OCTOBER 2026
KENGO SHIBATA
ILARIA CALVELLO
GUY WARD-JACKSON
KEEGAN MCBRIDE



From Discovery to Startup: Strengthening the UK Innovation Ecosystem

TONY BLAIR
INSTITUTE FOR
GLOBAL CHANGE

Contents

4 Executive Summary

7 Turning Scientific Strength Into Economic Growth

12 Why the Early Stage Is the Right Place for Policy Intervention

15 Diagnosing Britain's Early-Stage Innovation Ecosystem

24 Recommendation 1: Build Commercial Capability Through Venture Doctorates and Enterprise Fellowships

28 Recommendation 2: Connect Experience With the Next Generation of Ventures

31 Recommendation 3: Standardise Technology Transfer and Align Incentives With Long-Term Outcomes

36 Recommendation 4: Build a Connected

Pathway From Proof of Concept to First Customer

40 Conclusion

42 Acknowledgements

Executive Summary

Britain needs growth, and science and technology offer one of its greatest opportunities. Few countries combine globally competitive universities, deep pools of talent, a major venture-capital market and an established university-spinout ecosystem. Britain therefore has the foundations to become the best place in the world to start and build a research-intensive technology company.

The government is right to focus on Britain's scaleup challenge. But Britain cannot scale companies it does not create. There is a major opportunity to strengthen the formative stage, when commercial opportunities are identified, teams assembled, intellectual property (IP) transferred and technologies first tested against markets. In the age of AI, technological progress and global competition are accelerating. Turning discoveries into companies is increasingly a source of economic competitiveness and technological sovereignty, making the capability and speed of commercialisation more important than ever.

Britain is not yet capturing the full value of its strengths. Its exceptional scientific base is not matched by an equally strong base of research-intensive businesses. Scientists and researchers represent a potential powerhouse of entrepreneurial and technical talent, but career structures remain predominantly organised around academic progression. Britain has experienced founders and operators, but lacks a systematic mechanism for recycling their knowledge, networks and judgement into emerging ventures. University spinout formation remains too dependent on institutional practice, affecting both the experience and perception of entrepreneurship. Promising technologies also stall between proof of concept and market because funding, specialist capabilities and early demand remain fragmented.

Government already shapes many of these formative conditions through research funding, academic incentives, knowledge exchange, technology transfer and translational support. It therefore has significant leverage to

make entrepreneurship more attractive, improve how technologies become companies, and de-risk promising opportunities until private capital and commercial demand can take over.

The ambition should be to double by 2035 the number of research-intensive companies that raise at least £2 million in cumulative equity investment within five years of formation. The goal is more companies with the foundations to attract investment, reach customers and compete globally.

This paper proposes four reforms to achieve this:

1. Build commercial capability through Venture Doctorates and Enterprise Fellowships. Scientific excellence and commercial capability should reinforce one another. UK Research and Innovation's new Venture Doctorates should provide a pathway for researchers who want to combine rigorous research with venture creation. Successful programmes should be connected through a national network and, subject to evidence of impact, scaled towards 1,000 funded places annually by 2032, requiring £100–150 million per year at steady state. Enterprise Fellowships should give researchers protected time to build ventures, supported by clearer entrepreneurial-leave and return arrangements. These pathways should sit alongside traditional research careers, recognising the value of rigorous research without an immediate commercial objective.

2. Make entrepreneurial experience a reusable national asset. Britain should recycle more of the tacit knowledge and networks generated by successful technology companies into the next generation. Building on the Royal Society's Entrepreneur in Residence programme, government should expand provision towards 100 active placements nationally by 2030, requiring approximately £4–5 million annually. Universities should also mobilise entrepreneurial alumni and create routes for experienced founders, industrial researchers and technical leaders to contribute to research and commercialisation.

3. Standardise technology transfer and align incentives with long-term outcomes. Britain should make university entrepreneurship something ambitious founders want to pursue and investors want to finance. Building

on recent reforms, government should establish technology-sensitive national default terms for university spinout transactions, with a benchmark university equity stake of 5 per cent. Higher stakes should be reserved for cases where the nature and importance of university IP justify them, with departures from the benchmark transparently shared. Researchers should have greater choice over venture-building support, encouraging providers to compete on the value they add. Commercialisation incentives should also recognise the long-term progression of university spinout portfolios rather than value captured at formation.

4. Build a connected pathway from proof of concept to first customer. Promising technologies need funding to test their potential, specialist capabilities to develop them and customers to validate them. Government should close the estimated £100 million annual proof-of-concept funding gap by 2029. Publicly funded translational infrastructure should respond more systematically to the bottlenecks faced by research-intensive companies. Government should also use its purchasing power more effectively. Procurement pathways should provide a meaningful route for products to be purchased, while targeted advance market commitments can give companies and investors confidence that technologies meeting predefined requirements will find a customer.

Together, these reforms can build economic and cultural momentum. As more scientists see entrepreneurship as a credible career, more experienced founders contribute to the next generation and more early-stage companies grow, company building can become a more established part of Britain's scientific culture.

Britain already has exceptional science, talent, capital and increasingly sophisticated institutions. The opportunity now is to make Britain the best place in the world to turn breakthroughs into globally competitive companies. Creating more companies worth scaling can turn Britain's scientific advantage into the industries, jobs and growth of the future.

01

Turning Scientific Strength Into Economic Growth

Britain needs growth. Without it, living standards will stagnate, public services will remain under pressure and the country will have fewer choices about its future. Emerging technology markets are projected to outpace growth in the wider industrial economy, increasing from around €2.5 trillion globally today to more than €20 trillion by 2040.[1] That is why science and technology will be central to unlocking that growth.

Britain starts with a major advantage: one of the strongest scientific research bases in the world. But scientific strength does not automatically translate into prosperity. That requires turning discoveries into commercial opportunities, building companies around them, scaling those companies into globally competitive businesses and diffusing new technologies through the wider economy. Britain's future prosperity will increasingly depend on the ecosystem that turns scientific and technological strength into economic advantage.

The Tony Blair Institute for Global Change's (TBI) wider work on science and technology has examined this innovation ecosystem end to end, from scientific discovery in *A New National Purpose: Reimagining UK Science and Technology Through Lovelace Disruptive Invention Laboratories* through to company growth in *From Startup to Scaleup: Turning UK Innovation Into Prosperity and Power* and industrial capability in *Hard Tech, Hard Power: Rebuilding Britain's Industrial Base for the Age of AI*. This paper focuses on a critical transition early in that journey: turning scientific and technological potential into high-quality companies with the foundations to scale.

The urgency is growing. Advances in artificial intelligence are transforming how scientific discoveries are made, accelerating research and enabling increasingly automated experimentation. As explored in our previous work on AI for science, these developments will fundamentally alter the pace of scientific progress and create new opportunities for technological

breakthroughs. They also change the competitive landscape and raise the stakes for countries seeking to translate discoveries into economic advantage.

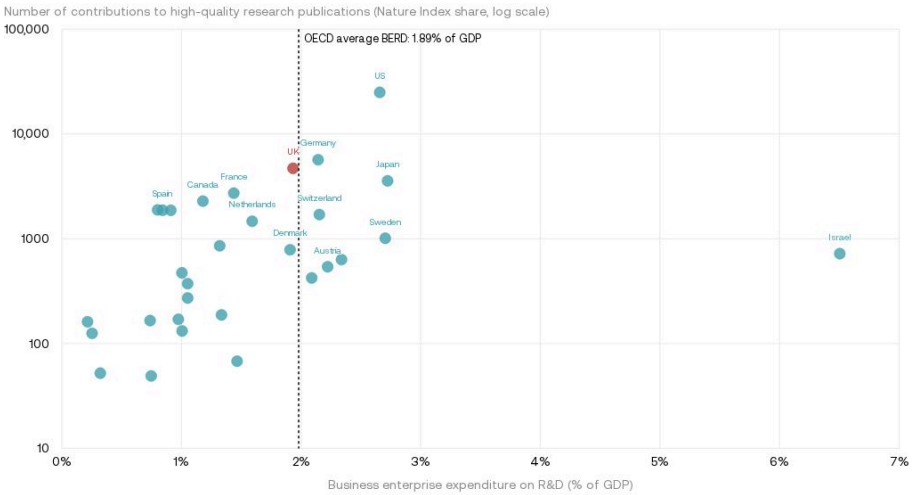
At the same time, geopolitical and technological competition is intensifying. Scientific talent, capital and intellectual property (IP) are increasingly mobile and contested. Countries are competing to attract the researchers, entrepreneurs and investment needed to turn frontier research into globally significant companies. Britain's traditional strengths in universities and research can therefore no longer guarantee that the companies and economic value emerging from scientific breakthroughs will be created and retained in the UK.

Britain has the world's third-largest venture-capital (VC) market,[2] a world-leading research base[3] and a strong university-spinout ecosystem.[4] Its research system is also a major source of talent: thousands of scientists and engineers are trained at the frontier of emerging technologies in universities, corporates and small and medium-sized enterprises (SMEs). This shows that Britain has the foundations to become the best place in the world to turn frontier research into exceptional technology companies.

Yet this competitive advantage sits alongside a deeper structural gap. Britain's exceptional position in high-quality research output is not matched by an equally exceptional level of business R&D intensity. The UK sits around the Organisation for Economic Co-operation and Development (OECD) average for business R&D expenditure, despite being among the world's leading contributors to high-quality research (Figure 1). The UK is also home to four of the world's top ten universities, but only three of the world's top 100 industrial R&D spenders are British and none are in the top ten.[5] The UK therefore combines exceptional research with a comparatively thin base of R&D-intensive businesses able to absorb, develop and scale new technologies.[6] Closing this gap requires industrial strategy, but also strengthening of the startup and scaleup landscape.

FIGURE 1

Britain's exceptional research strength is not matched by equivalent business R&D intensity



Source: Nature Index (2025), using 2024 data; OECD Main Science and Technology Indicators, using 2023 data

Note: Research strength is measured using Nature Index share, which captures each country's fractional contribution to articles published in the high-quality research journals tracked by the Nature Index. The y-axis is logarithmic. Business R&D intensity is measured as business enterprise expenditure on R&D (BERD) as a share of GDP. The dashed line indicates the OECD average. Selected comparator economies shown.

Innovation is the only plausible way to reindustrialise the UK in the 21st-century economy and, as established, this starts with turning scientific and technological advantage into economic value at home. Commercialisation is one way in which scientific strength becomes national wealth. University spinouts demonstrate the potential: those founded since 2010 have already created around 27,000 jobs in the UK and reached £49 billion in combined enterprise value.[7] But the ambition should be broader. Britain needs to more consistently turn scientific and technical capabilities into productive businesses: specialist and mid-sized companies in regional clusters across the country, alongside exceptional companies capable of becoming globally competitive businesses.

Government is already responding to technological competition by taking a more active role in backing strategically important UK companies.[8] That direction is broadly right, but if the government wants companies that scale and stay in the UK, it should place greater emphasis on the formative stage, where these new champions emerge and where the government has more leverage to engineer culture and success. Britain needs to prioritise improving the ecosystem, rather than increasing taxation, penalising risk-taking and making it harder to leave.

There is growing momentum behind this agenda. In June 2026, Universities UK set an ambition to double annual external investment into UK university innovation from around £5 billion to £10 billion by 2035, equivalent to more than £100 billion over the decade.[9]

The ambition for the wider innovation ecosystem should be to match this increase in investment with a doubling of the number of research-intensive companies that raise £2 million or more cumulatively in external equity investment within five years of formation by 2035.[10] This means not only more startups, but better ones that are ready to scale: companies that build on research to solve pain points, create jobs and increase tax revenue. At a time when Britain needs new sources of growth, getting more from its scientific and technological advantage should be a national priority.

FIGURE 2

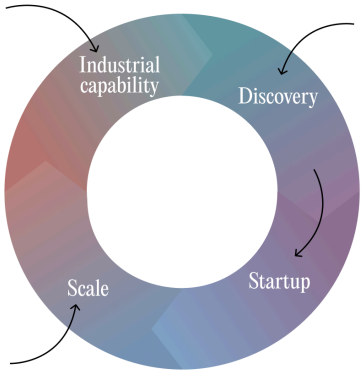
Building an end-to-end innovation ecosystem

Hard Tech, Hard Power: Rebuilding Britain's Industrial Base for the Age of AI

argues that the rise of physical AI makes the industrial capabilities needed to build advanced technologies increasingly important. It proposes strengthening strategic technology infrastructure, translational and manufacturing capabilities, and patient capital so UK hard-tech companies can reach industrial scale.

From Startup to Scaleup: Turning UK Innovation Into Prosperity and Power

addresses the UK's difficulty turning promising technology companies into global leaders. It proposes reforms spanning growth capital, public investment, institutional investors and public markets to help more UK companies scale and retain economic value domestically.



A New National Purpose: Reimagining UK Science and Technology Through Lovelace Disruptive Invention Laboratories

identifies a gap between traditional academic research and commercially oriented R&D. It proposes autonomous Lovelace labs with long-term funding and greater freedom to bring scientists and engineers together around ambitious, interdisciplinary technology development.

From Discovery to Startup: Strengthening the UK Innovation Ecosystem

focuses on four reforms to strengthen the early stages of startup formation and validation:

Recommendation 1
Strengthen commercial capability within academia.

Recommendation 2
Recycle entrepreneurial experience across the ecosystem.

Recommendation 3
Make technology transfer faster, more predictable and outcome-focused.

Recommendation 4
Bridge the translational gap from proof of concept to first commercial adoption.

Source: TBI analysis

02

Why the Early Stage Is the Right Place for Policy Intervention

Government increasingly recognises the need for growth and its role in securing technological leadership. The British Business Bank is playing a greater role in backing strategically important technology companies, alongside its efforts to mobilise pension capital through the British Growth Partnership and a proposed £1 billion-plus UK Scale-up Fund. [11] The National Wealth Fund is similarly mobilising investment into capital-intensive industries, with TBI's *Hard Tech, Hard Power* paper proposing a stronger mandate to build out strategic technology infrastructure. The Sovereign AI Fund and National Security Strategic Investment Fund both provide further targeted support for frontier and dual-use technologies. Together, these interventions represent a pragmatic response to intensifying technological and geopolitical competition.

But most of this attention has focused on the more mature end of the innovation system. By the time discoveries are matched with commercial opportunities and credible teams are assembled, markets are generally well placed to assess their potential. Government has distinctive leverage earlier, given it shapes how research is funded and supports some of this research to become companies in the first place. Other economies are increasingly targeting this stage. For example, the European Union's recent Startup and Scaleup Strategy and proposed European Innovation Act[12] explicitly seek to strengthen the pathway from research to market through researcher mobility, IP commercialisation and innovation procurement. Britain should further complement efforts to back established champions with systematic efforts to strengthen the ecosystem from which the next generation of companies will emerge.

Government Already Shapes the Early Stage

Government already shapes many of the institutions and incentives around research commercialisation. In 2026–27, Research England will allocate more than £2 billion in research funding to English universities, with Research Excellence Framework outcomes informing its distribution. It will also provide £284 million through Higher Education Innovation Funding (HEIF) to support knowledge exchange, including business engagement and commercialisation.[13] Government also supports the transition from research to market through translational funding and public investment. Innovate UK funds businesses and research–industry collaborations to develop, test and demonstrate new technologies, while British Business Bank programmes have already supported almost a quarter of university-spinout equity deals between 2022 and 2024.[14]

Government therefore does not need to create an entirely new set of levers. Through research funding, HEIF, proof-of-concept support and public investment, it already shapes the environment in which companies emerge from research. The question is whether these levers are sufficiently aligned for this new era of technological disruption.

Upstream Support Can Unlock Private Capital

Britain already has a mature early-stage investment ecosystem, with specialist funds and angel investors backing companies early in their lifecycle. Public policy can strengthen this early part of the ecosystem by creating conditions that encourage greater risk-taking and make more promising technologies investable.

Government already has powerful levers to do this. Research and translational funding can reduce technical uncertainty before technologies are ready for conventional investment; institutions and incentives can make entrepreneurship more attractive; and public programmes can signal priorities and help mobilise private capital around emerging opportunities.

Used well, these interventions can improve the ecosystem in which companies are formed and de-risk promising technologies until private investment and commercial demand can take over.

Returns Compound Over Time

Strengthening company creation is not a one-off improvement. It is an investment in the productivity of the entire ecosystem. The compounding runs deeper than any single company's success. Every founder, operator and investor produced by one generation of company creation can become a critical input into the next, through talent that moves on to new ventures, capital that gets recycled into new funds or companies, and networks that make the following generation of founders easier to support. Improving the quality of company creation today will improve the ecosystem within which every future company will be created.

This process can also build cultural momentum. More people attempting to build companies, alongside more visible successes, can make entrepreneurship a more established and attractive path. It can also change attitudes towards failure: an unsuccessful venture need not mean a failed career, as founders and operators carry experience, networks and judgement into subsequent companies, investments or research roles. Success creates role models and ambition, and repeated attempts can build the experience on which a stronger innovation culture depends.

The early stage is therefore a particularly high-leverage point for intervention. Improving the conditions under which companies are formed increases the quality of ventures entering the innovation pipeline, with effects that persist through subsequent stages of growth. This complements the imperative to help companies scale: a stronger early-stage ecosystem should produce more companies worth scaling in the first place. Addressing early gaps in incentives, commercial knowledge and translational support can therefore strengthen the UK's innovation ecosystem as a whole.

03

Diagnosing Britain's Early-Stage Innovation Ecosystem

Britain's early-stage innovation ecosystem does not consistently give promising technologies the strongest foundations for success. The weaknesses begin around the people closest to emerging technologies and extend through the institutions, expertise and infrastructure surrounding them. Britain is missing out on the opportunity to turn its strongest research into globally competitive companies.

Scientific Career Structures Make Entrepreneurship a Costly Career Risk

The scientific career structure in universities centres predominantly around the academic pathway. Progression is tied to publications, research quality, teaching and grant funding, while experience in industry or entrepreneurship carries less weight. The tension between publication and IP illustrates the problem. The career structure incentivises researchers to publish their findings, but premature public disclosure can compromise IP protection. Researchers therefore need to recognise commercial opportunities early but are often not incentivised to do so. Academic patenting intensity helps illustrate the extent of the UK's translation gap. Despite its research strength, the UK ranks 12th among the countries compared for international patent applications from academia per 100,000 university students.[15] The system and culture are such that translation is something researchers pursue alongside, and sometimes in tension with, academic objectives.

These incentives also shape career choices. For researchers with commercially promising discoveries, building a company can require stepping away from activities that underpin academic progression. Substantial opportunity costs exist where leave arrangements, routes back into academia and recognition for entrepreneurial activity remain inconsistent.

This results in a system where pursuing commercial experience can carry a career penalty in academia, reinforcing both institutional and cultural separation between scientific and commercial careers. When movement into industry or entrepreneurship is seen as a departure from the conventional academic path, this can shape researchers' perceptions of what constitutes a successful career. Yet greater movement between the two can benefit both: scientific expertise flows into companies, while commercial experience, industry knowledge and networks can flow back into universities.

In practice, talent already moves across these boundaries. About 70 per cent of UK PhD graduates enter non-academic employment,[16] yet separate research found that only a third reported feeling prepared for a non-research career.[17] There is therefore a mismatch between a research system still largely organised around academic progression and the increasingly varied careers researchers actually pursue.

Some universities are beginning to adapt. The University of Edinburgh, for example, has introduced an Innovation Career Pathway that recognises commercialisation and industry engagement within academic career progression.[18] This demonstrates that academic career structures can recognise a broader range of contributions without treating commercial activity as outside the research career.

Who Identifies and Builds Commercial Opportunities?

Researchers are closest to emerging science, but proximity to a discovery does not necessarily come with the commercial experience needed to recognise where it could create value. The Department for Science, Innovation & Technology's (DSIT) Research and Innovation Workforce Survey found commercial expertise to be the most commonly cited skills gap,[19] while research on academic entrepreneurship highlights industrial experience and social capital as important to successful commercialisation.[20] Government policy increasingly recognises this gap. UK Research and Innovation's (UKRI) new £25 million Venture Doctorates

programme explicitly seeks to combine doctoral research with experiential entrepreneurship and venture creation, reflecting growing recognition that commercial capability needs to be developed alongside scientific expertise.[21] This builds on Deep Science Ventures' Venture Science Doctorates,[22] which are doctoral programmes focused on venture creation, and the University of Manchester's PhD by Enterprise,[23] an effort to add commercial training to existing research-centred doctoral training.

The separation between research and commercial training also affects which opportunities are identified and how they are developed. The current system relies heavily on researchers recognising the commercial potential of their own work, despite substantial differences in researchers' commercial experience and networks. Promising applications may therefore be missed, or technologies developed without sufficient understanding of potential customers and market needs. This also impacts the translation of science beyond commercialisation. Routes to develop useful data sets, or start non-profits or Focused Research Organisations, are also missed.

When it comes to commercialisation, there is also no single route through which promising research should reach the market. Licensing, consultancy or collaboration with established industry may provide a better route than creating a new company. Where a venture is appropriate, there is likewise no single model for who should build it. Some researchers have the ambition and capability to lead companies themselves; organisations such as Conception X demonstrate a model for developing researchers as venture scientists.[24] Others may benefit from experienced entrepreneurial capability around their science, including venture scouts, entrepreneurs in residence and investors. Not every researcher needs to become an entrepreneur, but commercial opportunities should not depend on researchers already possessing the experience, networks and inclination needed to identify and pursue them.

Entrepreneurial Experience Is Not Systematically Recycled

Strong innovation ecosystems recycle entrepreneurial experience into successive generations of companies. Experienced founders and operators bring tacit knowledge, networks and often capital that can help emerging ventures avoid mistakes and progress faster.

Britain increasingly has the ingredients for this dynamic: the UK had an estimated 56,800 active angel investors in 2025, up 54 per cent from 2022.[25] Many of these are themselves successful entrepreneurs. But founder experience is still recycled less often than in the US: 7.3 per cent of UK "golden triangle" (London, Oxford and Cambridge) founders become investors, compared with 13.7 per cent in leading entrepreneurial clusters in the US, while 18 per cent of founders of "golden triangle" university spinouts have founded more than two companies, compared with 26.1 per cent in the leading US clusters.[26] This suggests scope to better institutionalise and transfer entrepreneurial know-how. Schemes such as the Enterprise Investment Scheme and the Seed Enterprise Investment Scheme encourage the recycling of capital, but do not systematically recycle the operating experience, networks and tacit knowledge of successful technology entrepreneurs.

Britain needs a feedback loop: successful companies generate experienced people and wealth; these are reinvested into new companies; and those companies produce the next generation of founders, operators and investors. Each generation of success therefore improves the conditions in which the next is created. Britain is not yet doing everything it can to close this loop. Taxation is one area where incentives to recycle entrepreneurial success can be weakened. While tax policy is beyond the scope of this paper, it remains an important policy lever in shaping incentives for entrepreneurship and growth.[27]

Spinout Formation Remains Too Dependent on Institutional Practice

University research can reach the market through multiple routes, including licensing, research partnerships and industry collaboration as well as new company formation. Here, startups are defined as companies established without the use of university-owned research expertise, IP or know-how, including most student-founded companies. Spinouts, by contrast, are formed around university-owned research expertise, IP or know-how. Where a spinout is appropriate, universities and their technology-transfer organisations play a direct role in shaping the conditions under which the company is formed.

A central challenge today is how this process is perceived by the entrepreneurs and investors the UK needs to attract. The university spinout process as a whole often does not offer a consistently clear and compelling proposition to founders and investors. Technology-transfer organisations are perceived as taking substantial equity, offering limited visibility over likely terms and requiring lengthy negotiations, with the experience varying significantly depending on the institution. These perceptions matter even where individual institutions perform well: expectations about the spinout process can influence whether entrepreneurs choose to pursue university technologies and whether investors view them as an attractive asset class in the first place.

Founder-reported evidence supports this reputational challenge. Spinout.fyi[28] has collected experiences of university equity terms and technology-transfer processes, highlighting substantial variation in both equity expectations and transaction times. The 2023 Independent Review of University Spin-out Companies similarly found that only 39 per cent of surveyed founders considered their university deal fair and balanced, while 43 per cent disagreed.[29] This indicates that the perception of technology transfer is itself part of the commercialisation challenge. Although the landscape has evolved positively, this narrative has persisted to this day.

Equity expectations are an important contributor to this perception and impact on company formation. UK universities have historically taken relatively high equity stakes, with expectations varying substantially between institutions. A university securing a larger share at formation does not necessarily generate a greater return if the resulting structure weakens founder incentives, deters investment or constrains the company's ability to recruit experienced operators. Studies have found that higher university equity stakes are associated with both a lower likelihood of raising venture capital and lower rates of spinout formation.[30]

International examples demonstrate alternatives. Stanford generally takes no more than 5 per cent (although dilution protection can change interpretation),[31] while ETH Zurich starts from a baseline 2 per cent institutional equity stake, with separate licensing terms for university IP used by the spinout.[32] These models demonstrate how relatively modest and clearly communicated starting equity expectations can form part of a wider proposition to founders and investors.

Recent reforms have begun to address these challenges in Britain. The University Spin-Out Investment Terms (USIT) Guide[33] has established common principles for spinout transactions, while the 2026 Hickson Review[34] similarly called for greater transparency and standardised documentation. Universities including Imperial College London, Cambridge and King's College London have introduced more standardised approaches to equity, royalties and licensing. But these reforms remain largely voluntary and institution-specific. They do not yet give founders and investors a consistent national expectation of the terms, transparency or timelines they will encounter when commercialising university research.

At the same time, many university commercialisation organisations have evolved well beyond traditional IP protection and licensing. Some teams combine sector expertise, industry and investor engagement, entrepreneurial training and venture-building support. This points to an important distinction: a more involved university role can create substantial value where it provides genuine company-building capability. Higher institutional participation or longer formation processes may be justified where the additional support is transparent, and founders and investors

believe they receive commensurate value in return. The problem is therefore not university involvement itself, but whether the equity, time and restrictions attached to that involvement are proportionate to the value provided.

Institutional incentives reinforce the importance of this distinction. Patents, licences, spinout formation and immediate financial returns are relatively straightforward to measure, while subsequent investment, customer acquisition and company growth are harder to capture. Yet universities ultimately benefit from the success of the companies they help create. A smaller initial stake in a company that attracts stronger founders, more investment and ultimately creates substantially more value can generate a greater return than a larger stake in a company whose prospects are constrained at formation. Lower headline equity stake can therefore be consistent with universities' own financial interests.

The objective should therefore be bigger than reducing university equity or shortening negotiations. Britain should seek to change the proposition and perception of university entrepreneurship itself: making spinouts something ambitious founders want to build and investors want to finance.

Promising Technologies Can Stall Between Proof of Concept and Market

Even where commercial potential has been identified, research-intensive technologies face a difficult transition from research to becoming something a customer can test and buy. Early translation requires flexible proof-of-concept funding to test technical and commercial assumptions before an opportunity is conventionally investible. As technologies progress, companies may also need specialist engineering, prototyping, testing, demonstration and pilot-scale manufacturing. These capabilities can be prohibitively expensive for an early-stage company to build itself.

The UK supports this transition through UK-wide programmes including Innovate UK and the Catapult Network, alongside nation-specific provision such as the Scottish government's Proof of Concept Fund and Scottish Enterprise's High Growth Spin-out Programme. Recent analysis estimates a

proof-of-concept funding gap of about £100 million annually.[35] Locally allocated proof-of-concept funds and UKRI's new £40 million Proof of Concept programme, providing funding over five years, are welcome steps towards addressing this gap but remain modest and highly competitive, to the extent that even high-calibre companies fail to secure funding.

The UK already has many of the components needed to support translation at different stages. Knowledge-exchange teams can help researchers assess promising ideas and determine whether further technical validation or IP protection is warranted. Innovate UK's ICURe programme has successfully supported researchers in testing commercial potential through customer and market discovery. Catapults and specialist facilities provide access to technical expertise, infrastructure, manufacturing capabilities and potential customers. But these components operate across a fragmented landscape and do not connect enough to existing industries.

Procurement can also be particularly difficult in sectors such as health, defence and infrastructure, where government and public institutions are major potential buyers and procurement pathways can be lengthy or difficult for young companies to navigate. For example, many health and medtech companies in the UK do not sell into the NHS, citing structural challenges in procurement. The situation is improving, but public procurement remains a policy lever that could be used more effectively to support young companies.

From Diagnosis to Reform

Taken together, these weaknesses point less to an absence of capability than to a failure to connect it consistently around promising technologies. Britain has world-class researchers, experienced entrepreneurs, increasingly sophisticated commercialisation organisations, translational infrastructure and significant pools of capital, but these capabilities do not always come together early enough.

Four conditions are particularly important to the quality of companies that emerge: the capabilities of the people closest to the research, the entrepreneurial experience around them, the institutional environment through which technologies move and the pathway from technical proof to market. The following chapters therefore propose four reforms:

1. Build commercial capability through Venture Doctorates and Enterprise Fellowships.
2. Connect experienced entrepreneurs to the next generation of ventures.
3. Standardise technology transfer and align incentives with long-term outcomes.
4. Build a connected pathway from proof of concept to first customer.

These reforms should apply across the UK. Where delivery sits with England-specific bodies or funding mechanisms, equivalent reforms should be pursued through the relevant institutions in Scotland, Wales and Northern Ireland, reflecting the different oversight and funding bodies.

04

Recommendation 1: Build Commercial Capability Through Venture Doctorates and Enterprise Fellowships

Scientific excellence and commercial capability should reinforce rather than compete with one another. Researchers should be able to develop an understanding of markets, customers and venture creation alongside deep technical expertise, and pursue commercialisation without closing off an academic career. Government should build on the Venture Doctorates and Enterprise Fellowships now being developed by UKRI to make this capability a more systematic part of the research career.

This will allow improved fluidity between researchers and the rest of the ecosystem. This is critical given that 70 per cent of UK PhD graduates enter non-academic employment.[36]

Commercial exposure should sit in parallel with traditional academic routes. Rigorous research without an immediate commercial objective remains valuable in its own right; these schemes provide an additional pathway for researchers who want to combine scientific research with venture creation.

Turn Venture Doctorates Into a National Capability

UKRI's £25 million Venture Doctorates programme is currently at a formative stage. The immediate priority should be to establish a small number of high-quality programmes combining rigorous research with genuine commercial experience. Researchers should work directly with customers, industry and founders, identify problems, test scientific and commercial assumptions, and develop potential routes to market, with sustained access to people who have built and financed companies.

Venture Doctorates should support both IP-led and talent-led routes into venture creation. An IP-led route starts with an existing discovery or piece of university IP and gives researchers the commercial capability to explore how it can best be developed. A talent-led route starts with researchers and their scientific capabilities, connecting them with real-world problems that can help shape the direction of their research. This requires greater flexibility for research questions to evolve as commercial and technical insights emerge, while maintaining doctoral rigour.[37] Existing initiatives demonstrate the potential of talent-led venture creation across institutional boundaries.[38] Supporting both routes would allow Venture Doctorates to develop existing commercial opportunities while enabling new technologies, IP and ventures to emerge through the research itself.

To avoid this expertise becoming fragmented across temporary programmes, UKRI should connect successful consortia through a national Venture Doctorate network, sharing commercial capabilities, networks and learning between them. Networks of founders, investors, industry partners and venture builders assembled through the awards should progressively be made accessible to researchers beyond participating institutions. This is particularly valuable outside the "golden triangle" and its surrounds, which capture 74.5 per cent of UK spinout investment, with median spinouts in the "golden triangle" receiving four times more funding than elsewhere.[39,40]

If the first programmes demonstrate strong results by 2030 when the first cohort would be reaching the end of their doctorates, government should commit to scaling Venture Doctorates to at least 1,000 funded places annually by 2032, representing approximately 5 per cent of science, technology, engineering and mathematics doctoral starts in commercially relevant fields and requiring around £100–150 million annually at steady state. UKRI should mandate standardised reporting on researcher outcomes, company formation, investment and subsequent venture progression, with a formal review in 2031 determining the pace and scale of further expansion.

Scale Enterprise Fellowships as a Pathway Into Venture Creation

UKRI's planned Enterprise Fellowships provide an important foundation for giving researchers the time and career flexibility to build ventures. The programme is expected to support 100 fellowship starts over the Spending Review period, with awards averaging around £150,000 for 12 to 24 months. It is intended for researchers with opportunities around the late or post-proof-of-concept stage, providing dedicated time to establish a new venture and develop a pathway towards follow-on investment. UKRI also intends participating institutions to support fellows who wish to return to academic roles without being disadvantaged for time spent commercialising research.

Government should build on this foundation and, where the initial programme demonstrates strong results, scale Enterprise Fellowships into a permanent national pathway for research-led venture creation. The initial programme will be delivered through selected existing UKRI investments aligned with the eight sectors specified in the government's industrial strategy. Over time, access should be widened so that promising researchers and opportunities are not excluded simply because they sit outside participating programmes. Fellows should have consistent access to commercialisation training, customers, investors and experienced company-builders alongside the protected time needed to develop their ventures. The Venture Doctorates scheme will run in parallel to provide complementary support to these ambitions.

Universities should reinforce the programme through clear entrepreneurial leave and return policies, including arrangements for researchers who temporarily leave to build research-intensive companies or combine venture creation with part-time academic roles. Academic recruitment and progression should recognise substantive entrepreneurial experience, helping ensure that researchers are not disadvantaged for time spent building a venture.

Over time, government should consider extending the same principle beyond venture formation, enabling researchers to spend substantive periods in existing startups or industrial R&D before returning to academia.

05

Recommendation 2: Connect Experience With the Next Generation of Ventures

Not all entrepreneurial capability needs to be developed within researchers themselves. Experienced founders and operators can bring the tacit knowledge, networks and judgement needed to identify opportunities, strengthen founding teams and navigate the early stages of company building. Government should help find and fund experienced operators and connect them with promising technologies.

Scale and Connect Entrepreneur-in-Residence Provision

The Royal Society's Entrepreneur in Residence (EiR) programme provides an existing foundation. Established in 2017, it places experienced entrepreneurs and industrial scientists within universities to support research translation and company formation. EiRs assess commercial opportunities, mentor researchers and connect them with industry and investors. More than 80 EiRs have now participated in the programme, providing a substantial evidence base from which to learn.[41] Before scaling, the Royal Society and government should systematically evaluate the outcomes of these placements to identify which models, activities and types of engagement have generated the greatest impact, and use these findings to inform future programme design and recruitment criteria.

Government should expand the programme to 100 active placements nationally by 2030, requiring approximately £4–5 million annually at full scale. Placements should range from lighter-touch advisory roles to intensive venture-building support where opportunities warrant. EiRs should help researchers test markets, shape commercial strategies, assemble founding teams and connect with customers, investors and talent. Where appropriate,

they should be able to transition into part-time executive or co-founder roles, closing the gap between mentorship and company leadership that often stalls promising ventures.

Expansion should create a connected national network to help identify relevant expertise. EiRs should be matched to opportunities according to sector expertise and venture needs, and able to work across institutional boundaries. At least half of additional capacity should be directed outside the “golden triangle”. Venture Doctorates, Enterprise Fellowships and other publicly funded commercialisation programmes should draw on this network rather than building entrepreneurial expertise from scratch.

Turn Entrepreneurial Alumni Into an Ecosystem Asset

Universities should systematically connect entrepreneurial alumni with emerging ventures, whether as potential co-founders, advisors, board members, customers or investors. Universities receiving public commercialisation funding should demonstrate how they mobilise alumni expertise, with Research England assessing meaningful engagement rather than imposing new reporting requirements.

These networks should operate across institutional boundaries. The right co-founder or advisor for a spinout may come from a different university’s alumni base. The expanded EiR network should provide one route for matching alumni expertise with opportunities wherever they emerge. The goal is to make entrepreneurial experience a reusable national asset, not a resource confined to individual institutions.

Universities should also make it easier for alumni founders, industrial researchers and technical leaders to contribute directly to academic life while retaining their primary industry roles. Visiting or part-time industry appointments, requiring only a few days each month, could bring current technical and commercial expertise into research, doctoral training and commercialisation, while giving accomplished industry researchers a meaningful affiliation with the academic community.

Entrepreneurial alumni can help upskill Venture Doctorate students and can also provide the right expertise to the universities' tech-transfer offerings.

Overall, government should make experienced founders and operators a more systematic part of Britain's research-commercialisation ecosystem, building on existing programmes to connect entrepreneurial expertise with promising research and emerging ventures.

06

Recommendation 3: Standardise Technology Transfer and Align Incentives With Long-Term Outcomes

Universities should receive a fair return where their research and IP contribute to commercial success, but the objective should be to maximise long-term value creation rather than value captured at the point of transfer. This means choosing the commercialisation route best suited to the opportunity, whether spinout, licensing or industry partnership. Where a spinout is appropriate, lower default equity stakes need not reduce universities' overall return: IP-protection costs and institutional value can also be recovered through royalties, milestones and other success-linked licensing terms; and a better ecosystem can generate more companies with a higher ceiling. The terms of individual transactions also shape the wider ecosystem. A faster, more transparent, predictable and founder-friendly proposition can strengthen perceptions of university entrepreneurship, attracting more founders, experienced operators and investors to engage with university technologies. Over time, this will build momentum for a stronger pipeline of successful companies and ultimately generate greater returns for universities themselves.

Make Standard Terms and Processes the Default

Building on the 2023 Independent Review of University Spin-out Companies and subsequent USIT guidance, government should establish a small number of technology-sensitive national default terms for university spinout transactions, reducing institution-by-institution negotiation. Consistent with TBI's previous recommendations, a benchmark university equity stake of 5 per cent should be employed. Where university IP is more foundational, defaults should vary according to the nature and importance of the IP, including across life sciences and therapeutics, software and digital technologies, and IP-intensive deep tech and hardware.

Existing models demonstrate that greater standardisation need not mean a single set of terms. Imperial College London's Founders Choice standardises key elements of the spinout transaction, while King's College London uses predefined equity stakes ranging from 0 to 15 per cent according to the nature and IP intensity of the technology.[42] ETH Zurich goes further, offering a baseline 2 per cent equity stake and an Express Licence with fixed terms and a one-month completion target, alongside predefined combinations of equity, royalties and sublicensing fees.[43]

Routine transactions should follow a standard process as well as standard terms. The UK already has a precedent for this approach in the Lambert toolkit, which provides a suite of model agreements for university–industry research collaborations with different allocations of IP rights. Spinout transactions require a different framework, but the same principle should apply: standardise common structures while preserving choice where commercial circumstances genuinely differ. Harvard University's Office of Technology Development has published a new licensing framework, ExpressPath, to reduce negotiating times to weeks instead of months. It uses a pre-negotiated boilerplate to help innovators navigate the path to commercialisation. Critically, it has three distinct pathways tuned to the kind of technology involved.[44] Introducing a standardised framework would give UK founders and universities a faster and more transparent route from IP assessment to agreement, rather than requiring each spinout to negotiate from first principles.

Funding bodies should make adoption of the framework mandatory (and also adopt standard terms themselves). Transaction times, use of default terms, final equity position and reasons for exceptions should be reported through the national Spin-out Register. This would build sector-level accountability and improve the information asymmetry between founders and universities.

Institutional complexity should be resolved between universities rather than passed on to the company. Where several institutions hold rights in the same technology, their interests should be accommodated within a single overall university equity allocation rather than accumulating separate stakes.

Where institutions lack sufficient transaction volumes or specialist expertise, funding bodies should continue testing shared technology-transfer office (TTO) provision.

Funding bodies should convene the sector to finalise national default frameworks by mid-2027, with adoption expected across all publicly funded universities by academic year 2028–29. From 2028, universities should report transaction times, use of standard terms and material departures through the national Spin-out Register. Funders should publish an annual benchmarking report comparing institutional performance and highlighting best practice.

Better technology transfer also requires researchers to engage effectively with this process. The commercial training proposed in Recommendation 1 should equip researchers to understand IP, licensing, equity and negotiation, allowing them to engage with TTOs as more informed participants.

Give Researchers Choices Over Venture-Building Support

Once ownership and licensing terms have been established, researchers should be free to choose who helps them build the company. Universities should continue to provide integrated venture-building support where they have strong capabilities, but researchers should also be able to work with specialist venture builders, accelerators or pooled expertise via shared TTOs. Access to university IP should not require founders to accept venture-building support they do not need. Where substantive support is provided, the service should be transparent and commercially separable from the underlying IP terms. Greater choice would also create stronger incentives for providers to demonstrate the value of their support, encouraging competition around the quality of venture-building services rather than access to university IP.

Unbundling also enables clearer and potentially lower default university stakes. Where venture-building support is priced separately, fee and licensing options attached to the IP transaction can reflect the university's IP contribution rather than bundling in services that founders may not need or choose to use.

University College London's Portico Ventures provides a useful precedent: spinouts based on non-patentable IP can choose between a founder-led route with lower university equity and a higher-equity route offering more intensive venture support.[45] This demonstrates that access to university IP and venture-building support need not be treated as an indivisible contribution.

Align Commercialisation Incentives With Long-Term Outcomes

The national Spin-out Register provides an important foundation for moving from monitoring activity towards assessing outcomes. Patents filed, licences executed and spinouts formed capture useful activity, but provide limited information about whether commercialisation produces companies capable of progressing.

Research England should progressively link a proportion of HEIF funding to the long-term outcomes of university commercialisation. For spinouts, this could include whether companies subsequently survive, attract follow-on investment and create economic value, measured across a university's portfolio rather than individual companies. Performance should be measured across multi-year cohorts using outcomes recorded in the national Spin-out Register and linked data sets. This should complement measures within universities' direct control, including transaction speed, transparency and adherence to standard terms.

Universities cannot determine whether individual companies ultimately succeed. But excluding downstream outcomes entirely gives TTOs little incentive to consider what happens after a transaction is completed. A

portfolio-based approach would give institutions a financial incentive to optimise for the long-term value of the companies they help create, while reducing the influence of individual successes and failures.

07

Recommendation 4: Build a Connected Pathway From Proof of Concept to First Customer

Company formation is only the beginning of the commercialisation journey. Research-intensive technologies still need to be de-risked, developed and demonstrated against real customer needs before private investment and commercial demand can take over. Government should create a more continuous pathway from proof of concept to first customer, connecting translational funding, technical capabilities, demonstration and early demand.

Expand Proof-of-Concept Funding to £100 million Annually by 2029

Government should substantially expand proof-of-concept funding for researchers seeking to test the technical and commercial viability of promising discoveries.

UKRI's current £40 million programme over five years (£8 million annually) should be treated as the foundation for a larger and more durable funding mechanism. To supplement local funds such as the Impact Acceleration Accounts and the use of HEIF for proof-of-concept projects, government should commit to scaling its central proof-of-concept funding pool to £100 million annually by 2029, closing the estimated funding gap identified by UKRI.[46] This should be accompanied by streamlined application processes and faster decision times, with a target of 60 days from application to funding decision for awards under £150,000.

Proof-of-concept funding should maintain a sufficiently broad initial funnel to test promising opportunities, with support becoming progressively more selective as technical and commercial evidence accumulates. The funding should be coordinated so that university funds, national schemes and

regional capital connect. At least 40 per cent of funding should be directed to institutions outside the “golden triangle”, addressing the current regional concentration of spinout investment.

Government is also strengthening the early-stage private-capital ecosystem into which these opportunities can progress. In 2026, the British Business Bank committed up to £90 million as a cornerstone investor in ten new pre-seed and seed-focused microfunds through Investor Pathways Capital. Stronger proof-of-concept support would complement this investment by helping more research opportunities reach the point at which private capital can invest.

This matters because public R&D can catalyse private-sector success: DSIT-commissioned analysis found that every £100 million invested raises private-sector output by around £40 million within six years, with wider benefits to the UK economy of up to £80 million.[47,48] By strategically targeting this investment at barriers to commercialisation, it might be possible to unlock even greater private investment and economic value.

Make Translational Infrastructure Respond to Company Bottlenecks

Building on the wider catapult reforms proposed in *Hard Tech, Hard Power: Rebuilding Britain’s Industrial Base for the Age of AI*, Innovate UK should ensure that publicly funded translational infrastructure responds systematically to the engineering, prototyping and pilot-manufacturing bottlenecks faced by research-intensive startups and spinouts.

Innovate UK should establish a common mechanism across the Catapult Network for researchers and companies to identify unmet technical and infrastructure needs, with aggregated demand used to inform investment, capacity and capability decisions.

Translational capability should also be connected more closely to industrial demand. Successful product development benefits from repeated interaction with customers. Research has shown how close customer

relationships can contribute to innovation and competitive advantage, while the development of the Dutch lithography-equipment sector illustrates how networks, learning and interaction between technology producers and users can support the emergence of globally competitive capabilities.[49,50] Where new capabilities or facilities are required, their location should therefore reflect proximity to industrial expertise and customers as well as research excellence.

Create a Clearer Pathway to First Customer

Government is a major potential customer in sectors such as defence, health and infrastructure. Public-sector needs can help early-stage companies develop and demonstrate technologies against real-world requirements. But successful demonstration does not itself create a market. Companies and investors also need confidence that technologies meeting those requirements will have a credible route to purchase.

Emerging programmes provide models for this approach. Sovereign AI's £100 million R&D Procurement Scheme connects AI companies with public-sector challenges, while ProQure uses phased R&D contracts to develop and validate quantum-computing systems, with early phases intended to inform future large-scale public procurement.[51,52] However, the UK can go further, drawing on approaches already used in the United States and being proposed in the EU to create stronger pathways to procurement.[53,54,55] Government should build on these initiatives by creating a clearer link between R&D procurement and subsequent purchase. Programmes should identify public-sector problems, fund development against predefined technical milestones and provide a credible route to procurement where technologies successfully meet those requirements.

For selected challenges, government should also use advance market commitments, under which a public buyer commits in advance to purchasing a defined quantity or value of a technology if predetermined performance and cost requirements are met. This does not require government to select a winning company upfront: multiple firms can

compete to meet the same outcome, while gaining confidence that a buyer will exist if they succeed. This is particularly valuable where high development costs, long lead times and uncertain early demand make private investment difficult.[56] This would also allow government to focus on the wider economic value of supporting domestic innovation. Creating more opportunities for innovative UK startups to become government suppliers would provide critical first customers, thus helping attract corporate investment, venture clienting and strategic partnerships, and strengthening the domestic industrial base over the long term.

The reforms proposed earlier in this paper should mean stronger propositions reach this stage in the first place: researchers with greater commercial capability and mobility, experienced founders and operators engaged around promising technologies, and companies formed with clearer IP arrangements and stronger foundations for growth. The next task is to de-risk those propositions, build investor readiness and connect them to the technical capabilities and customers required to reach commercial viability.

08

Conclusion

Britain has the scientific base, capital and entrepreneurial capability to build many more globally significant technology companies. The challenge is to connect these strengths earlier and more consistently.

This paper proposes a reform agenda for the early stages of turning research into companies. Researchers should have stronger routes into commercialisation without having to choose permanently between an academic career and entrepreneurship. Experienced founders and operators should be connected systematically with the next generation of technologies. University spinouts should become something ambitious founders want to build and investors want to finance, supported by transparent terms and incentives focused on long-term company success. And promising technologies should have a clearer pathway through proof of concept, technical development and demonstration to their first customers.

These reforms are necessary to complement the wider scaleup and industrial-strategy agenda. Britain will create more globally competitive scaleups if it creates more companies worth scaling in the first place. The ambition should therefore be to double by 2035 the number of research-intensive companies that raise at least £2 million in cumulative external equity investment within five years of formation. This would shift the focus from startup quantity towards progression: creating more companies capable of attracting capital, reaching markets and ultimately scaling.

Government does not need to build this ecosystem from scratch. Many of the institutions, programmes and capabilities already exist, and important reforms are underway. The opportunity is to use public policy more deliberately: strengthening what works, connecting capabilities that remain fragmented, and concentrating intervention where government can improve the conditions for private enterprise rather than substitute for it.

The returns would compound beyond the companies directly supported. A stronger pathway from discovery to startup can become self-reinforcing: better companies create a stronger ecosystem, and a stronger ecosystem creates better companies.

Britain's scientific strength is already an important national asset. The task for the next decade is to turn more of that strength into companies, industries and economic value created in Britain.

09

Acknowledgements

We would like to extend a special thanks to Morgane Bascle, who supported the initial research of this paper during her summer internship (June-July 2026) at TBI. We are especially grateful for her enthusiasm, thoughtful insights and dedication throughout the internship. We are also grateful to the following individuals who shared their time and expertise on this paper. The views and recommendations expressed in this paper are those of the authors and do not necessarily reflect those of the individuals or organisations acknowledged. Unless explicitly stated, no content should be attributed to individual contributors.

- Hasan Baig, University of East London
- Nathan Benaich, Air Street Capital
- Fabio Bianchi, Oxentia
- Andrew Borland, University of Liverpool
- Thane Campbell, Deep Science Ventures
- John Cassidy, Kindred Capital
- Luke Charbonnier-Bevan, Zinc VC
- Adam Clarke, Russell Group
- Steve Cleverley, Oxentia
- Anne Dobrée, Parkwalk
- Barbara Domayne-Hayman, KQ Labs, Francis Crick Institute
- Sean Fielding, independent
- Rebecca Glenapp, Oxford University Innovation
- Bradley Hardiman, InnovationRCA
- David Herbada, Fikra Ventures
- Aleksandra Herbec, UCLPartners
- Mike Hutson, Oxford Seed Fund

- Riam Kanso, Conception X
- Ronit Kanwar, Renaissance Philanthropy
- Anne Lane, UCL Ventures
- Harriet Lester, Pioneer Group
- Naunehal Matharu, London Institute of Healthcare Engineering
- Jakob Mökander, General Catalyst Institute
- Andrea Taylor, Edinburgh Innovations
- Jake Taylor-King, Relation Therapeutics
- Mann Virdee, The Entrepreneurs Network
- Cam Watson, independent
- Matt Wichrowski, Fly Ventures
- Sybil Wong, Flagship Pioneering
- Julian Alexander Zagalak, Edinburgh Innovations

Endnotes

1 https://content.rolandberger.com/hubfs/07%5Fpresse/Roland%20Berger%5F2040%20technology%20game%20plan.pdf

2 https://www.british-business-bank.co.uk/why-uk-venture-capital

3 https://www.nature.com/nature-index/country-outputs/generate/all/global

4 https://raeng.org.uk/media/yfpdjrqu/01%5Fspotlight%5Freport%5Ffinal%5F2026.pdf

5 https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19203.htm

6 https://www.ciip.group.cam.ac.uk/wp-content/uploads/2026/03/UK-Innovation-Report-2026.pdf

7 https://raeng.org.uk/media/yfpdjrqu/01%5Fspotlight%5Freport%5Ffinal%5F2026.pdf

8 https://www.ukri.org/wp-content/uploads/2026/03/Innovate-UK%5FProspectus%5Fv14%5FDIGITAL%5FAccessible%5FSpreads.pdf

9 https://www.universitiesuk.ac.uk/latest/news/universities-uk-sets-goal-secure-ps100bn

10 An average of 147 UK research-intensive companies per year raised at least £2 million within five years of founding across the 2019–21 cohorts (144 in 2019, 150 in 2020 and 147 in 2021). Doubling this rate would mean about 294 companies per annual cohort reaching this threshold. Methodology: TBI analysis of PitchBook data, extracted on 19 October 2026. Companies were identified using selected research-intensive industries, verticals, emerging spaces and keywords, and we aggregated equity deals within five years of the end of each company's founding year (through Q3 2026 for the 2021 cohort). Undisclosed deal values were treated as zero, making estimates a lower bound. Limitation: This is necessarily a lagging measure: five-year outcomes can currently only be assessed for companies founded up to 2021 and may not reflect more recent trends.

11 https://www.gov.uk/government/news/uk-pension-giants-join-forces-to-unlock-1bn-to-back-britains-innovators

12 https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/european-innovation-act%5Fen

13 https://www.ukri.org/publications/research-england-grant-allocations-to-heps-2026-to-2027/research-england-grant-allocations-basis-2026-to-2027/

14 https://www.british-business-bank.co.uk/about/research-and-publications/small-business-equity-tracker-2025

15 https://www.iwkoeln.de/en/studies/maike-haag-enno-kohlisch-oliver-koppel-international-ranking-by-country-and-individual-university.html

16 https://doi.org/10.1080/03075079.2023.2249023

17 https://www.hepi.ac.uk/reports/phd-students-and-their-careers/

18 https://uoe-edinburgh-innovations.ed.ac.uk/for-staff/innovation-career-pathway

19 https://assets.publishing.service.gov.uk/media/641d90305155a2000c6ad5f8/insights-uk-survey-research-innovation-workforce-2022.pdf

20 Christian Sandström et al., 'Public Policy for Academic Entrepreneurship Initiatives: A Review and Critical Discussion', *The Journal of Technology Transfer* 43, no. 5 (2018): 1232–56, https://link.springer.com/article/10.1007/s10961-016-9536-x

21 https://www.ukri.org/opportunity/doctoral-focal-award-ukri-venture-doctorates-outline-stage/

22 https://www.deepscienceventures.com/venture-science-doctorate

23 https://www.manchester.ac.uk/study/postgraduate-research/funding/phd-by-enterprise/index.htm

24 https://www.conceptionx.org/venture-scientist-100

25 https://ukbaa.org.uk/wp-content/uploads/2026/06/Angel-Report-2025-Trends-Resilience-and-the-Role-of-Angel-Groups-1-3.pdf

26 https://www.ukri.org/wp-content/uploads/2026/01/RE-200126-Ulrichsen-InvestinginSuccess-Report.pdf

27 https://www.independent.co.uk/news/uk/politics/andy-burnham-capital-gains-tax-tony-blair-b3009140.html

28 https://www.spinout.fyi/

29 https://assets.publishing.service.gov.uk/media/6549fcb23ff5770013a88131/independent%5Freview%5Fof%5Funiversity%5Fspin-out%5Fcompanies.pdf

30 https://papers.ssrn.com/sol3/papers.cfm?abstract%5Fid=4416303

31 https://otl.stanford.edu/sites/g/files/sbiybj16766/files/media/file/otlstartupguide.pdf; US university equity stakes are often protected from dilution through early funding rounds, so headline equity percentages are not directly comparable with fully dilutable stakes.

32 https://entrepreneurship.ethz.ch/startups-spinoffs/find-offers-programs-space-grants-for-

entrepreneurs/faq-spinning-out-of-eth.html

33 TenU, *University Spin-out Investment Terms: Guide 2023* (2024)

34 https://www.ukri.org/wp-content/uploads/2026/02/RE-280126-DeepeningUni-InvReport.pdf

35 https://www.ukri.org/wp-content/uploads/2026/02/RE-280126-DeepeningUni-InvReport.pdf

36 https://doi.org/10.1080/03075079.2023.2249023

37 https://www.foundation.org.uk/Journal/2025/Volume-24-Issue-1/Editorial/Unlocking-UK-DeepTech-at-scale

38 Conception X has supported 869 PhD researchers and postdocs from 92 universities since 2018, resulting in 250 companies that have raised more than £276 million.

39 https://assets.publishing.service.gov.uk/media/6549fcb23ff5770013a88131/independent%5Freview%5Fof%5Funiversity%5Fspin-out%5Fcompanies.pdf

40 https://www.british-business bank.co.uk/backing-innovation-led-businesses-2022/

41 https://royalsociety.org/-/media/grants/entrepreneur-in-residence/entrepreneur-in-residence-case-studies.pdf

42 https://www.kcl.ac.uk/news/kings-college-london-increases-founder-equity-stakes-in-university-spinouts

43 https://entrepreneurship.ethz.ch/startups-spinoffs/find-offers-programs-space-grants-for-entrepreneurs/faq-spinning-out-of-eth.html

44 https://otd.harvard.edu/researchers/licensing-startup-formation/harvard-expresspath-licenses/

45 https://www.uclventures.com/your-route-to-market/pathways/create-company

46 https://www.ukri.org/wp-content/uploads/2026/02/RE-280126-DeepeningUni-InvReport.pdf; https://globalventuring.com/university/uk-proof-of-concept-funding/#:~:text=The%20need%20is%20closer%20to,of%20the%20UK%20lagging%20behind.

47 https://assets.publishing.service.gov.uk/media/6759c68b9f669f2e28ce2b6d/returns-to-public-research-and-development.pdf

48 https://www.gov.uk/government/publications/the-value-of-public-rd/the-value-of-public-rd#fn:7

49 https://doi.org/10.1509/jim.11.0159

50 Karel Müller, Steffen Roth, and Milan Žák (eds), ***The Social Dimension of Innovation***, 1st ed (Linde, 2010).

51 https://www.gov.uk/government/news/100-million-competition-to-back-british-ai-companies-to-fix-public-services

52 https://apply-for-innovation-funding.service.gov.uk/competition/2439/overview/06423ffe-b763-4cac-b83b-f80208dfe2f2

53 https://www.diu.mil/latest/advancing-dod-operational-capabilities-with-software-acquisition-reform

54 https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-agenda/innovation-procurement%5Fen

55 https://cdn.prod.website-files.com/69df4e62ff62d7b5568fc58b/6acd3b717284a356fb2434d5%5FProcurement%5FBD%5FFinal%20%282%29.pdf

56 https://www.researchagenda.news/articles/money-alone-wont-fix-the-uks-innovation-problems.html

TONY BLAIR
INSTITUTE FOR
GLOBAL CHANGE

Follow us

facebook.com/instituteglobal

x.com/instituteGC

instagram.com/institutegc

General enquiries

info@institute.global

Copyright © October 2026 by the Tony Blair Institute for Global Change

All rights reserved. Citation, reproduction and or translation of this publication, in whole or in part, for educational or other non-commertial purposes is authorised provided the source is fully acknowledged Tony Blair Institute, trading as Tony Blair Institute for Global Change, is a company limited by guarantee registered in England and Wales (registered company number: 10505963) whose registered office is One Bartholomew Close, London, EC1A 7BL.