reform regulation and encourage regulators to support economic growth.⁴¹⁶
246. **The Regulatory Innovation Office should be important in promoting pro-innovation regulation in key sectors, but it is significantly underpowered. Start-ups and other companies want a single 'front door' to understand the regulatory implications of any new products, but the Regulatory Innovation Office is not empowered or resourced to provide this. Regulators regularly ask for more resources to be able to engage with SMEs and innovation, which the RIO is not resourced to provide. As it sits within DSIT, it does not have authority over regulators in other departments.**
247. *We welcome the establishment of the RIO, but its role, intentions, and powers need to be set out and clarified. There is a clear demand in the system for additional resources for regulators to engage with innovative technologies. The Government should investigate the best way to provide this, perhaps through an expanded Regulators' Pioneer Fund available to the RIO. The efforts of the RIO need backing from the centre of Government if it does not have powers over other regulators; it should be aligned with the pro-growth regulatory reform agenda led by the Treasury.*
248. *The Government should establish a 'front door' for innovative companies to contact to understand the regulatory implications of products and services they might develop. This could be a function of the RIO but it will be unable to perform these functions with its current resources. The task could alternatively sit with the Business Growth Service, or another body such as a concierge service as described above.*

Research foundations: R&D funding, universities, spin-out companies

University funding

249. This inquiry has focused on the scale-up stage of company growth, founded on the understanding that the UK's fundamental research and start-up environments are sound. Nonetheless, to promote the late-stage growth with which we are concerned it is necessary to nurture and enhance the foundations. The importance of this was highlighted by Dame Fiona Murray:

"The willingness of the university system in the United States to fund, at very significant scale, labs, research activities and infrastructure in this

413 Department for Science, Innovation and Technology, *Guidance: Regulators' Pioneer Fund round 4*, 22 May 2025

414 [Q 164](#) (Lord Willetts)

415 [Q 295](#) (Lord Vallance of Balham)

416 HM Treasury, *Policy paper: New approach to ensure regulators and regulation support growth (HTML)*, 31 March 2025

somewhat small handful of places has been extraordinarily important in driving economic growth. The evidence suggests that it really is a very important piece of the economic growth story.”⁴¹⁷

250. Universities are under sustained financial pressure. In November 2024 the Office for Students estimated that up to 72% of higher education providers could face a deficit in 2025/26.⁴¹⁸ This affects research because, as Professor Richard Jones told us, it is not funded to full cost in universities, but only partially by grants from UKRI, and is “essentially sustained by cross-subsidies, generally from overseas students.”⁴¹⁹ The number of these is declining as the government seeks to reduce immigration.⁴²⁰ More widely, analysis presented to Universities UK shows that the real value of tuition fees has been eroded by a third by inflation.⁴²¹ In written evidence, Universities UK also pointed to “years of tuition fees being frozen and government action to reduce international student numbers” as the main causes of the problem.⁴²² Sir John Kingman described himself as “very concerned about the condition of the British university system.” He told us that: “The funding system is now under extraordinary strain—effectively, I do not think it is working any longer”, arguing that a first-principles look was needed at the overall funding picture.⁴²³
251. Dr Alicia Greated of CaSE said that the most important campaigning issue for them was “around the long-term sustainability of the R&D system, particularly universities.”⁴²⁴ She said that “the financial pressure that universities are under is absolutely acute and significant”, and that they provide important facilities for basic research as well as translation, innovation, and knowledge diffusion.⁴²⁵ Professor Jones added that the UK was “an international outlier in how much of its public sector research happens in universities”,⁴²⁶ illustrating the importance of this issue for the public sector’s wider research environment.
252. The risk is that the UK loses its advantages in research through insufficient care about the cumulative impact of spending decisions. Dr Greated told us that “individual universities are making their decisions relating to these cuts in isolation ... as the UK, we do not have oversight of these decisions and how they will impact us when we aggregate them across the UK.” This could result in “complete loss of certain R&D fields in the UK” across universities and businesses, as well as impacting skills provision.⁴²⁷
253. The Spending Review did not contain any significant answers to the university funding crisis, despite announcing longer-term budgets for research and innovation,⁴²⁸ while the Government announced in the Immigration White

417 [Q 271](#) (Dame Fiona Murray)

418 Office for Students, [Financial sustainability of higher education providers in England: November 2024 update](#), 15 November 2024, p 2

419 [Q 6](#) (Professor Richard Jones)

420 BBC, [Is the UK becoming less attractive for international students?](#), 4 March 2025

421 The Guardian, [English universities need tuition fees of £12,500 to break even, analysis finds](#), 5 September 2024

422 Written evidence from Universities UK ([SUK0052](#))

423 [Q 75](#) (Sir John Kingman)

424 [Q 1](#) (Dr Alicia Greated)

425 [Q 6](#) (Dr Alicia Greated)

426 [Q 6](#) (Professor Richard Jones)

427 [Q 1](#) (Dr Alicia Greated)

428 Universities UK, [Universities UK responds to the Spending Review](#), 11 June 2025; BBC, [Four in 10 universities face financial challenges](#), 8 May 2025

Paper that it was consulting on introducing a levy on international students, which would likely further erode the financial position of the universities.⁴²⁹ In September 2025, the Government confirmed the introduction of the levy, stating that it would be used to fund reintroduced means-tested maintenance grants.⁴³⁰ In October 2025, the government confirmed that it would index tuition fees in line with inflation in future; however, this will not make up for the erosion in their value due to inflation over previous years, or the decline in income from international students.⁴³¹

254. **Universities have a key role to play in basic research, the talent and spin-out pipeline, and at various stages of commercialisation. The university funding crisis, caused by inflation-eroded tuition fees and a clampdown on international students, is still unresolved, despite the move to index tuition fees in line with inflation. This has serious implications for the future of UK scientific research and STEM education which rely on university finances. Rather than addressing this issue, the Government will introduce an international student levy which will make the situation worse. The Government cannot afford to take the UK's strong research base for granted; nor can UK R&D afford a disorderly shrinking of the university sector.**
255. *The Government urgently needs to set out a long-term plan to restore financial sustainability to the university sector, particularly when it comes to research. Introducing an international student levy is likely to be self-defeating, robbing universities of both talent and funds, even when coupled with the reintroduction of grants.*

Spin-out companies and intellectual property

256. We have taken some evidence on university spin-out companies over the course of the inquiry. We have heard that universities have got better at spinning out companies; Sir John Bell said that universities were “quite good at spinning out small companies, and the UK numbers from big institutions are actually as good as the American numbers” but that “what we do not do is build them into real companies.”⁴³² Sir John Lazar said that the Cambridge ecosystem had “a strong stream of spinouts from the university and very good angel investing” and could be replicated elsewhere.⁴³³ He noted that £2.6bn was given to spin-out companies in 2024, but fewer bigger investments were being made to help them scale-up.⁴³⁴ Similarly, Irene Graham described the UK as a “a very good start-up and incubation nation”.⁴³⁵
257. Various witnesses raised the issue of universities taking too much equity in the companies that they spun out. Dr Patrick Rose of SPRIND⁴³⁶ told us that: “We have had experience here in the UK with several universities where they will say, ‘We want 30% of the company, royalties and licensing

429 UK Council for International Student Affairs (UKCISA), *The Immigration White Paper—your questions answered*, 12 July 2025

430 Department for Education, *Press release: Targeted maintenance grants for students to be reintroduced*, 29 September 2025

431 BBC, *University tuition fees in England to rise with inflation every year from 2026*, 20 October 2025

432 [Q 42](#) (Sir John Bell)

433 [Q 89](#) (Sir John Lazar)

434 [Q 90](#) (Sir John Lazar)

435 [Q 110](#) (Irene Graham)

436 The German Federal Agency for Breakthrough Innovation (Sprunginnovationen-Deutschland).

fees.’ That company is dead on arrival.”⁴³⁷ Jakob Mökander said that he had recommended “capping the overheads that universities take from technology spin-outs and start-ups, and facilitating different ways of sharing patents or intellectual property rights”.⁴³⁸

258. The *Independent Review of University Spin-out Companies* by Professor Irene Tracey made this point⁴³⁹ and since then the average equity stake universities take has been falling. Sir John Lazar said that “The Government responded very well to [Irene Tracey’s] report. We have seen TenU⁴⁴⁰ standardising spinout terms. The average stake that the universities are taking is dropping, but it is still a process that is very laborious for many companies.”⁴⁴¹
259. Some witnesses suggested that funders should have a role to play in shifting their incentives. Dr David Dent argued that: “The emphasis on publications as the primary measure of ‘research excellence’ for career advancement discourages researchers from pursuing commercial opportunities that require patents” and suggested that funders of research should “incentivise and value patents” and “provide interim funding for researchers delivering high-value patents”.⁴⁴² Dr Stefanie Tompkins made a similar point: “It is easier to count papers and citations ... than ... something related to this broader entrepreneurial mindset.”⁴⁴³ UKRI has recently published a register of UK university spin-out companies.⁴⁴⁴
260. **Universities have succeeded in recent years in producing a promising group of spin-out companies. Universities and UKRI must continue to prioritise and incentivise the production of intellectual property and patents, as well as pure research, to allow academics to have time and space for spinning out and commercialisation. There is a continued need to standardise the terms of university spin-out companies in handling intellectual property and for them to keep their equity stakes in spin-out companies reasonable, as suggested by the Independent Review of University Spin-out Companies. Patents are a crucial step on the road to innovation and should be encouraged and incentivised.**
261. ***Government funders of research such as UKRI should incentivise and track the number of patents that their funding has supported as a key performance indicator, as well as using their register of spin-out companies to monitor progress in this area. The Government and universities should continue to work on implementing the recommendations of the Independent Review of University Spin-out Companies.***

437 [Q 121](#) (Dr Patrick Rose)

438 [Q 11](#) (Jakob Mökander)

439 [Q 115](#) (Irene Graham); Department of Science, Innovation and Technology and HM Treasury, *Independent review of university spin-out companies*, November 2023

440 An international collaboration between the technology transfer departments of 10 leading research universities. TenU, *About Us & Who We Are* [accessed 9 September 2025]

441 [Q 97](#) (Sir John Lazar)

442 Written evidence from Dr David Dent FRSB, Dent Associates Ltd, CEO and Principal Consultant ([SUK0003](#))

443 [Q 144](#) (Dr Stefanie Tompkins)

444 UKRI, *World-leading register of UK university spin-outs published*, 5 June 2025

CHAPTER 6: LEADERSHIP, CROSS-GOVERNMENT COORDINATION AND DELIVERY

262. Many witnesses stressed the importance of cross-government coordination to deliver on addressing the scale-up issue, as discussed in Chapter 2. Saul Klein told us that, on skills, “the challenge ... is not a single-department challenge; it is a DSIT-DBT-DfE-Home Office challenge, and a Whitehall co-ordination challenge.”⁴⁴⁵ Written evidence from AIRTO emphasised that “The Science and Technology Framework is owned by DSIT but for it to be successful it will need collaboration across government and industry—a ‘whole-government strategy’ approach that can mobilise the UK’s private sector ... this requires practical mechanisms to facilitate cross-government collaboration”.⁴⁴⁶ The Royal Academy of Engineering stressed the importance of a systems approach:

“The success of the Industrial Strategy depends in large part on the Strategy adopting a systems approach. Systems-based approaches are an essential enabler for achieving the government’s objectives; applying systems thinking principles and tools across the Industrial Strategy will enable better results with fewer resources in more lasting ways. Adopting a systems approach will enable risks to be mitigated more effectively and ensure that the different elements of the strategy work together as a coherent whole. A key element of this approach is understanding interdependencies between different parts of the strategy, in order to identify both fragilities and opportunities to aggregate value and reinforce outcomes. This is crucial given the overlaps and interdependencies across the growth-driving sectors, the emerging sectors and technologies and the foundational sectors, and the policy levers.”⁴⁴⁷

263. Serendipity Capital suggested that the Government should “create a scale-up capital dashboard, which would publicly track and publish the amount of domestic capital going into Series B/C by sector; number of ‘breakout’ UK tech companies per year; public-private fund flows; UK vs US/EU benchmarking for deep tech scale-ups.”⁴⁴⁸
264. The *Industrial Strategy’s Digital and Technologies Sector Plan* sets out ambitions for the UK to become the third best place to scale-up a company and securing a trillion-dollar technology company by 2035. It also includes a section on implementation, where the Government commits to establish a “robust approach to measuring the impact of this Sector Plan”, including tracking “a range of microeconomic and macroeconomic metrics” via the Industrial Strategy Council.⁴⁴⁹ Possible metrics suggested include VC investment, value of business R&D, number of spinouts and value of foreign direct investment.
265. The Minister, Lord Vallance, acknowledged the need for coordination across many elements of Government and monitoring a range of metrics, stating that addressing scale-up “requires everything covering regulation, procurement,

445 [Q 101](#) (Saul Klein)

446 Written evidence from AIRTO ([SUK0023](#))

447 Written evidence from the Royal Academy of Engineering ([SUK0038](#)); see also their response to the Industrial Strategy consultation: Royal Academy of Engineering, *Invest 2035: The UK’s Modern Industrial Strategy The National Engineering Policy Centre’s Response*, November 2024

448 Written evidence from Serendipity Capital ([SUK0021](#))

449 HM Government, *Industrial Strategy: Digital and Technologies Sector Plan*, 23 June 2025, p 64 (Section 6)

finance for scale-up, skills and international collaboration, and indeed there are metrics against each of those things that will be looked at.”⁴⁵⁰ On the metrics, he said that “my desire would be to make as many of those things public as possible so that we can hold our own feet to the fire”.⁴⁵¹ In written evidence, DSIT described itself as “uniquely positioned to coordinate on delivering government’s S&T strategy” and stated that “cross-departmental collaboration will also be supported by the Science and Technology Cabinet sub-Committee, chaired by the Prime Minister.”⁴⁵²

266. Lord O’Donnell was sceptical of the effectiveness of a standard Cabinet committee fulfilling this coordinating function, preferring a structure similar to the National Security Council, which “would be the group of politicians who are relevant in the different areas, plus the key delivery agencies or Permanent Secretaries.”⁴⁵³
267. **The Industrial Strategy sets out overarching targets for the UK to become the third-best place in the world to scale up a technology business, and to achieve the first \$1-trillion tech company in the UK by 2035. Getting this right requires coordinated action across Government departments and public bodies, including No 10, the Treasury, DSIT, DBT, DfE, the Home Office, delivery departments, UKRI, Innovate UK, the British Business Bank, the National Wealth Fund, procurement authorities in government and regulators. This coordination has proved difficult to achieve in the past, particularly when departments pull in contradictory directions, despite the existence of bodies such as the Growth Mission Board and National Science and Technology Council.**
268. **DSIT has a ‘horizontal role’ to play across government, both to achieve the broader mission of commercialising and scaling up science and technology, and to act as a centre of scientific and technological expertise for Government.**
269. *The Industrial Strategy commits DSIT to establishing a “monitoring and evaluation framework” for its ambitions around the technology sector. This should track metrics including:*
 - *the amount of scale-up funding at different rounds that UK science and technology companies are receiving, quarterly, including investments by the British Business Bank and National Wealth Fund and from institutional investors via the Mansion House process;*
 - *the ratio of foreign to domestic capital in late-stage funding rounds and valuations of technology companies (for example, the number of unicorn companies);*
 - *the number of spin-out companies, patents, and research publications supported by UK Government funding;*
 - *the total value and speed of Innovate UK grants awarded;*

450 [Q 280](#) (Lord Vallance of Balham)

451 [Q 280](#) (Lord Vallance of Balham)

452 Written evidence from Department of Science, Innovation and Technology ([SUK0108](#))

453 [Q 56](#) (Lord O’Donnell)

- *business R&D expenditure, foreign direct investment in R&D and greenfield infrastructure;*
 - *the value of innovative procurement contracts or procurement contracts with UK-based SMEs, broken down by Government department and measured relative to SBIR targets;*
 - *the numbers of people enrolled in STEM skills training and the number of STEM and digital visas issued; and*
 - *the number of domestic initial public offerings of companies or acquisitions versus the number of technology companies sold or floated overseas.*
270. *The Government should commit to regular public reporting of these metrics, every six months, illustrating the progress of its overarching mission to improve scaling up for technology companies. Critically, this must spur action: the metrics should feed into the cross-government committees (including the Industrial Strategy Advisory Council and the Strategic Public Investment Forum) to spur further policy actions when one or more indicators is lagging behind.*
271. *But this is not sufficient. A continued lack of coordination demands a new and more robust structure to provide leadership, which is needed from the top or there will be no progress. It should be coordinated by the National Council for Science, Technology and Growth, a newly-established body that includes the Prime Minister, Chancellor, and Minister for Science, Research, and Innovation as well as principals from the Department for Education, Ministry of Defence, Home Office, DHSC, DESNZ and Department for Business and Trade. While we welcome the Department's suggestion that the Science and Technology Cabinet sub-committee could perform this role, such a body needs to meet frequently. It must be used as a proper forum for driving growth, resolving conflicts between departments and coordinating on strategic decisions, for example around technological sovereignty, rather than as a rubber-stamping forum. It would also benefit from the ad-hoc inclusion of key non-ministerial figures, such as the heads of the British Business Bank and National Wealth Fund, and the ability to meet responsively in a crisis situation.*
272. *We therefore recommend that the Council be given similar prominence, resources and working practices to the National Security Council. Leadership and a sense of urgency at the highest levels is needed to stop the bleeding and drive growth.*
273. *The issues facing the UK economy are grave, but not insurmountable. There is enormous potential to seize this moment of technological and geopolitical opportunity, and catalyse the growth that the UK badly needs. But it will require much more focus and a concerted effort to lead the UK out of stagnation. If the Government helps the entrepreneurs, unlocks investment, changes the culture around innovation, and organises its efforts, it can still reap enormous rewards for the nation.*

CHAPTER 7: RESPONSIBILITIES FOR KEY RECOMMENDATIONS

Recommendation	Responsibility
Leadership: Provide clear, top-level leadership through the National Council for Science, Technology and Growth to end the UK's "failure to scale"; coordinate across No10, HMT, DSIT, DBT, Home Office, DfE, and delivery departments like MoD, DHSC and DESNZ.	Prime Minister, Chancellor, Minister for Science via newly empowered National Council for Science, Technology and Growth
Risk appetite: Incentivise and protect sensible risk-taking to support domestic innovation in government investment and procurement, adopting a risk-on mindset	Ministers and departments
Treasury: Rewire Treasury appraisal of R&D; science and technology investment (beyond narrow "value for money") with an understanding of long-term benefits; including Green Book revisions.	Treasury (HMT)
Retaining UK tech companies: Develop a plan to retain UK tech companies, including tackling the pharma crisis, and reduce overseas listings/acquisitions; distinguish productive foreign direct investment from ownership transfer. Run 'exit surveys/interviews' when UK tech firms float abroad or are acquired; learn and intervene earlier.	HMT, DBT, Office for Investment, ONS
Pensions and institutional investors: Go further & faster on consolidating DC pensions; channelling more of their capital to UK science & technology using BBB and Tibi-type vehicles. Reserve mandation power and consider clawbacks/incentives if targets are not met. Pension funds to survey members and encourage domestic investment.	Minister for Pensions/ HMT/BBB/Industry; those involved in coordinating Mansion House reforms and signatories.
Procurement: Use procurement as an innovation lever with departmental targets for spend with innovative UK SMEs, scaling up to 3%; expanded and simplified Contracts for Innovation which allow outcome-based and stage-gated processes; signal procurement needs earlier and celebrate successes.	All procuring departments; coordinated by Cabinet Office/S&T sub-Committee
Public sector investors: Consolidate and expand the BBB and NWF; fix the leaky pipeline to scale-up financing between them and Innovate UK through coordination and tracking referrals; scale public investment to overseas comparators as capability is proven.	NWF, BBB, HMT, Innovate UK (DSIT), Strategic Public Investment Forum

Recommendation	Responsibility
Innovate UK: rebuild grants, streamlined and simplified; increase transparency with an annual report and outcome-based metrics. BBB: grow its vehicles to crowd-in pension fund investment and track referrals from Innovate. NWF: specific targets for late-stage UK technology company “scale-up” investments; assess its returns on longer horizons.	Innovate UK, BBB, NWF.
Skills and talent: Cut absurd upfront visa costs and empower Global Talent Taskforce and fund. Scale-up skills training aligned with Industrial Strategy needs, and entrepreneurial skills as part of PhD/undergraduate training.	Home Office, DfE, Skills England, Universities.
Career permeability: create more opportunities and incentives for movement between academia/industry/government	Across Government, academia, industry
Concierge service: establish a cross-sector ‘concierge service’ to fast-track high-potential tech firms through regulators, funding opportunities, business support, and unblock challenges	DBT’s Business Growth Service; DSIT’s Life Sciences concierge service
Regulators: Provide a clear regulatory ‘front door’ for innovators; resource and clarify the role of the Regulatory Innovation Office	RIO, DSIT, Regulators
Universities: Stabilise university finances as a matter of urgency; track patents and spin-outs	HMT, DfE, Universities
Monitoring and implementation: Strengthen DSIT’s horizontal role, monitor and evaluate scale-up progress tracking and publishing key metrics; feed these into the Council for policy action when they lag	DSIT; Council for Science, Technology, and Growth

CONCLUSIONS AND RECOMMENDATIONS

Chapter 2: Failing to scale in the UK

1. The UK's pure research base remains globally competitive. But long-term factors in its R&D ecosystem and economy have hindered companies' growth. Outside professional services and the life sciences, it lacks large-scale companies. (Paragraph 27)
2. The UK is in a 'doom loop': its capital pools are shallow, its institutional investors risk-averse, and its technology companies undervalued. Policies to encourage start-ups and spin-outs have fostered more early-stage companies, but these then struggle for domestic scale-up finance. Without this finance, the UK's strong R&D base risks supporting an 'incubator economy' of venture-backed start-ups that eventually move overseas in search of funding. The UK needs a clear plan to retain more companies. (Paragraph 28)
3. The Government's Industrial Strategy seeks to address this problem, but the gap between rhetoric and reality is stark and several significant companies have moved overseas as we took evidence for this inquiry. Historically, UK industrial strategies have been small in scale and have not lasted, particularly due to a lack of cross-party consensus. This undermines attempts at a sustained partnership with the private sector. (Paragraph 29)
4. The 'failure to scale' for UK science and technology companies is not new. Its causes have deep roots, both domestic and international. However, it has also been well studied and many policy proposals suggested. Solving this problem will require serious, cross-government, co-ordinated, long-term, and radical efforts. The Government will need to use every lever it has to support UK-based science and technology companies and encourage private investors to do the same. It is essential that there is clear and decisive leadership, especially from the Prime Minister and the Chancellor. Coordinating the urgently needed action across Government will require a forum for this leadership, as existing structures have not stopped the bleeding. (Paragraph 30)
5. *We recommend that a National Council for Science, Technology and Growth, modelled on the National Security Council, should be empowered to tackle the growth mandate, with a particular focus on science and technology and the scale-up issue. It should include the Prime Minister, Chancellor, DSIT, DBT, the Home Office, MoD, DHSC, DESNZ, DWP, and Department for Education, and the public investment institutions. It should meet frequently to drive through reforms that will support technology for growth and the scale-up of UK companies. We return to this further in Chapter 6 and set out reforms it should implement in the remainder of this report.* (Paragraph 31)
6. UK science and technology is held back by low risk appetite across institutions, from the Government in procurement, through institutional investors such as pension funds, and even in career choices. There is little incentive to take calculated risks, and often significant disincentives. (Paragraph 39)
7. *The incentive structures holding back innovation must change. The Government should explore ways to incentivise and reward experimentation with technology, particularly that which supports the growth of UK science and technology companies. It should celebrate successes and provide more direct incentives for risk-taking. Ministers should explicitly encourage innovation within their departments, giving*

time, space and political cover for officials who innovate and setting up structures in which fear of criticism does not hinder considered risk-taking. (Paragraph 40)

8. We heard concerns about how the Treasury assesses the return on investment for R&D projects. The cost-benefit analysis approach of “value for money” does not always capture the wider benefits of R&D investment or innovative government expenditure. This could be exacerbated by a lack of analytical or policy capacity to pursue economic growth alongside its traditional finance role. The Government Chief Scientific Adviser and Head of the Government Economic Service should collaborate on revising this approach. (Paragraph 41)
9. *Behaviour in the Treasury must change if it is to deliver long-term economic growth. The Treasury must take responsibility for driving growth across the economy, supporting the aims of our proposed National Council. As an example, the review of the Green Book provides an opportunity, which should be seized, for the Treasury to expand its work on understanding R&D and its impact on growth, particularly for investments where the long-term benefits are not captured by standard analysis of project-level value for money. (Paragraph 42)*
10. The UK has seen many promising companies listing overseas or being acquired by overseas buyers. This results in a reduced UK ‘home bias’ for these companies, cutting UK employment, investment, and tax revenue. Geopolitical factors such as the rise of global conflicts and rapid technological development have meant that critical technologies and companies are increasingly seen through the lens of national interest, if not national security. This requires a shift in policy. (Paragraph 54)
11. The Government has taken a notably laissez-faire approach to the acquisition of UK technology companies, as well as foreign direct investment more broadly. Ministers were reluctant to support any sort of intervention to prevent companies from being acquired by overseas buyers, instead hoping to make the UK the most attractive place for companies to retain high-value jobs. (Paragraph 55)
12. *Too often, in recent years, a laissez-faire approach by the Government and reliance on foreign investment to plug gaps in domestic investment has hurt the UK’s long-term interest. This must change if we are, in the Minister’s words, to ‘cherish’ our companies. The new fiscal rules introduced in 2024 provide an opportunity to revitalise domestic investment and correct chronic underinvestment. As part of this:*
 - *The Office for Investment, when seeking foreign investment, should make a clear distinction, between foreign direct investment that supports the creation of new infrastructure and that which involves a transfer of ownership, control, and management to overseas owners. ONS reporting should more clearly distinguish between these two types of foreign direct investment.*
 - *When science and technology companies are listed on an overseas stock market or acquired by foreign investors, the Department for Business and Trade should conduct an ‘exit survey’ of those companies and ‘exit interviews’ of the founders, to establish the reasons why this was done and whether any interventions could have prevented it.*
 - *Our proposed National Council for Science, Technology, and Growth should have a view about which technologies the UK needs sovereign control over and intervene to ensure that this is the case. The Government should*

examine other countries' policies to retain domestic ownership of strategically important science and technology companies. For example, it should use public investment bodies, like a scaled-up National Wealth Fund, to take meaningful equity stakes in companies, as overseas sovereign wealth funds have done. (Paragraph 56)

Chapter 3: Enabling private sector financing

13. UK pension funds and other institutional investors have substantially underinvested in UK equities and venture capital compared to international equivalents to a quite shocking degree. Their investment in the UK has severely declined over decades, in part due to successive governments' policy. They are no longer playing the vital role they should in investing in the UK economy. The result is a dearth of long-term, patient UK scale-up capital and the resulting scale-up crisis. We believe this is not in the interests of UK pension-holders or the UK economy more broadly, but it can and should be reversed. (Paragraph 88)
14. Fragmentation, especially of defined contribution (DC) pension funds, means that they do not have the scale to allocate significant assets to high-risk, high-reward investments in science and technology companies. Comparators in Australia and Canada show what is possible with consolidation. UK pension funds have focused on minimising fees rather than maximising return for a variety of regulatory, institutional and cultural reasons. (Paragraph 89)
15. Witnesses agreed that the Mansion House reforms were critical. If successful, they will help provide the domestic scale-up capital that UK science and technology companies need. However, there are concerns about the speed of reform, the need to upskill investors, and the risk that institutional investors focus on infrastructure rather than scale-up capital. There is an ongoing debate about whether pension funds should be mandated to invest if they do not fulfil their voluntary commitments. (Paragraph 90)
16. *We welcome the Mansion House reforms as essential measures to accelerate growth. It is critical that they result in capital flows to the next generation of growing UK science and technology companies. If not, those companies will be forced to seek funding and likely relocate abroad. The Government should:*
 - *Insist on the consolidation of DC pension schemes, and lead by example with the consolidated Local Government Pension Scheme pools, making significant allocations to domestic science and technology funds, including the British Business Bank's vehicles and approved private funds to crowd-in institutional investor money;*
 - *Use its convening power with the major institutional investors to encourage them to invest in UK technology companies. Support transparency and disclosures as part of the Mansion House Accord, and track the amount invested in UK science and technology companies as one of its key progress metrics;*
 - *Encourage transparency between providers and pension-holders, setting out the returns of different DC pension schemes and what proportion of their assets are in UK companies or infrastructure. Following the provision of this information, pension funds should survey their members, asking what percentage of assets they would like to be invested in the UK, and incentivised to act on any desire to see increased investment in the UK. The Government*

should set out that pension fund investment in the UK benefits everyone's quality of life;

- *Maintain the reserve power to mandate pension funds to follow their Mansion House commitments in the Pension Schemes Bill. The Government should set targets for the percentage of assets allocated under the Mansion House reforms overall by the end of 2027, as well as for the scale-up capital allocated to UK technology companies, and reconsider mandation if these targets are not met;*
 - *Explore possibilities short of mandation—for example, a clawback on tax relief for pension schemes that do not invest enough capital in the UK, or additional incentives for leading pension schemes;*
 - *Support and expand training schemes like the Venture Capital Fellowships scheme that bring science and technology experts together with VCs to enable the creation and sharing of investment expertise. (Paragraph 91)*
17. *The Minister for Pensions, CEO of the British Business Bank, and Minister for Science and their teams should co-ordinate to identify ways to ensure that the Mansion House reforms benefit innovative UK science and technology companies in addition to other asset classes. (Paragraph 92)*
 18. *The declining attractiveness of the UK as a place to list public companies is extremely worrying. Many promising UK science and technology companies have floated in the US rather than on the London stock exchanges. They are attracted by deeper capital pools, greater analyst coverage, and a perception that they will attract a greater valuation overseas. Reforms to address this problem will have to counter long-term trends towards passive and globally diversified investment. (Paragraph 104)*
 19. *We have heard that capital availability is the main problem, followed by a lack of investment research into smaller companies. The Government has considered proposals to increase investment, but none has yet been implemented. The ISA is fundamentally a tax break, designed to encourage saving, but there is merit in coupling that tax advantage with a responsibility to invest in ways that benefit the UK economy. (Paragraph 105)*
 20. *The Government should therefore undertake reforms to encourage capital flows into the UK markets. This could include changes to the ISA limits, such as reducing the cash limit in favour of stocks and shares, taxation such as the proposed stamp duty holiday for IPOs, or creating additional savings vehicles and incentives for UK savers to invest in domestic science and technology companies. The Government should encourage financial literacy campaigns to encourage investors and pension-holders to shift their allocation away from cash where this makes sense for them. (Paragraph 106)*
 21. *Witnesses, including entrepreneurs, told us that R&D tax credits were highly valuable to R&D intensive businesses, and the Treasury has committed to maintain their levels throughout this Parliament, but there are also significant reforms underway due to concerns about fraud. (Paragraph 115)*
 22. *Companies are best placed to decide how R&D money should be spent and tax credits efficiently allocate this funding. They must be maintained at current levels. While fraud remains a concern, the answer is to tackle that fraud rather than to recast the scheme. Money recovered by the elimination of error or fraud could be reused for other schemes for instance grants and initiatives to support scale-up funding. This*

would diversify government support while maintaining the amount of funding used productively through the tax credits scheme. (Paragraph 116)

Chapter 4: Public sector investment and procurement

23. Public procurement is a crucial lever for supporting innovative science and technology companies. It is not functioning as it should due to a combination of risk aversion, lack of expertise, and a tendency to favour large and often overseas incumbents. Contracts provide domestic revenue that can encourage further private investment and reduce reliance on overseas money. Despite this, innovative SMEs find public procurement very difficult to access. Procurement authorities need to develop their relationships with innovative SMEs, and their ability to run innovative procurement processes—stage-gated, outcome-based, rapid—that they can take part in. (Paragraph 130)
24. The US Small Business Innovation Research scheme has been very successful, but the UK equivalent—Contracts for Innovation—is far smaller. The MoD's procurement reforms and decision to allocate a percentage of its equipment budget for SMEs to drive innovation are examples other departments can follow. It is positive that the Government has committed to review procurement for innovation as part of its industrial strategy. (Paragraph 131)
25. *Public sector procurement practices need to change; this needs explicit political commitment from the top of government and action across departments. We recommend that:*
 - *The Government should set a target for each department and local authority for a mandatory percentage of procurement budgets to be spent on innovative, UK-based SMEs. This should rise over time to 3%, around the US SBIR level. A cross-government committee that brings together the Minister for Procurement in the Cabinet Office with the Minister for Science, the Department for Business and Trade, and delivery departments should oversee the development of this innovative procurement function. The Government must monitor and publish annually progress towards these targets.*
 - *The UK should increase the amounts allocated through Contracts for Innovation (formerly the Small Business Research Initiative, SBRI), and create a central database for these contracts that is easier to navigate for SMEs.*
 - *Departments should signal further in advance and in more detail precisely the kinds of outcomes they need.*
 - *Outcome-based procurement, where departments specify what their end goals are, rather than setting onerous requirements on the product, should be used to provide flexibility with SMEs. Stage-gated procurement can support smaller companies with funding in stages to develop and scale up their processes. An expanded Contracts for Innovation scheme could be used to support these more innovative and less bureaucratic processes.*
 - *Ministers should celebrate and reward public procurement that has supported innovative companies. The Government should back ministers and officials who procure innovative domestic solutions even if not all of the goals are delivered: failure is a necessary part of innovation. There is no reward without some risk: ministers need to specify appropriate risk profiles for their projects and take clear accountability for doing so. Civil servants will not be*

empowered to take risks without explicit political cover from ministers from excessive auditing. There should be cross-party consensus on this issue and on the importance of a healthy appetite to risk.

- *The UK should consider a presumption in favour of buying British, especially when it concerns new and emerging technologies, even if narrow value-for-money considerations would not allow this. It must take the wider benefits to the economy of domestic procurement into account.*
 - *For critical frontier technologies, particularly where there is a desire for UK sovereignty and control over the technology, the Government should consider using Vaccine Taskforce-style procurement to ensure they can be developed in the UK. (Paragraph 132)*
26. The UK economy has suffered from chronic underinvestment in recent decades, which has impacted science and technology. The Government sees public sector investment bodies such as Innovate UK, the British Business Bank and the National Wealth Fund supporting scale-up for science and technology companies and crowding in private sector finance. But the public investment landscape remains fragmented, overly complicated, and small in scale. Businesses want a ‘single front door’ to understand the support available at each stage, but it is unclear which of these organisations is responsible for that, or whether the business growth service in the Department for Business and Trade will do this. At the moment there is too often a ‘leaky pipeline’ where companies fall between the cracks. (Paragraph 146)
 27. *To provide a clear pipeline of support, Innovate UK, the British Business Bank and the National Wealth Fund must at the very least work together much more closely, aligning on priority sectors and companies with direction set by the Industrial Strategy. The Strategic Public Investment Forum provides an opportunity to deepen this coordination. The demarcation of responsibility between these bodies must be made clear to industry to avoid a ‘leaky pipeline’ where co-investment stops at a certain funding size or technology readiness level. Each of the organisations should track successful referrals (for example, from a successful Innovate grant to scale-up funding via the British Business Bank) as a key performance indicator. They should each continue to work on simplifying and scaling up the offers they have and providing clear guidance. (Paragraph 147)*
 28. More investment is needed and the 2024 change to the fiscal rules provides some latitude to provide this. We welcome the increases in capital for the British Business Bank and National Wealth Fund, but both combined are still tiny compared to overseas equivalents such as Bpifrance of France, KfW of Germany, or Temasek of Singapore, let alone the larger sovereign wealth funds; in particular, the NWF is far smaller than overseas public investment bodies. As relatively new bodies, there are also concerns around their longevity. (Paragraph 148)
 29. *At a minimum, the British Business Bank should be put on a statutory footing alongside the National Wealth Fund to help ensure permanence and both operations should be significantly scaled up. But to achieve a properly integrated, diversified and well-resourced public investment landscape, the various government lending and investing bodies such as the NWF and BBB should be consolidated. There is a strong case for including Innovate UK in this structure. This would allow them to act more strategically, benefit from diversification and risk aggregation, and provide*

pooled expertise and continuity of support, reducing the overall complexity of the system. (Paragraph 149)

30. *Public sector investment bodies can make more use of debt and guarantees to unlock private capital. The UK should recognise that other countries, such as France, Germany, and Singapore, have more established public development financing and the Strategic Public Investment Forum should study in detail what lessons can be learned from international comparators. (Paragraph 150)*
31. Innovate UK and its grants have a difficult but vital role to play in supporting companies in the early stages: many successful companies have benefitted from them. However, the grants are substantially oversubscribed and Innovate UK has historically been slow and bureaucratic in providing awards, leading to frustration. If Innovate is to remain within UKRI, it must move at the speed of business—as one of the Government’s main interfaces with SMEs. (Paragraph 158)
32. In addition, Innovate UK allocates many schemes and pots of money with specific, often well-intentioned criteria, adding to complexity, bureaucracy, and difficulty for SMEs in determining which schemes they should apply for. This contributes to time wasted in applications that are unlikely to succeed. AI will require a rebuild of the grant allocation process, which provides an opportunity to address these issues. (Paragraph 159)
33. *The rebuilding of Innovate UK’s grant allocations provides an important opportunity to streamline, simplify, consolidate, and speed up the delivery of grants. Fewer but faster programmes would benefit everyone and the Government should resist the temptation to task Innovate UK’s funding with too many subsidiary goals. Innovate UK must work to make eligibility for different grants clearer—for example, through a simplified online portal with a questionnaire. It must continue to work on reducing the turnaround time for its grants. (Paragraph 160)*
34. Whether it remains part of UKRI or not, Innovate UK should become a ‘due diligence’ body that crowds investment into science and technology companies. Its grants should give confidence to follow-on investors in the private and public sector that a technology has potential, and confidence to businesses that there is a real likelihood of follow-on investment. To achieve this will require much more transparency to build trust in its processes. Innovate UK does not publish an annual report and, while it collects a lot of data on the companies and projects it backs, this is hard to access and could benefit from deeper analysis. (Paragraph 163)
35. *Innovate UK should aim to become a ‘due diligence’ body with grants that are widely respected. It must play a more active role in identifying the highest-potential technologies and companies. It should increase its referrals to the British Business Bank and other sources of scale-up finance. The number of referrals, as well as the long-term private scale-up funding raised by the companies supported by Innovate UK, should be tracked as key performance indicators as part of a shift to outcome-based reporting. It should publish an annual report which sets out more details around the sectors and businesses it supports in line with the Industrial Strategy. (Paragraph 164)*
36. We welcome the announced increase in funding for the British Business Bank, although it is still too small. The Bank’s efforts to create vehicles for private sector capital, such as the British Growth Partnership and LIFTS, are commendable, but small in scale relative to the problem. (Paragraph 171)

37. *The Government should use its convening power to encourage more institutional investors to take part in funds that provide scale-up capital into UK science and technology companies. The Bank should publicise the success of these funds as they become established. Its additional funding could be used in part to increase the scale of the Bank's investment in these funds. The Bank should also have targets to create follow-on funds for LIFTS and the British Growth Partnership to expand their size over time. (Paragraph 172)*
38. The National Wealth Fund has a very wide remit and has historically concentrated on infrastructure and net zero investments. Providing late-stage capital for growth companies is a new area for the NWF, and it is unclear how much funding it will allocate to this area compared to its primary responsibilities, yet it is precisely the late-stage capital that the NWF is supposed to deploy where the UK has the biggest gaps. Its role is to invest amounts in excess of £25m at a time and to coinvest alongside the private sector. (Paragraph 178)
39. *The National Wealth Fund should have a specific target for the number of late-stage (Series C+) scale-up funding rounds for UK science and technology companies it will support during each Parliament. It should consider ring-fencing some of its annual fund commitment target to this goal. Innovate UK, the British Business Bank, DSIT, and private sector venture capital should help the National Wealth Fund identify companies that are suitable for scale-up financing in sectors identified by the Industrial Strategy. Secondments between these organisations should be established to bring scientific and technological expertise into the National Wealth Fund. The NWF should also deepen its relationship with private sector venture funds. (Paragraph 179)*
40. The National Wealth Fund has made financing contingent on companies maintaining capital expansion, jobs, or head offices in the UK. This is an important tool. The National Wealth Fund has a significant risk budget, but it also has a mandate to ensure a positive return to the Treasury. It may be difficult to assess that return for long-term science and technology equity investments. (Paragraph 182)
41. *The National Wealth Fund should assess its return on investment in science and technology venture equity on a sufficient time horizon to avoid risk aversion. It should continue to explore ways to ensure that its late-stage scale-up finance supports companies with a serious commitment to scaling up in the UK. It should have an important role in assisting with the sharing and reducing of risk, for example through guarantees and loans as well as equity investments. (Paragraph 183)*

Chapter 5: Non-financial barriers to scaling

42. Visas for scientists remains a critical area where policy must change urgently if the Government is serious about growth. This Committee has repeatedly set out to the Home Office the need for a pro-active policy to attract global scientific and technological talent, in particular by addressing the high up-front costs for even those visas reserved for Global Talent. (Paragraph 195)
43. The UK has a unique opportunity to attract global talent, particularly from the US, yet the Home Office's historic unwillingness to review the barriers for high-potential talent is an absurd act of national self-harm. The UK Government is lagging behind other countries in this respect. It should be rolling out the red carpet instead of red tape. The Committee welcomes the establishment of the Global Talent Fund, commitments to increase numbers

for highly-skilled visa routes, and recent news that fees may be reconsidered, but the scale of resources allocated to the Fund are tiny compared with the scale of the opportunity. (Paragraph 196)

44. *The Government should urgently use its new Global Talent Taskforce and significantly increased funding for the Global Talent Fund to seize this unique opportunity to attract the scientists and entrepreneurs of the future to the UK. It is critically important that the recently hinted abolition of fees for certain global talent is not blocked by Home Office intransigence.* (Paragraph 197)
45. *In addition, the Global Talent Taskforce must find creative and flexible ways to address the high up-front visa costs more generally for those it attracts. Independently of other measures, the Government must change its policy on the Immigration Health Surcharge, allowing it to be repaid over time. The Home Office should embed the mission to attract more global talent as a primary goal alongside reducing net migration. The Scale-up Worker Visa is in need of review as uptake has been very limited.* (Paragraph 198)
46. Skills England has made sector-specific assessments of skills needs as part of the Industrial Strategy. Despite this, and the widely stressed importance of skills policy, it remains an underfunded area regularly shuffled between departments. Developments in AI will require substantial and expanding retraining programmes, both in using the technology and if it results in workforce reduction across sectors. (Paragraph 207)
47. *The Government should ensure that the training it funds as part of the Industrial Strategy is commensurate with the skills needs identified by Skills England. It should accept that investment in the UK workforce will be an ongoing and growing requirement in this decade and is key to any technological productivity gains.* (Paragraph 208)
48. *The Government should also consider whether there are sufficient entrepreneurial skills in the science and technology research community. Undergraduate courses and PhD training should include entrepreneurial training, and particularly placements with business, wherever possible in order to ensure every student is exposed to industry. Universities must make better use of links with their business schools.* (Paragraph 209)
49. Witnesses emphasised the importance of career permeability between academia, entrepreneurship, industry, and government, yet the incentive structures in each of these sectors makes building portfolio careers difficult. All sectors need to value cross-cutting experience more for the new ideas, networks, and experience it can give. Pay structures in the civil service inhibit its ability to attract and retain top talent, particularly in STEM. (Paragraph 216)
50. *The Government, universities and research funders should encourage and incentivise careers that involve moving in and out of the civil service, academia, and industry, work to align incentives and improve the availability of temporary secondments. The Government and research funders should create more secondments, fellowships, and placements with business, and set targets to increase the number of these opportunities substantially. Initiatives like the Venture Capital Fellowships should be expanded.* (Paragraph 217)
51. *To attract young professionals, the civil service should consider whether its pay offer delivers the highest calibre officials and benefits to the wider economy. This could*

include rebalancing the total compensation away from pensions, providing more performance-based pay and flexibility in pay scales and developing incentives to retain specialist talent and expertise. A greater approach to flexibility in careers that allows greater movement between academia, industry and government will also help in recruitment and retention for top talent. This could result in fewer but better-paid civil servants. (Paragraph 218)

52. Witnesses pointed to the power, efficiency, and speed of the science and technology network in Silicon Valley. Strong connections exist there between financiers, entrepreneurs, and universities, reducing the time taken to make the connections needed to scale up. Similar connectivity has been achieved at MIT which provides a highly effective model for UK universities. The issue brings together most of the problems we have been considering in this report: availability of capital where it is needed, expertise for investors, entrepreneurial skills for researchers, permeability between different fields. Improving each of them will create networks; fostering networks will in turn improve those elements. (Paragraph 224)
53. Several witnesses have suggested the idea of a ‘concierge service’ for high-potential technology companies to help them navigate the complexities of government support and regulation, and unblock issues preventing them from scaling. The concierge service proposed in the Government’s Life Sciences Sector Plan is a promising initiative, but it is restricted to life sciences. (Paragraph 229)
54. *There is a clear role for a ‘concierge service’ to identify high-potential science and technology companies and refer companies on a fast-track basis to decision-makers in bodies, such as regulators, the Regulatory Innovation Office, public sector investment bodies and the Office for Global Talent, and to guide them through the scaling up process. The concierge service must not only provide advice but also be empowered to intervene swiftly to clear blockages. The Government could choose to deliver this through DBT’s business growth service or its proposed Life Sciences concierge service. The key is that the concierge service must be authoritative and have the power to intervene and speed up processes and decision-making. (Paragraph 230)*
55. *The Government must strengthen the density and connectivity of the UK science and technology network, particularly in specific clusters. These networks need a concentration to reach critical mass; it is better to focus on a smaller number of them. This could include creating start-up campuses like France’s Station F, fostering its own network of ‘scale-up champions’, which could be venture capital investors or technologists, or hosting regular convening events. (Paragraph 231)*
56. Standards can be potential enablers for start-up companies with new technologies to gain a significant competitive advantage if they are involved with the process of international standard-setting. The UK has significant standards bodies (especially the British Standards Institution) and public sector laboratories (such as the National Physical Laboratory) that can help in the underlying measurements and would benefit from greater participation in international standards-setting meetings. (Paragraph 238)
57. The Regulatory Innovation Office should be important in promoting pro-innovation regulation in key sectors, but it is significantly underpowered. Start-ups and other companies want a single ‘front door’ to understand the regulatory implications of any new products, but the Regulatory Innovation Office is not empowered or resourced to provide this. Regulators regularly ask for more resources to be able to engage with SMEs and innovation, which

the RIO is not resourced to provide. As it sits within DSIT, it does not have authority over regulators in other departments. (Paragraph 246)

58. *We welcome the establishment of the RIO, but its role, intentions, and powers need to be set out and clarified. There is a clear demand in the system for additional resources for regulators to engage with innovative technologies. The Government should investigate the best way to provide this, perhaps through an expanded Regulators' Pioneer Fund available to the RIO. The efforts of the RIO need backing from the centre of Government if it does not have powers over other regulators; it should be aligned with the pro-growth regulatory reform agenda led by the Treasury.* (Paragraph 247)
59. *The Government should establish a 'front door' for innovative companies to contact to understand the regulatory implications of products and services they might develop. This could be a function of the RIO but it will be unable to perform these functions with its current resources. The task could alternatively sit with the Business Growth Service, or another body such as a concierge service as described above.* (Paragraph 248)
60. Universities have a key role to play in basic research, the talent and spin-out pipeline, and at various stages of commercialisation. The university funding crisis, caused by inflation-eroded tuition fees and a clampdown on international students, is still unresolved, despite the move to index tuition fees in line with inflation. This has serious implications for the future of UK scientific research and STEM education which rely on university finances. Rather than addressing this issue, the Government will introduce an international student levy which will make the situation worse. The Government cannot afford to take the UK's strong research base for granted; nor can UK R&D afford a disorderly shrinking of the university sector. (Paragraph 254)
61. *The Government urgently needs to set out a long-term plan to restore financial sustainability to the university sector, particularly when it comes to research. Introducing an international student levy is likely to be self-defeating, robbing universities of both talent and funds, even when coupled with the reintroduction of grants.* (Paragraph 255)
62. Universities have succeeded in recent years in producing a promising group of spin-out companies. Universities and UKRI must continue to prioritise and incentivise the production of intellectual property and patents, as well as pure research, to allow academics to have time and space for spinning out and commercialisation. There is a continued need to standardise the terms of university spin-out companies in handling intellectual property and for them to keep their equity stakes in spin-out companies reasonable, as suggested by the Independent Review of University Spin-out Companies. Patents are a crucial step on the road to innovation and should be encouraged and incentivised. (Paragraph 260)
63. *Government funders of research such as UKRI should incentivise and track the number of patents that their funding has supported as a key performance indicator, as well as using their register of spin-out companies to monitor progress in this area. The Government and universities should continue to work on implementing the recommendations of the Independent Review of University Spin-out Companies.* (Paragraph 261)

Chapter 6: Leadership, cross-government coordination and delivery

64. The Industrial Strategy sets out overarching targets for the UK to become the third-best place in the world to scale up a technology business, and to achieve the first \$1-trillion tech company in the UK by 2035. Getting this right requires coordinated action across Government departments and public bodies, including No 10, the Treasury, DSIT, DBT, DfE, the Home Office, delivery departments, UKRI, Innovate UK, the British Business Bank, the National Wealth Fund, procurement authorities in government and regulators. This coordination has proved difficult to achieve in the past, particularly when departments pull in contradictory directions, despite the existence of bodies such as the Growth Mission Board and National Science and Technology Council. (Paragraph 267)
65. DSIT has a ‘horizontal role’ to play across government, both to achieve the broader mission of commercialising and scaling up science and technology, and to act as a centre of scientific and technological expertise for Government. (Paragraph 268)
66. *The Industrial Strategy commits DSIT to establishing a “monitoring and evaluation framework” for its ambitions around the technology sector. This should track metrics including:*
 - *the amount of scale-up funding at different rounds that UK science and technology companies are receiving, quarterly, including investments by the British Business Bank and National Wealth Fund and from institutional investors via the Mansion House process;*
 - *the ratio of foreign to domestic capital in late-stage funding rounds and valuations of technology companies (for example, the number of unicorn companies);*
 - *the number of spin-out companies, patents, and research publications supported by UK Government funding;*
 - *the total value and speed of Innovate UK grants awarded;*
 - *business R&D expenditure, foreign direct investment in R&D and greenfield infrastructure;*
 - *the value of innovative procurement contracts or procurement contracts with UK-based SMEs, broken down by Government department and measured relative to SBIR targets;*
 - *the numbers of people enrolled in STEM skills training and the number of STEM and digital visas issued; and*
 - *the number of domestic initial public offerings of companies or acquisitions versus the number of technology companies sold or floated overseas.* (Paragraph 269)
67. *The Government should commit to regular public reporting of these metrics, every six months, illustrating the progress of its overarching mission to improve scaling up for technology companies. Critically, this must spur action: the metrics should feed into the cross-government committees (including the Industrial Strategy Advisory Council and the Strategic Public Investment Forum) to spur further policy actions when one or more indicators is lagging behind.* (Paragraph 270)

68. *But this is not sufficient. A continued lack of coordination demands a new and more robust structure to provide leadership, which is needed from the top or there will be no progress. It should be coordinated by the National Council for Science, Technology and Growth, a newly-established body that includes the Prime Minister, Chancellor, and Minister for Science, Research, and Innovation as well as principals from the Department for Education, Ministry of Defence, Home Office, DHSC, DESNZ and Department for Business and Trade. While we welcome the Department's suggestion that the Science and Technology Cabinet sub-committee could perform this role, such a body needs to meet frequently. It must be used as a proper forum for driving growth, resolving conflicts between departments and coordinating on strategic decisions, for example around technological sovereignty, rather than as a rubber-stamping forum. It would also benefit from the ad-hoc inclusion of key non-ministerial figures, such as the heads of the British Business Bank and National Wealth Fund, and the ability to meet responsively in a crisis situation. (Paragraph 271)*
69. *We therefore recommend that the Council be given similar prominence, resources and working practices to the National Security Council. Leadership and a sense of urgency at the highest levels is needed to stop the bleeding and drive growth. (Paragraph 272)*
70. The issues facing the UK economy are grave, but not insurmountable. There is enormous potential to seize this moment of technological and geopolitical opportunity, and catalyse the growth that the UK badly needs. But it will require much more focus and a concerted effort to lead the UK out of stagnation. If the Government helps the entrepreneurs, unlocks investment, changes the culture around innovation, and organises its efforts, it can still reap enormous rewards for the nation. (Paragraph 273)

APPENDIX 1: LIST OF MEMBERS AND DECLARATIONS OF INTEREST

Members

Lord Berkeley
 Lord Borwick
 Lord Drayson
 Lord Lucas
 Lord Mair (Chair)
 Baroness Neuberger
 Baroness Neville-Jones
 Baroness Northover
 Lord Ranger of Northwood
 Viscount Stansgate
 Lord Stern of Brentford
 Baroness Walmsley
 Baroness Willis of Summertown
 Baroness Young of Old Scone

Declaration of Interest

Lord Mair
Emeritus professor of engineering at Cambridge University
Consultant to Laing O'Rourke, the construction company that has substantial research and development collaborations with Cambridge
Chairman of Epsimon, a spin-out company from Cambridge

Lord Berkeley
No relevant interests

Lord Borwick
No relevant interests

Lord Drayson
Director and executive chairman of Freevolt Technologies and director of Freevolt Group
Director of Isovia Health
Director and chairman of Appella AI
Industry adviser to Advent International
Shareholdings in technology companies, including Cambridge Mechatronics, Freevolt, Arcturis Data and Appella AI
Recently a member of the advisory board of Labour Together, advising on the topic of the inquiry
Honorary fellow of St John's College, Oxford, which is developing a science park in the north of Oxford

Lord Lucas
No relevant interests

Baroness Neuberger
Chair, University College London Hospitals Foundation NHS Trust and Whittington Health NHS Trust
Member of the North Central London Integrated Care Board and various of its committees

Baroness Neville-Jones
Adviser to AQL Ltd Leeds

Baroness Northover
Member of Faraday Institution Policy Commission on Battery Gigafactories

Lord Ranger of Northwood

An angel investor and adviser to British tech firms. I have been in the industry for the past 25 years

Viscount Stansgate

President of the Parliamentary and Scientific Committee

Trustee of the Foundation for Science and Technology

Trustee of the Parliamentary Science and Technology Information Foundation

Fellow of the Royal Society of Biology

Lord Stern of Brentford

Chair of the board of Systemiq Limited

Chair of the Global School of Sustainability at LSE

Chair of the Grantham Research Institute on Climate Change and the Environment at LSE

Professor of Economics & Government, London School of Economics

Baroness Walmsley

Former Chair, Botanic Gardens Conservation International

Baroness Willis of Summertown

Professor of Biodiversity in the Department of Biology, University of Oxford

Former Director of Science, Kew

Baroness Young of Old Scone

Chair, Royal Veterinary College, with its subsidiary the London Biosciences Innovation Centre (until July 2025)

Former Chancellor and Council member of Cranfield University

A full list of Members' interests can be found in the Register of Lords' Interests:

<https://www.parliament.uk/hlregister>

APPENDIX 2: LIST OF WITNESSES

Evidence is published online at <https://committees.parliament.uk/committee/193/science-and-technology-committee/publications/written-evidence/> and available for inspection at the Parliamentary Archives (020 7219 3074).

Evidence in alphabetical order

The Academy of Medical Sciences	SUK0072
ADS	SUK0037
Advanced Research and Invention Agency (ARIA)	SUK0031
Airbus	SUK0077
Dr Jim Ajioka, Chief Scientific Officer, Colorifix Ltd. and Professor Gos Micklem, Special Advisor Colorifix Ltd.	SUK0096
Association for Innovation, Research and Technology (AIRTO)	SUK0023
AXREM	SUK0002
Professor Sir John Bell, President, Ellison Institute of Technology	QQ 41–50
BGF	SUK0080
Bio-Based and Biodegradable Industries Association (BBIA)	SUK0011
The BioIndustry Association (BIA)	SUK0082
BioYorkshire	SUK0088
Black Kite Ltd	SUK0045
Boardwave	SUK0053
Professor Christina Boswell, Vice-Principal, Research and Enterprise, University of Edinburgh	SUK0064
Baroness Bowles of Berkhamsted	SUK0044
Professor Ashley Braganza, Director, Centre for Artificial Intelligence and Professor in Business Transformation, Brunel University of London, and Dr S. Asieh H. Tabaghdehi, Senior Lecturer in Strategy and Business Economy and Impact Lead, Centre for Artificial Intelligence, Brunel University of London	SUK0091

Douglas Brion, Founder and CEO, Matta.ai		QQ 169–180
British Business Bank	SUK0061	QQ 203–214 Louis Taylor, CEO
British Heart Foundation	SUK0073	
British Private Equity and Venture Capital Association (BVCA)	SUK0106	
British Society for Research on Ageing	SUK0065	
Dr Simon Brown, Visiting Professor of Entrepreneurship, University of Wales	SUK0004	
BSI	SUK0110	QQ 152–168 Dr Scott Steedman CBE, Director-General of Standards
Campaign for Science and Engineering (CaSE)	SUK0027	QQ 1–8 Dr Alicia Greated, Executive Director
Cancer Research UK	SUK0076	
CBI	SUK0084	
Cell and Gene Therapy Catapult	SUK0097	
The Centre for Long-Term Resilience	SUK0041	
Chartered Institute of Patent Attorneys	SUK0066	
Rt Hon Greg Clark		QQ 64–74
Cleantech for UK	SUK0043	
Dr David Cleevely CBE	SUK0107 ; SUK0112	QQ 181–202
Cohere	SUK0028	
Professor Brian Collins CB, Emeritus Professor of Engineering Policy, University College London	SUK0019	
Dr David Connell	SUK0113	QQ 64–74
Council on Geostrategy	SUK0050	
CropLife UK	SUK0055	
Dr Nigel Culkin, Professor of Enterprise and Entrepreneurial Development, University of Hertfordshire	SUK0063	
David Dent, Dent Associates Ltd	SUK0003	
Dr Miles Dixon, Equity Research Analyst, Peel Hunt	SUK0100	

Dr Olly Duncan, Senior Lecturer, Manchester Metropolitan University, et al	SUK0078
James Eaton, CEO & Co-Founder, IONETIC	SUK0075
Embassy of France to the UK	QQ 129–139 Patrick Nédellec, Science and Technology Counsellor
Energy Systems Catapult	SUK0008
Engineering Professors' Council	SUK0069
Epilepsy Society	SUK0071
European Marine Energy Centre (EMEC) Ltd	SUK0103
First Light Fusion	SUK0024
Professor Kieron Flanagan, Professor of Science and Technology Policy, University of Manchester, and Dr Mabel Sanchez Barrioluengo, Senior Lecturer in Science Policy and Innovation, University of Manchester	SUK0087
Dr Tom Franklin, Research Associate, University of Sheffield	SUK0016
Fraunhofer UK Research Ltd	SUK0083
Grasp Consulting Ltd	SUK0033
Dr Vishal Gulati, Managing Partner, Recode Ventures	SUK0094
Tim Haines, Managing Director, Abingworth	SUK0010
Angus Hanton	QQ 16–28
HM Government	QQ 215–228 Baroness Gustafsson CBE, Minister of State for Investment, Department for Business and Trade and HM Treasury; Matt Henty, Deputy Director, Science and Technology & Access to Finance, HM Treasury; Ceri Smith, Director General, Office for Investment, Department for Business and Trade

HM Government	SUK0108	QQ 280–299 Lord Vallance of Balham KCB, Minister for State, Department for Science, Innovation and Technology; Hannah Boardman, Director of Technologies, Growth and Security, Department of Science and Technology
Damian Horton, Director, Eloy	SUK0006	
Imperial Policy Forum	SUK0012	
Innovate UK Catapult Network	SUK0048	
Innovate UK, UKRI		QQ 229–242 , Tom Adeyoola, Executive Chair
The Institute of Cancer Research, London	SUK0089	
Institute of Development Studies	SUK0020	
Institute of Physics	SUK0079	
The Institution of Engineering and Technology (IET)	SUK0017	
IP Group plc	SUK0086	
Isembard	SUK0007	
Prof Ying Jin, Professor of Architecture and Urbanism, University of Cambridge	SUK0098	
Johnson Matthey	SUK0093	
Professor Richard Jones, Professor of Materials Physics and Innovation Policy, University of Manchester		QQ 1–8
Amy Karam	SUK0092	
Sir John Kingman, Chair, Legal & General Group		QQ 75–88
Saul Klein OBE		QQ 100–109
LifeArc	SUK0102	
London Stock Exchange Group		QQ 256–269 Marcus Stuttard, Head of AIM and UK Primary Markets
Chris Loryman	SUK0081	
Ian Merricks, Managing Partner, White Horse Capital Limited		QQ 110–116

Professor Tim Minshall, Dr John C Taylor Professor of Innovation, and Head of the Institute for Manufacturing, University of Cambridge	<u>SUK0109</u>	
Mozilla	<u>SUK0070</u>	
Professor Dame Fiona Murray, Associate Dean of Innovation, MIT School of Management		<u>QQ 270–279</u>
National Biofilms Innovation Centre	<u>SUK0051</u>	
National Centre for Universities and Business	<u>SUK0040</u>	
National Measurement Laboratory at LGC	<u>SUK0032</u>	
National Oceanography Centre	<u>SUK0054</u>	
National Wealth Fund		<u>QQ 243–255</u> John Flint, CEO
NICE (National Institute for Health and Care Excellence)	<u>SUK0046</u>	
NorthEast Capital	<u>SUK0005</u>	
Professor Sir Paul Nurse, Chief Executive and Director, The Francis Crick Institute		<u>QQ 29–40</u>
Nystagmus Network	<u>SUK0018</u>	
Lord O'Donnell GCB		<u>QQ 51–63</u>
Open Cloud Coalition	<u>SUK0047</u>	
Oxford Nanopore Technologies	<u>SUK0105</u>	
Oxford Science Enterprises	<u>SUK0059</u>	
Oxford Translational Health and Medicine Society (THAMES)	<u>SUK0114</u>	
Paragraf	<u>SUK0036</u>	
Mr John Phillips, Management Consultant, JPH Performance Management	<u>SUK0013</u>	
Professor William Powrie, Professor of Geotechnical Engineering, University of Southampton	<u>SUK0014</u>	
Dr Arati Prabhakar		<u>QQ 140–151</u>
RAND Europe	<u>SUK0035</u>	
Regulatory Innovation Office		<u>QQ 152–168</u> Rt Hon Lord Willetts, Chair

Royal Academy of Engineering	SUK0038	QQ 88–99 Sir John Lazar, President
Royal Society of Chemistry	SUK0026	
Dr. Tzameret Rubin, Senior Lecturer, Oxford Brookes University, and Prof. Tim Vorley, Pro VC, Head of AHSS Faculty, Oxford Brookes University	SUK0067	
Russell Group	SUK0039	
ScaleUp Institute		QQ 110–116 Irene Graham OBE, CEO
SCI (formerly the Society of Chemical Industry)	SUK0085	
Professor Andy Sellars, Professor Callum Littlejohn, Professor Graham Reed, and Dr Justyna Lisinska	SUK0056	
Serendipity Capital	SUK0021	
Professor Muthu De Silva, Professor, Birkbeck, University of London	SUK0111	
Space Forge	SUK0029	
SPRIND		QQ 117–128 Dr Patrick P. Rose, Innovation Manager
Startup Coalition	SUK0068	
Strand Analytica Limited	SUK0095	
Professor Alice Sullivan, Professor of Sociology, University College London (UCL)	SUK0057	
Sir Jonathan Symonds CBE, Chair, GSK		QQ 100–109
Steve Taylor, Managing Director of Strategy, Autoware	SUK0025	
Tech Nation - part of Founders Forum Group	SUK0049	
Temasek		QQ 129–139 Aftab Mathur, Managing Director, Investment (Innovation) and Emerging Technologies
Dr Stefanie Tompkins, Provost, Colorado School of Mines		QQ 140–151
Tony Blair Institute		QQ 9–15 Jakob Mökander, Director of Science and Technology Policy

Translating & Accelerating Research Network	<u>SUK0022</u>	
Trust Electric Heating	<u>SUK0009</u>	
UK Marine Energy Council	<u>SUK0104</u>	
UK Metamaterials Network (EPSRC Funded NetworkPlus)	<u>SUK0060</u>	
UK Supply Chain and Logistics Excellence (SCALE) Centre	<u>SUK0042</u>	
UK Research and Innovation (UKRI)		<u>QQ 229–242</u> , Professor Charlotte Deane, Executive Chair, Engineering and Physical Sciences Research Council and champion for commercialisation
Universities UK	<u>SUK0052</u>	
Dr Alina Vaduva, Senior Lecturer in Business Strategy, University of East London, Prof Kirk Chang, Professor in Technovation, Director of the Centre of Innovation, Management and Enterprise (CIME), University of East London, Centre of Innovation, Management and Enterprise (CIME), and Dr Siemon SMID, Director, PwC	<u>SUK0015</u>	
Chris Vann, COO, Autolus Therapeutics		<u>QQ 169–180</u>
Vertical Aerospace	<u>SUK0058</u>	
Vinnova		<u>QQ 117–128</u> Darja Isaksson, Director General,
Wellcome Sanger Institute	<u>SUK0062</u>	
Stian Westlake, Executive Chair, the Economic and Social Research Council, UKRI		<u>QQ 16–28</u>
UK Day One		<u>QQ 9–15</u> Julia Willemyns, Co-Director
Yorkshire Universities	<u>SUK0034</u>	

APPENDIX 3: CALL FOR EVIDENCE

Background

Science and technology are essential to the UK's future prosperity and wellbeing. The UK has a world-class research base, universities, and a growing scene of spin-out and start-up companies. However, the Government acknowledges that the UK “can struggle to translate” its strengths in research, development, and innovation into UK-based companies, and economic growth.⁴⁵⁴ The backdrop for this inquiry is fifteen years of meagre growth, despite significant R&D investment, and a wider sense that the UK often fails to capitalise on its excellent science and technology base. This is particularly true when it comes to the establishment of large domestic technology companies, which often start up here but move overseas.

We want to understand why this is happening and how we can fix it, including whether there are international models for science, technology and innovation policy that the UK can learn from.

Finding solutions to this problem is increasingly urgent, and a change in Government presents new opportunities for policy proposals. The UK and its science and technology sector face new challenges from constraints on public expenditure, geopolitical challenges which may shift state R&D expenditure more to defence, and a mix of challenges and opportunities from AI. Key organisations in the UK's science and technology landscape, such as the Department for Science, Innovation and Technology (DSIT), and the research councils and innovation agencies under UK Research and Innovation (UKRI), are undergoing reform under a new Government. Government strategies, such as the [Science and Technology Framework](#) and the forthcoming [Industrial Strategy](#), have attempted to provide solutions, and a range of policy initiatives have been proposed.⁴⁵⁵ Does the UK have an appropriate science and technology strategy for this rapidly changing world, and is there appropriate coordination across government, including No 10, the Treasury, DSIT, and wider delivery departments, to implement it?

We are interested in a broad range of issues that span the research, development and commercialisation process, from the earliest [technology readiness levels](#), across the ‘[Valley of Death](#)’, and through to the large technology companies that the UK, broadly, lacks. The UK now spends a record amount on R&D.⁴⁵⁶ However, the UK's relative international position in private sector R&D has declined,⁴⁵⁷ and many major technology companies that start in the UK ultimately move overseas, particularly to the US. Roughly a third of R&D spend in the UK comes from foreign direct investment—private sector companies headquartered overseas that invest here. But does the UK's science and technology strategy, and its industrial strategy more broadly, position it to compete for and maximise the benefits to

454 Department for Business and Trade, [Invest 2035: the UK's modern industrial strategy](#), 24 November 2024

455 Including by this Committee: Science and Technology Committee, [“Science and technology superpower”: more than a slogan?](#) (1st Report, Session 2022–23, HL Paper 47); Science and Technology Committee, [Don't fail to scale: seizing the opportunity of engineering biology](#), (1st Report, Session 2024–26, HL Paper 55); Communications and Digital Committee, [AI and creative technology scaleups: less talk, more action](#), (2nd Report, Session 2024–26, HL Paper 71); Council for Science and Technology, [Letter to the Prime Minister on investment in innovative science and technology companies](#), 7 October 2022; David Connell and Bobby Reddy, [Selling Less of the Family Silver](#), July 2024

456 Department for Science, Innovation and Technology, [Government backs UK R&D with record £20.4 billion investment at Autumn Budget](#), 31 October 2024

457 Financial Times, [UK companies on list of top R&D spenders almost halves in a decade](#), 21 January 2025

the UK from this investment? How can we incentivise the private sector to invest more in innovative science and technology companies in the UK?

Our inquiry and its priorities

In this context, the Committee is launching an inquiry into Financing and Scaling UK Science and Technology: Innovation, Investment, Industry.

We would like to explore strategic questions around the UK's science and technology priorities; and the role of public sector investment, private sector investment, and governmental policy levers to help scale-up companies and translate basic research into applications that benefit the UK's public services, society, and economy. We want to hear from science policy experts, entrepreneurs, businesses, researchers, investors, research performing organisations—any stakeholders in this area.

We want to hear from you: what are the fundamental problems in this area? What evidence do you have to support this? What policy solutions do you propose—are there examples of solutions that have worked elsewhere? Your answers may touch on science and technology priorities, skills, regulation and standards, financing, infrastructure, institutions and relationships, and the policies of major players (e.g. Government, the Treasury, Universities, research funders, and the finance sector).

The more detailed questions below cover:

- The challenges of scaling UK science and technology; international comparisons, and how the Government makes decisions around S&T to maximise benefit to the UK
- Strategic priorities for UK science and technology in a changing world; cross-government coordination on delivering this strategy
- The structure of the UK research and innovation landscape and its ability to bridge the 'Valley of Death'
- Private sector investors and the UK's capital markets
- The role of public sector late-stage investors like the National Wealth Fund
- The Government's policy levers (such as procurement) to help companies scale-up.

Respondents may wish to focus on a small subset of these questions. Please note that our priorities may well change as evidence comes in, and our report will focus on the best supported analyses and proposals.

Scaling UK science and technology

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?
 - (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?

- (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?
- (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?
- (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?
- (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?

Strategic priorities for UK science and technology in a changing world

2. How should the UK's science and technology strategy respond to ongoing major changes in the economic, geopolitical, and technological landscape?⁴⁵⁸ What challenges and opportunities now face the UK's science and technology sector? What policy actions would you prioritise?
 - (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?⁴⁵⁹ How could cross-Government coordination be improved?
 - (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 Framework⁴⁶⁰ align with the UK's strengths and weaknesses? What about the emerging prioritisation

458 These include the current UK economic situation, the renewed commitment to spending on defence and security, political developments in the US and Europe, and technological change from AI, to name a few.

459 The Science and Technology Framework explicitly assigns responsibilities to individual departments across its ten strands of activity, but is a DSIT document. We are interested in whether there is sufficient coordination between these departments and who should drive this strategy forward.

460 AI, engineering biology, future telecommunications, semiconductors, and quantum technologies. Department for Science, Innovation and Technology, *The UK Science and Technology Framework: update on progress*, 9 February 2024

in the Government's Industrial Strategy?⁴⁶¹ What implications will a required shift to defence spending in R&D have?

- (c) Given that the UK cannot be world-leading in everything, which sectors should the UK prioritise (and de-prioritise)? Which sectors offer opportunity for the UK to obtain a strategic advantage, given global supply chains and the nature of the UK economy?
- (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?⁴⁶²

Financing investment in UK science and technology

The UK research and innovation landscape

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?
 - (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?
 - (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?
 - (c) How effective are the UK's universities at encouraging commercialisation? Has the recent Independent Review of University Spin-outs⁴⁶³ resulted in positive policy changes?

Private sector investors, companies, and capital markets

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.
 - (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?

461 This identified “eight growth-driving sectors” in a much broader picture than DSIT's prioritisation exercise, including: advanced manufacturing, clean energy industries, creative industries, defence, digital and technologies, financial services, life sciences, professional and business services. Department for Business and Trade, *Invest 2035: the UK's modern industrial strategy*, 24 November 2024

462 Metascience is the scientific study of science and research. The UK's Metascience Unit describes itself as follows: “All our work starts from a simple idea: that the scientific method, so powerful in so many areas of life, should be systematically and routinely applied to how we practice, fund and support science itself.”

463 Department for Science, Innovation and Technology and HM Treasury, *Independent review of university spin-out companies*, 21 November 2023

- (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?
- (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?
- (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?

Public sector late-stage investors; the National Wealth Fund

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?⁴⁶⁴ Do they have the mandate to do this? If not, what changes or reforms would you propose?
 - (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 policy levers to support scale-up of science and technology

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.⁴⁶⁵ Are these measures working? Do they address the right problems? What additional policy levers exist for the Government to support scale-up?
 - (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?

⁴⁶⁴ The National Wealth Fund was formerly named the UK Infrastructure Bank and will operate “alongside” the British Business Bank. *positive money*, [The National Wealth Fund: more than a rebrand?](#) 17 October 2024; Financial Times, [Labour's £7bn pledge piles pressure on UK Infrastructure Bank to deliver](#), 23 September 2024; Financial Times, [Britain is building a new sovereign wealth fund—what can it learn from the others?](#), 10 September 2024

⁴⁶⁵ These include, for example:

- The development of a new [Industrial Strategy](#)
- Harnessing public procurement through the [Procurement Act 2023](#) and revised guidance for Government departments
- The [Mansion House](#) reforms to pension funds intended to increase their investments in UK
- The [Long-term Investment for Technology and Science \(LIFTS\)](#) initiative
- The [Science and Technology Venture Capital Fellowship](#) schemes
- Forward-looking regulation of advanced technology sectors through the [Regulatory Innovation Office](#)
- Changes to University spin-out policy following the [Independent Review of University Spin-outs](#)
- The setup of the [National Data Library](#)
- The commitments made in the [AI Opportunities Action Plan](#)
- The [Technology Adoption Review](#) under Dame Angela McLean

- (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?

APPENDIX 4: GLOSSARY

Anchor customer	An “anchor customer” is a large, significant client whose business provides a substantial portion of a company’s revenue. Having the government as an anchor customer may influence how companies choose to domicile.
Angel investor	An angel investor is an individual who invests their money into a small business in exchange for a venture stake, typically at an early stage.
Biotech	Biotechnology is technology based on biology, harnessing cellular and biomolecular processes to provide products and services.
British Growth Partnership	An investment vehicle created by the British Business Bank which allows institutional investors to invest in UK science and technology companies through a fund managed by the BBB
Brownfield investment	Brownfield investment involves the lease or purchase of a pre-existing facility in a foreign country; typically brownfield foreign direct investment implies purchase or lease of an existing facility as part of overall investment.
Crowd in/crowd out	“Crowding in” investment occurs when increasing government spending leads to more private investment than would have occurred otherwise; “crowding out” investment occurs when government investment displaces private sector investment. Government-led interventions typically aim to show they can crowd-in additional private sector investment: this is sometimes referred to as demonstrating additionality.
Deep tech	“Deep tech” is an umbrella term for organisations and companies that try to provide technological solutions based on substantial scientific or engineering challenges. Such organisations require lengthy upfront research and development and usually capital investment before successfully commercialising their technologies.
Fintech	Fintech or financial technology involves the use of technology to enhance products and services in the financial industry - for example, banking apps or software.
Greenfield investment	Greenfield investment involves establishing new operations in a foreign country, constructing new (“green”) facilities in the country where the investment is taking place.

LIFTS	The Long-term Investments for Technology and Science initiative is another investment vehicle created by the British Business Bank to enable institutional investors to invest in UK science and technology companies. It differs from the British Growth Partnership in that the investments are managed by a third-party fund, rather than the British Business Bank itself.
Medtech	Medical technology.
Spin-out	A “spin-out” is a separate company formed by a research institution (typically a university) in order to commercialise intellectual property developed as part of the research.
Start-up	A start-up company is a project undertaken by an entrepreneur to identify, develop, and validate a business model that they hope to scale. They differ from simply a new company in that the intention is usually to scale the business rapidly.
Seed/Series A/B/C/D	Venture-led companies typically undergo a series of equity funding rounds where parts of the company are sold in exchange for funds. Typically, as the company scales and develops and is worth more, the total amounts raised in the different stages of financing increase. “Seed” or sometimes “pre-seed” is the initial funding round required to start the company, while companies may go through a subsequent series of investment rounds where they raise money from an investor or group of investors. These are labelled by letter, Series A/B/C/D etc.
Technological sovereignty	A nation’s ability to control its own technology and tech infrastructure, avoiding excessive reliance on overseas companies
Unicorn	A start-up with a valuation of over \$1 billion.
Venture capital	Venture capital is a form of typically private financing provided by firms or funds to early-stage companies, exchanging funds for equity stakes in the business.