UK Research and Innovation

Research England

DEEPENING UNIVERSITY-INVESTOR LINKS

A review by Tony Hickson
for UK Research and Innovation

Tony Hickson Chief Business Officer, Cancer Research UK & Cancer Research Horizons, leads commercialisation of IP, start-up creation, licensing and commercial partnerships at CRUK. Former MD of Imperial Innovations, driving spin-outs and IP licensing for Imperial College London. Served on the boards of the investment company, Touchstone Innovations PLC and on multiple successful spin-outs (e.g. Thiakis, Respivert, Zihipp). Advises on translational innovation & investment at the Francis Crick Institute, Cambridge Enterprise, and Research England's Connecting Capability Fund. Holds DipIoD and Certified Licensing Professional credentials.

CANCER RESEARCH UK

CANCER RESEARCH HORIZONS

Contents

Foreword 7

Executive summary 9

1. Summary of recommendations 12

2. Current landscape 14
Trends in spin-outs 21
The diversity of university-investor engagement 23

3. Access to finance 27
Summary 27
Current financial landscape and gaps 28
Current public funding for spin-outs 31
Shifting gaps and motivations 31
Pre-incorporation and pre-seed stage funding 32
Seed and Series A/B funding 33
Scale up – Series C 37
Global comparisons 39
University-affiliated funds 40
Access to business angel investors 42
Access to international investors 45
Access to specialist investors: Social enterprises 46
Access to specialist investors: Arts and the creative industries 47
Non-dilutive funding: Grants, loans and venture debt as a source of spin-out funding 47
Recommendations 50

4. Behaviours and relationships 53
Summary 53
Academic culture 56
Serial entrepreneurs and exit pressure 56
Entrepreneurship education and exposure 58
Education with exposure and immersion 59
University and investor relationships and interactions 60
Alignment of expectations 60
Timing can be critical 62
The 3 Rs: Right technology, Right investor, Right time 63
Recommendations 64

5. Investor interactions 67
Summary 67
Addressing barriers in spin-out formation for investors and universities 68
Equity stakes – time to move on? 68
IP policies, transparency and trust 69
Intellectual property access, pace and agility 70
Intellectual property and spin-out formation – is a more harmonised approach feasible? 71
Investment readiness 72
Investment readiness support programmes 72
The role of accelerators and venture builders 73
Navigating the accelerator maze 75
Assessing value for money 75
Investors views of accelerators 75
The need for specialist support 75
Evolving models: Venture studios and collision spaces 76
Accelerators and venture builders for SHAPE 76

Entrepreneurs in Residence ... 77
Decision-making and getting earlier high-quality advice from investors ... 77
Investors in Residence (IIRs) ... 77
Getting spin-outs in front of investors ... 78
Investor alignment and matching mechanisms ... 78
Pitching events vs long-term relationship building ... 79
Pooling deal flow ... 79
Measures and incentives ... 79
Recommendations ... 81

6. Capacity, capability and place ... 84
Summary ... 84
Capital alone is not the answer ... 86
Accessing human capital ... 86
Accessing infrastructure and space ... 87
Anchoring in the UK ... 88
The importance of infrastructure to anchoring ... 91
Spin-out mobility and retention: National or regional cluster strategy? ... 91
Cross-regional collaboration and sector specific investment ... 92
Shared Technology Transfer Offices and investors ... 92
Place-based innovation strategies and spin-outs ... 93
Capabilities: Investor deeptech literacy ... 94
Capabilities: Investor and spin-out diversity ... 95
Recommendations ... 96

7. Whole system ... 98
A clear 10-year vision for spin-outs ... 98
Adapting tech transfer and spin-out models ... 99
Broader innovation ecosystem reforms ... 99
Incentives for scaling firms ... 100
Capital markets reform ... 100
Shoring up university finances ... 100
Electricity costs ... 100

Annex A: Definitions of investor types ... 101

Annex B: Understanding investor types ... 103
National development bank direct investments ... 103
Enterprise Investment Scheme (EIS)-backed seed/Venture Capital Trusts ... 103
Angel investor syndicates ... 104
Venture capital ... 104
Specialist venture capital funds ... 105
University-affiliated funds ... 105
Reported downsides and external investor concerns ... 106
Mitigating factors ... 106
Listed investment funds ... 107
Corporate venture capital ... 107
Family office investors ... 108
Charity investors ... 108
Philanthropic donations, local authorities and alumni investment into spin-out funds ... 109

Annex C: Building on the portfolio of previous reviews ... 110

Annex D: List of organisations/persons consulted as part of this review ... 113
Interviews ... 113
Roundtables and wider socialising of emerging findings ... 113
Individuals interviewed ... 114
Organisations and departments consulted ... 119

List of figures

Figure 1 Comparison of UK and selected global nations regarding venture capital exits including acquisitions, buyouts and public listings 15

Figure 2 Simplified illustration of the start-up double valley of death 16

Figure 3 Prevalence of spin-outs in the UK start-up population across sectors 17

Figure 4 Importance of spin-outs in the UK start-up population across sectors 19

Figure 5 Annual production levels of UK university spin-outs 21

Figure 6 Concentration of spin-out production as percent of spin-outs produced by the top university producers of spin-outs 21

Figure 7 A brief summary of what is meant by 'universities working with investors' within this report. This includes a variety of potential interactions, all at different stages of proposition maturity and lifecycle of company. 23

Figure 8 Trends in venture capital and other forms of investment into UK university spin-outs 29

Figure 9 UK public financial institutions (adapted from: The UK's Industrial Strategy) 30

Figure 10 A comparison of venture capital investments into spin-outs with UK headquartered companies at different stages of development across pre-seed/seed, early-stage VC (Series A and B) and later-stage VC (Series C onwards) 31

Figure 11 Research, spin-out activity and venture capital investment into spin-outs in the Golden Triangle vs the rest of the UK 34

Figure 12 Spin-out outcomes and the prevalence of limited growth companies 35

Figure 13 Average size of investment deals (£000s) for spin-outs emerging from higher education providers based in different UK nations and regions, for deals covering the period 2019-2024 37

Figure 14 Cumulative post-seed venture capital investment raised by spin-outs with different combinations of university and UAF involvement in their initial deals 40

Figure 15 Number of deals (excluding grants and accelerators) involving at least one angel investor 42

Figure 16 Headquarter locations of lead investors into UK spin-outs 45

Figure 17 Headquarter locations of all investors into UK spin-outs 45

Figure 18 Trends in grants to UK spin-outs from Innovate UK and other sources 49

Figure 19 Average and distribution of deal size for UK spin-outs (left) compared to the wider population of UK start-ups founded between 2013-2024 (right) for (top) pre-seed/seed stage, (middle) early venture capital stage which is Series A & B, and (bottom) later venture capital stage which is Series C onwards 55

Figure 20 International comparison of how many companies spin-out founders have been involved in founding 57

Figure 21 International comparison of the proportion of spin-out founders that have become investors or have a formal role involved in accelerators/incubators 57

Figure 22 University-investor interactions 61

Figure 23 Diverse philosophies and approaches to spin-out formation 62

Figure 24 Involvement of accelerators and venture builders as investors in UK spin-out deals 73

Figure 25 Average size of investment deals for spin-outs emerging from different disciplines, for deals covering the period 2019-2024 (constant 2024 prices) 76

Figure 26 A comparison of the distributions of research income, spin-out production and equity investment across the UK nations and regions....85

Figure 27 Headquarter location of acquirers of UK university spin-outs (% acquisitions)....89

Figure 28 Location of initial public offering (IPO) of UK university spin-outs (% public listings)....90

Figure 29 Reflecting on the last decade: Driving the UK innovation sector forward through activities (left) and reviews/advice/policy papers (right). The figure starts from 2014....111

List of tables

Table 1 Examples of university spin-outs contributing to the Industrial Strategy 8 priority areas....17

Table 2 The main types of investors into UK university spin-outs....24

Foreword

The UK's strongest differentiating asset is the quality of our research and innovation system which by most metrics is, per capita, best in class and is to a very great extent driven by our extraordinary university system. We have both quality and depth of quality with four of the top ten universities in the world, 5 of the top 30, and 17 of the top 100. Our universities produce more spin-outs and more start-ups than any other country in Europe and are second only to the US in the value generated from university spin-outs. Much more than institutions that teach and undertake research, universities are engines of economic growth both in the regions in which they are each situated and through the collective strengths they share and deliver to the UK economy and in particular the role they play in generating companies that will be increasingly important to our future.

Recognising the enormous potential to deliver more and accelerate the benefits of successful university spin-out companies, I commissioned this review to examine how deepening university-investor links might bring about what I might call a third age for this activity. To move beyond the role given to universities in the last decades to individually deliver in a competitive environment the best return on university generated IP. To a new age whereby we work collectively to convert research into durable national value by optimising across all parties end to end support for founders and companies, create the conditions that might anchor spin-out companies in the UK, and deliver the environment in which they can scale and grow at pace.

University spin-outs drive economic growth across the country, with the majority remaining within the cluster from which they began. They attract investment from across the world, with the majority of lead investors at the latest stages (£100 million and over) headquartered outside the UK. However, this is a highly competitive

global environment and a whole-system approach is needed. More widely the Government has announced a range of further support to enable companies to scale in the UK, including increasing the total financial capacity of the British Business Bank and launching a consultation on how the tax system can support entrepreneurs. The review looks in detail at the environment in which universities, investors, and founders operate to explore how the system can develop further and operate more effectively as a whole.

I welcome this report which reflects what a tremendous asset this ecosystem is and how far we have come. It sets out with great clarity as well as detail the opportunities and tangible actions that can be taken to further unlock its potential and drive economic growth.

The report focuses on solutions and the whole-system approach needed to unlock the opportunity to generate economic and social benefits from university spin-out companies including across capital, culture, systems

and regional considerations. We will take forward these key new insights and actionable recommendations to deepen university-investor links and further unlock the full potential of the research base across the country to drive both national and regional growth.

At UK Research and Innovation, our mission is to advance knowledge, improve lives and drive growth. The Government is putting record investment into research and innovation to make it the engine of national success. UKRI invests around £10 billion each year, and our responsibility is to ensure this investment delivers meaningful outcomes for the UK public. Importantly, this includes enabling companies to start, to scale, and ultimately to stay in the UK.

We invest in the best discovery research even when its impact may be felt years down the line, and often it goes on to have applications we hadn't necessarily expected, including growing companies and providing high quality jobs and economic growth.

The Industrial Strategy sets out a clear direction for the sectors that matter most to our future economy and we are already responding by aligning tightly to these priorities. As this review shows, universities are a vital element in delivering this strategy with 70% of the top 20 UK start-ups based on cumulative venture capital raised in sectors such as semiconductors, advanced manufacturing and life sciences originating as university spin-outs. We have seen recent unicorns such as OrganOx and Oxford Ionics which are already improving lives and livelihoods.

I thank Tony Hickson for the work he has undertaken for the review and the many individuals and organisations that have participated and provided data and evidence during the process.

Now is the time to work together to address capital gaps, accelerate the speed of innovation, address investor readiness, and continue to drive forward culture change. I agree that we have the bedrock from which to build, and now is the time to act.

Professor Dame Jessica Corner *Research England Executive Chair*

Executive summary

It is evident that the UK continues to have a university and investor ecosystem that is thriving. However, the full potential of the UK research base across the country is not being realised, and there is an opportunity to further drive economic growth which we must grasp. Our innovation landscape remains fragmented and needs better access to specialist capital, a healthy entrepreneurial culture and a consistently applied long-term vision to achieve our aims as an economy.

We have cultivated a dynamic ecosystem of accelerators, seed funds, angel investors and venture capital resulting in one of the most intensively incubated economies per capita in the world. There is no shortage of good ideas and the long-held myth that the UK excels at research but struggles with commercialising ideas out of academia is increasingly outdated. Huge progress has been made in areas from spin-out equity harmonisation to the generational shift unfolding in entrepreneurial activity and culture. University and investor relationships are strengthening, with many examples of exemplary practice and long-term partnerships, but context and mutual understanding remain key.

Our focus now should be on strengthening the base of the pipeline and scaling and retaining companies in the UK. Simply reallocating money around the system is not enough: we need to attract more capital into innovative high growth areas.

Universities are engines of growth and to think of them as solely focused on teaching and research does not reflect the reality of their role in the UK's innovation environment. Enabling impact and growth through mechanisms including internal capacity building, collaboration across universities and partnering with external venture builder and investment organisations, is now a core responsibility for universities and they must be appropriately empowered and resourced to fulfil it. They will play a key role in delivering the Industrial Strategy with spin-outs already playing a disproportionately significant role in sectors such

as semiconductors, advanced manufacturing and life sciences. However, their financial health and sustainability is a critical factor in expanding the supply of investment-ready spin-outs.

UK Research and Innovation's (UKRI) full potential to bridge the gap between research and innovation remains unrealised. The multitude of well-intentioned programmes offered by the research councils, Research England and Innovate UK has created a complex and often confusing landscape, making it difficult to navigate the journey from idea to impact. There is a significant opportunity to streamline, unify and scale these efforts, unlocking greater efficiency and accelerating progress.

Whilst the supply of generalist capital is now relatively healthy from inception to scale-up, the limited availability of specialist investment vehicles and investors with expertise in high-tech sectors such as deeptech, life sciences and the creative industries will act as a brake in our ability to scale innovation in line with the country's productivity ambitions. Over the last two decades the UK has shown notable innovation to address its structural disadvantages, with the British Business Bank taking an active role in increasing supply and university-affiliated investment funds (UAFs) gaining traction.

However, there is a limit to the replicability of such UAF models across all regions of the UK and new models may be required.

The current distribution of investment in spin-outs is also highly uneven and fragmented, with London by far the main domicile of venture capitalists. To drive meaningful growth, the country will need to strike a careful balance between regional development and national strategic priorities, an endeavour that will likely necessitate difficult and deliberate decisions such as whether to concentrate or spread resources. We need to ensure that the future cohort of UK unicorns is not dominated solely by software, fintech and service companies, but also includes a healthy mix of deeptech, life science and creative companies in line with the new national strategy. Achieving this will require a carefully calibrated approach to capital allocation, balancing investment between early-stage pipeline development and the scaling of high-growth ventures.

Ultimately, we must move beyond the search for silver bullets and shift decisively into solution mode. This requires whole system thinking comprising a clear and shared vision, capital (at the right stages), cultural change (incentives and education) and consistency (through reinforcing mechanisms that work well). We need to crowd in more capital, provide more spin-out financing at pre-incorporation and pre-seed stages and incentivise scale-up.

This report builds on the work of others and makes recommendations to enhance collaboration between universities and investors in order to improve alignment and accelerate innovation pathways. Some of these reinforce previous recommendations that have still not been actioned, but most reflect the current landscape and the emerging issues.

I extend my sincere thanks to all those who generously contributed their time to inform this review. The enthusiasm and willingness of everyone to engage were striking indicators of the shared commitment to ensuring that the UK innovation ecosystem reaches its full potential.

Finally, I wholeheartedly echo the view of others that UK scientific innovation represents a ‘tightly coiled spring poised for release’. The untapped potential of university spin-outs to attract both domestic and international investment, to scale at pace and to drive future economic growth for the UK is truly significant.

Now is the time to grasp this opportunity.

1. Summary of recommendations

1. Summary of recommendations

Throughout this report I have made recommendations for strengthening the UK spin-out and innovation ecosystem which reflect the findings in this report regarding university-investor links. These can be found at the end of each chapter.

Access to finance

- Significantly boost funding for pre-incorporation and pre-seed funding.
- Improve access to scale-up finance for spin-outs.
- Provide consistency and commitment to key funding programmes. Strengthen, stabilise and continue to invest in mechanisms which are working well.
- Expand specialist deeptech capital access and widen investor networks to address gaps in investor expertise and capital availability across the UK in line with the eight priority sectors identified in the Industrial Strategy.

Behaviours and relationships

- Strengthen the entrepreneurial culture in academia.
- Celebrate and recognise success.
- Improve institutional support and infrastructure.
- Address misalignment between universities and investors.

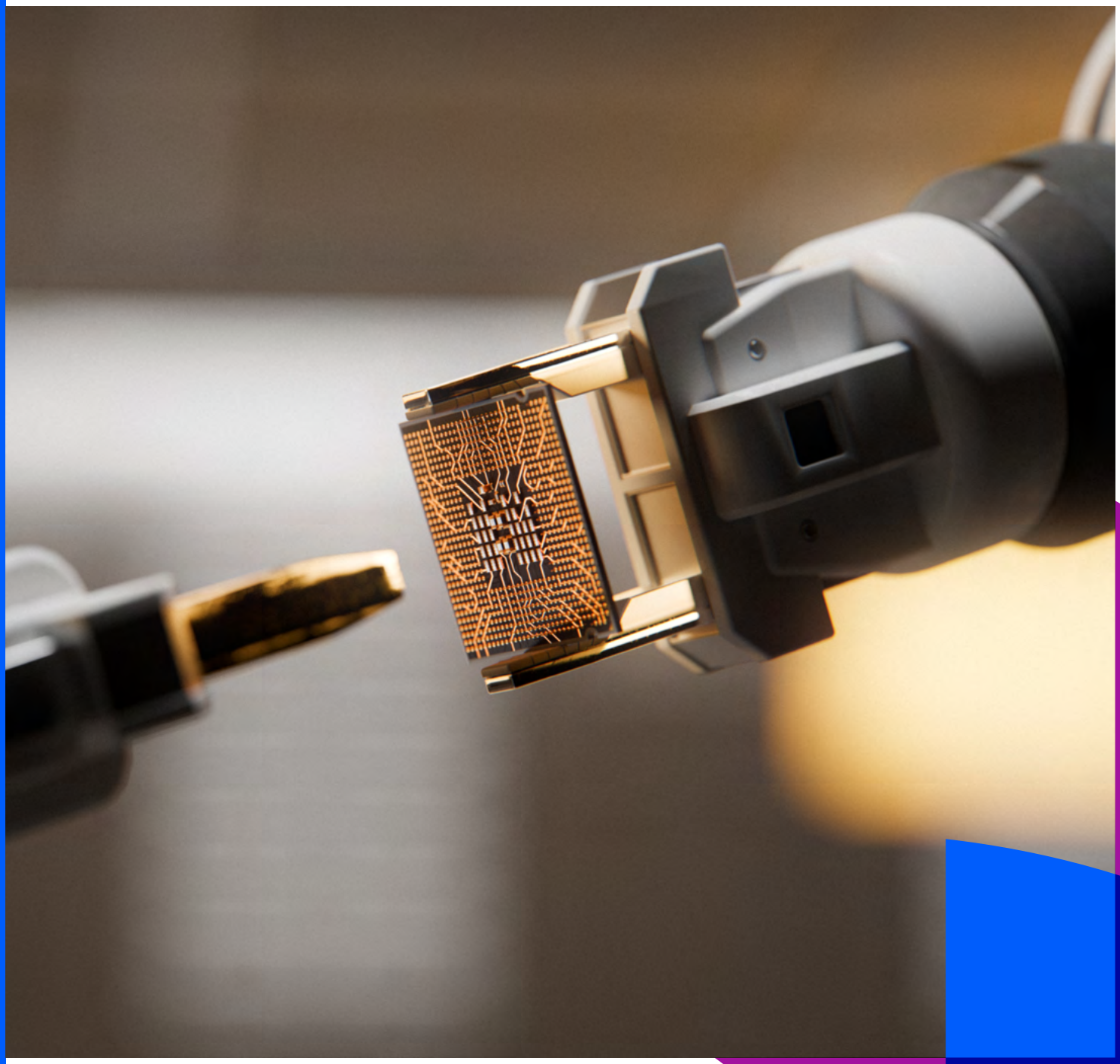
Investor interactions

- Enhance transparency and build trust between universities and investors.
- Accelerate spin-out formation and reduce spinning out too soon.
- Strengthen early investor engagement and interfaces.
- Support founders in selecting the right investors as partners.
- Improve metrics and tracking.

Capacity, capability and place

- Address talent gaps in leadership and expand infrastructure access for spin-outs.
- Enable models for sector sector-based shared technology transfer offices (TTOs).
- Improve investor technical literacy.
- Advance diversity in spin-outs and investment.
- Improve the mobility and anchoring of spin-outs in regions and in the UK.

2. Current landscape



2. Current landscape

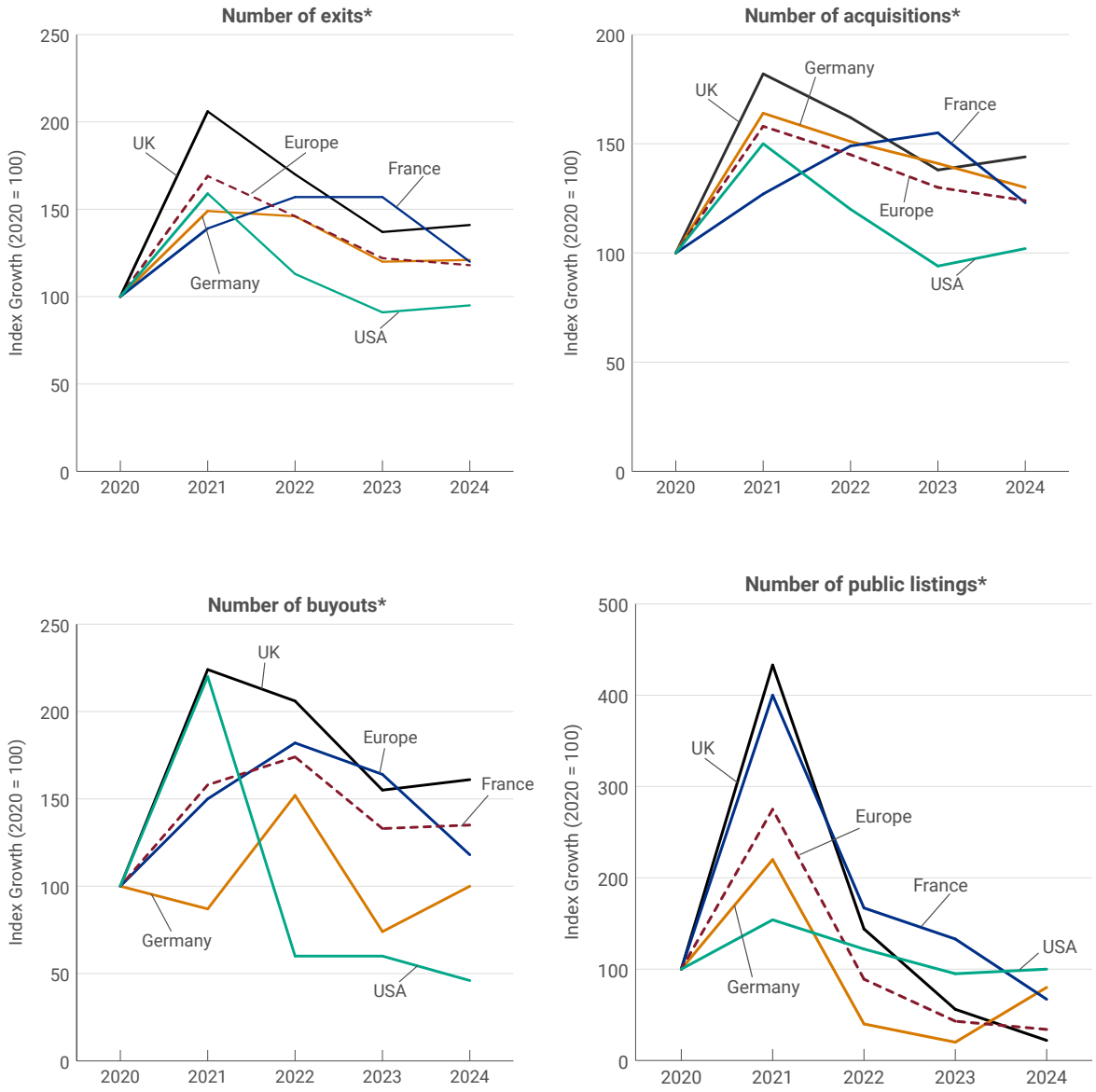
The UK has a leading research and innovation sector with four of the world's top 10 universities and higher publication rates per capita than the US or China. Our world class universities have produced innovations that underpin modern life and range from gene sequencing to ARM processors, optical fibres, genetic fingerprinting, monoclonal antibody drugs and MRI imaging. The country has attracted a dynamic investor landscape representing the leading start-up ecosystem in Europe and which accounted for nearly half of all billion-dollar exits over the past ten years.[1] As of quarter 3 2025, venture capital investment in the UK surpassed the combined total of France and Germany,[2] and the UK was the world's fifth most innovative economy in the Global Innovation Index.[3]

Strong links between universities and investors are central to translating research into real-world impact, driving resilient, inclusive and sustainable economic growth, and improving lives and livelihoods. Healthy partnerships are a vital component of that success.

As a country we stand alongside many of our global peers in performance, ranking second worldwide in the value generated from university spin-outs[4] and first in Europe in spin-out value per country. Additionally, the UK holds the distinction of having the second-highest number of Nobel Prize Laureates globally.[5] After the US, the UK is a leader in the number of venture capital exits (including acquisitions, buy-outs and public listings), and with activity holding up relatively well in recent years, as shown in Figure 1.

1. https://startupcoalition.io/u/2024/12/Startup-Coalition-Report-The-UKs-Modern-Industrial-Strategy-.pdf
2. https://www.disruptionbanking.com/2025/10/14/uk-venture-funding-surges-to-multi-year-high-reinforcing-position-as-europes-innovation-powerhouse/
3. Global Innovation Index, published by the World Intellectual Property Organisation (2024)
4. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
5. https://worldpopulationreview.com/country-rankings/nobel-prizes-by-country

Figure 1 Comparison of UK and selected global nations regarding venture capital exits including acquisitions, buyouts and public listings.[6]



*Index growth, 2020 = 100

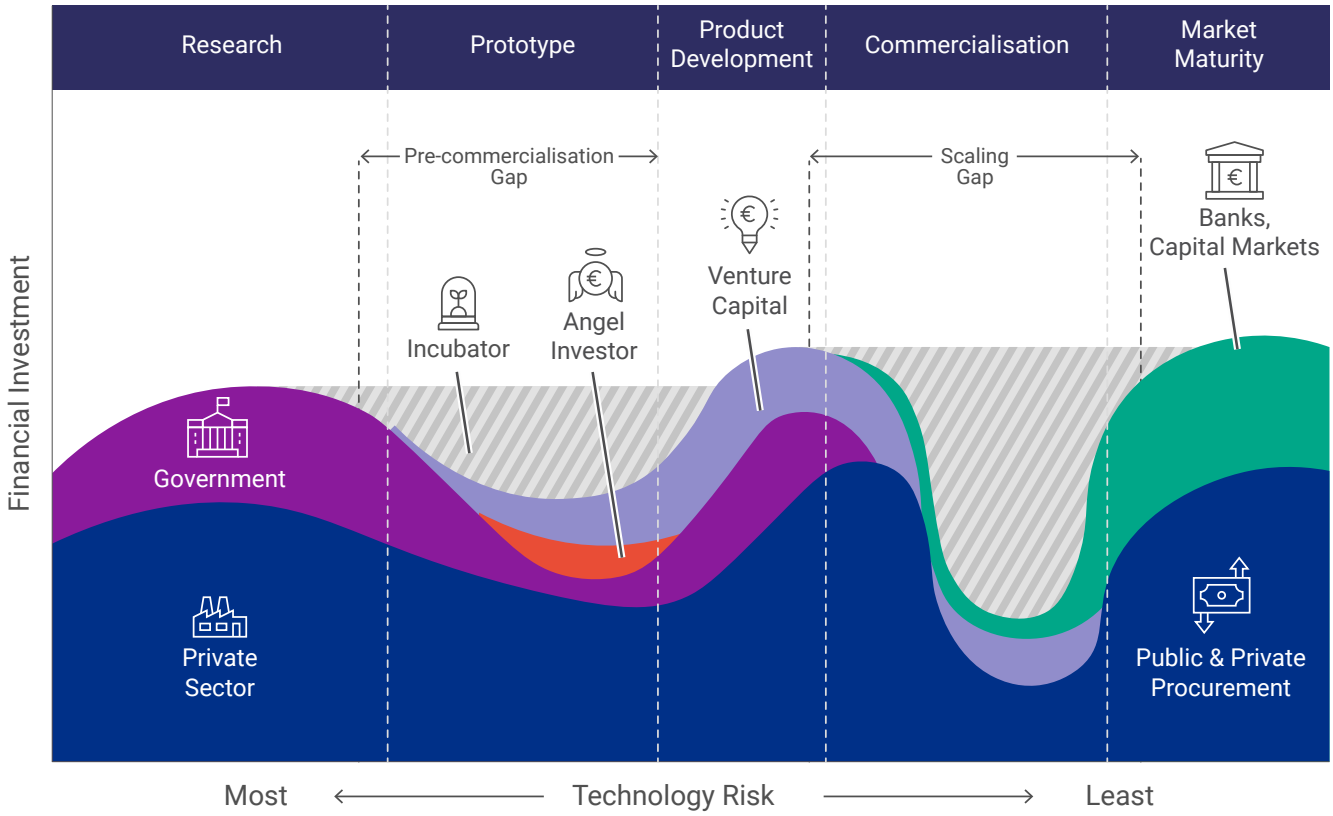
However, we cannot afford to rest on our laurels. To keep our ecosystem globally competitive and to maximise the value of research to our economic growth, we need world-leading knowledge, adequate capital access, the right infrastructure including business support, access to high-quality talent, and effective policy and regulation such as a respected intellectual property (IP) regime and sensible pathways to regulatory approval. Innovation and economic growth is a team sport from end to end, involving individual researchers, institutions, investors, supporting infrastructures as well as agencies, government and philanthropy.

Universities are fundamental to achieving the ambitions laid out in the UK government's Industrial Strategy which has identified eight high-potential sectors including life sciences, advanced manufacturing, clean energy, creative industries, and digital and technologies. The data shows us that university spin-outs are a successful and important part of the UK's research and innovation ecosystem, especially in the priority sectors of life sciences and advanced manufacturing.

6. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

There is no 'one route' for the commercialisation of research but a common journey is shown below in Figure 2. The commercialisation journey out of a university should always be tailored for the particular nature of any technology or idea. Some example commercialisation pathways include consultancy, licensing, innovation-focused partnerships, and spin-outs and start-ups. It is important to view these pathways collectively and not look at one pathway in isolation, especially when examining how universities and investors engage across the innovation lifecycle.

Figure 2 Simplified illustration of the start-up double valley of death.[7]



To unlock future high-quality, scalable ventures that can absorb the anticipated flow of capital from pension funds and other institutional investors, the UK will need to strengthen the foundations of the innovation pipeline. Throughout this review, universities consistently reported that promising ideas are being overlooked, left stranded or spinning out too soon and chasing grants due to insufficient pre-incorporation support. As well as addressing the much publicised 'scale-up gap', there is a pressing need for more funding at the proof-of-concept, proof-of-market and pre-seed stages, areas where the UK lags significantly behind international peers.

This review explores the university-investor relationship with a particular emphasis on the pipeline from early-stage to Series A funding, which is only part of the broader knowledge exchange matrix. As such, the review has focused on spin-outs as a mechanism for translating academic research into commercial ventures and impact. It builds on the considerable progress that has already been made, often on the back of previous reviews into the area as shown in Annex C.

This begs the question of why this area enjoys such frequent review? There are likely several contributing factors. Firstly, spin-outs represent a vital and expanding asset class for the UK, particularly in sectors aligned with Industrial Strategy 8 (IS-8) priorities (Table 1). Secondly, interest in venture creation is rising among students and researchers, with many universities reporting growing demand for support in launching new ventures. Thirdly, spin-outs continue to be a highly charged topic that attracts passionate debate and commentary from a wide range of stakeholders.

7. https://research-and-innovation.ec.europa.eu/document/download/2f76a0df-b09b-47c2-949c-800c30e4c530_en

Table 1 Examples of university spin-outs contributing to the Industrial Strategy 8 priority areas

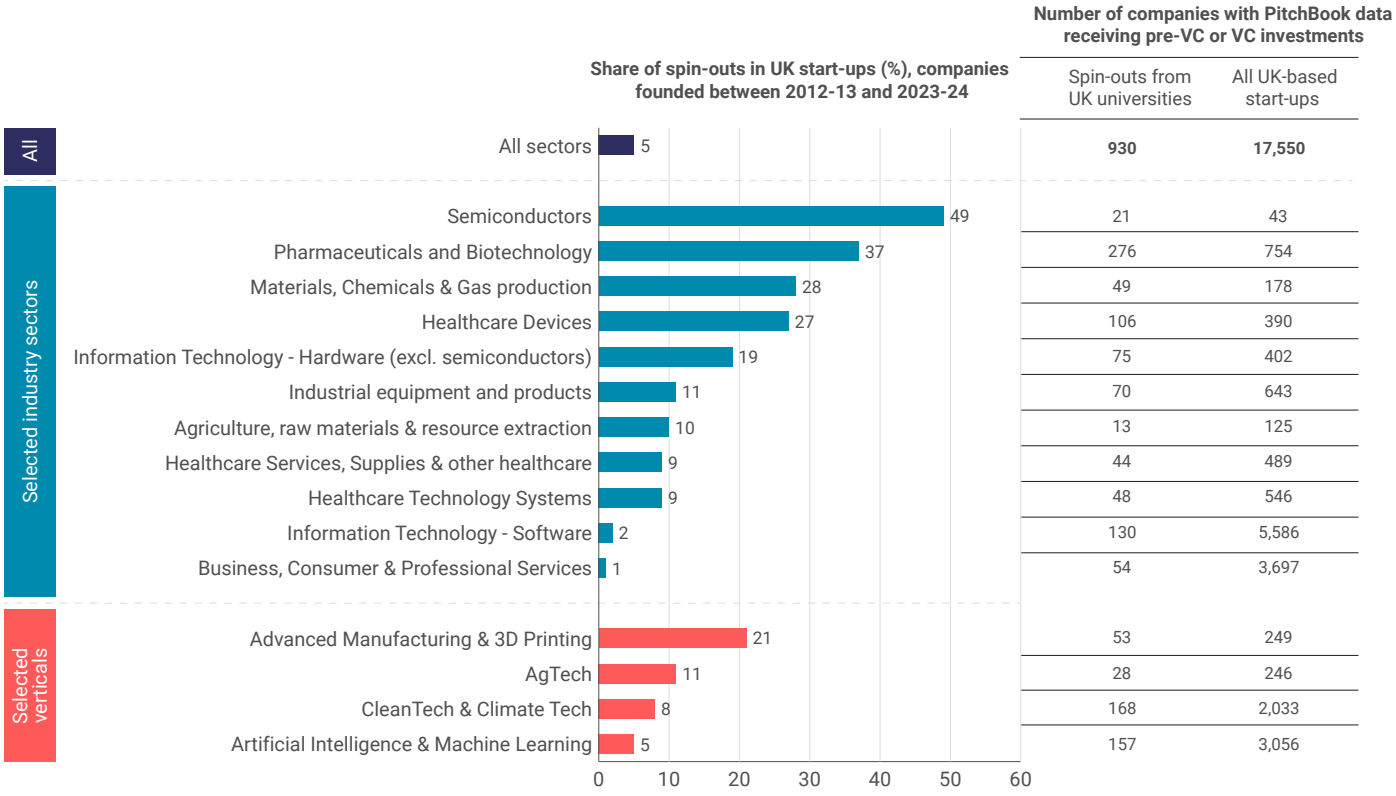
IS-8 priorities	Spin-out
Advanced Manufacturing	iCOMAT from the University of Bristol raised £17.5 million in a Series A funding round in 2024,[8] with a new facility in Gloucester expected to create 150 apprenticeships.[9] The spin-out manufactures advanced composites for carbon fibre tapes.
Clean Energy Industries	Promethean Particles from the University of Nottingham secured an £8 million Series A funding round in 2024 led by Mercia Ventures and Aramco Ventures to expand manufacturing capacity and accelerate the commercialisation of its metal organic framework-based technologies which can be used carbon capture purposes.[10]
Creative Industries	Gravity Sketch from the Royal College of Art raised a $33 million Series A round in 2022.[11] The spin-out is an immersive 3D workspace built for ideation and collaborative problem-solving.
Defence	Quantum Base from the University of Lancaster floated on the London Stock Exchange in April 2025.[12] The spin-out develops anti-counterfeit product security through its Q-ID technology
Digital and Technologies	Phasecraft from University College London and the University of Bristol closed a £25.2m Series B funding round in 2025.[13] Partnered with Google, IBM and Rigetti. The spin-out aims to accelerate the practical applications of quantum computing.
Financial Services	Slingshot Simulations, from the University of Leeds, secured a £3 million round of investment in 2023. The spin-out delivers insights from pioneering data sciences. Using a technique known as digital twinning, the start-up's software builds simulations of real-world objects, assets and systems to provide a wealth of information for decision-makers.
Life Sciences	Gentronix from the University of Manchester was acquired by Scantox Group in 2024 for an undisclosed sum, with Mercia selling its stake upon acquisition for £14.8 million.[14] This spin-out provides predictive toxicology solutions to the global chemical industry.
Professional and Business Services	Relative Insight from Lancaster University secured £5 million growth capital investment in 2022.[15] The spin-out is a text analysis platform used by organisations from sport franchises to financial institutions.

8. https://composites.blogs.bristol.ac.uk/2024/07/11/bristol-spinout-raises-more-than-17-5m-to-deliver-cutting-edge-composites/
9. https://www.bbc.co.uk/news/articles/cn4j73gpmgno
10. https://prometheanparticles.co.uk/promethean-particles-announces-series-a-closure-to-scale-mofs/
11. https://www.taylorwessing.com/en/insights-and-events/news/media-centre/press-releases/2022/04/advising-gravity-sketch-on-its-33m-series-a-funding-round
12. https://www.lancaster.ac.uk/lums/news/first-lancaster-university-spin-out-to-float-on-the-london-stock-exchange
13. https://www.phasecraft.io/news/phasecraft-raises-34-million-from-plural-playground-novo
14. https://www.mercia.co.uk/mercia-ventures-exits-gentronix-in-sale-to-danish-group/
15. https://yfmep.com/portfolio/relative-insight

The UK's universities have an economic impact of £265 billion, including £70 billion generated from local spending in 2021-22,[16] and 47% of research outputs rated as internationally excellent.[17] University spin-outs are not the only part of knowledge exchange, but they are an increasingly important part of it, and a crucial component of the UK's economic growth strategy. They are emerging as a distinct and promising asset class that has a strong potential for future scaling and will likely provide growing appeal to later-stage domestic investors including pension funds. Interestingly, university spin-outs have recently bucked the trend of the wider start-up market, showing growth in venture capital investment at later stages (Series C+) compared to the UK's general landscape, increasing from £1.27billion in 2023 to £2.24 billion in 2024 compared to venture capital (VC) investment more broadly at that stage which grew at a lower rate.[18,19]

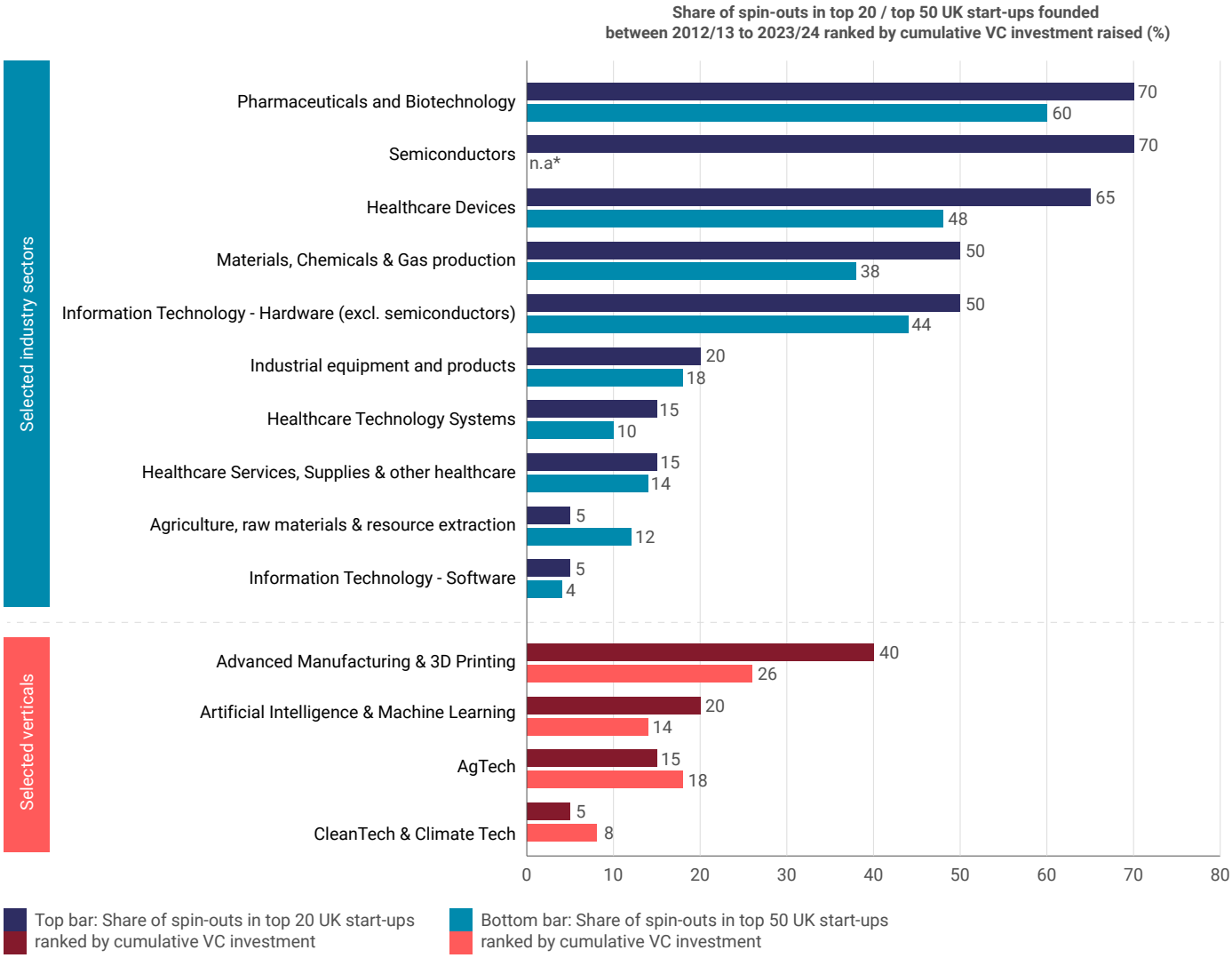
Spin-outs create innovative products and fuel productivity and growth. As a result, they have the potential to be disproportionately influential on both regional and national economic development. For example, UK university spin-outs raised £2.9 billion in venture capital investments, which is c.17% of all venture capital invested in UK-headquartered companies in 2024, noting only 5% of UK start-ups founded during 2013-2024 were university spin-outs. As of 2024, 2,307 unique university spin-outs have been identified of which 214 have been acquired, 67 have listed on a stock exchange, and 62 have raised more than £100 million in venture capital funding. Furthermore, 40-70% of the top 20 UK start-ups based on cumulative venture capital raised in sectors such as semiconductors, advanced manufacturing, 3D printing and life sciences originated as university spin-outs (Figure 3 and Figure 4).[20] Recent unicorn companies emerging include Oxford Ionics[21] and OrganOx[22].

Figure 3 Prevalence of spin-outs in the UK start-up population across sectors.[23]



16. https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/economic-impact-higher-education
17. https://2021.ref.ac.uk/media/1848/ref2021_key_facts.pdf
18. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
19. https://www.beauhurst.com/wp-content/uploads/2025/03/Beauhurst_Royal-Academy-of-Engineering_Spotlight-on-Spinouts-2025.pdf
20. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
21. https://www.oxionics.com/
22. https://www.organox.com/
23. Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England..

Figure 4 Importance of spin-outs in the UK start-up population across sectors.[24]



The landscape for UK research and innovation has undergone significant transformation in recent years. The operating environment has become more unpredictable, shaped by global volatility and instability, making the future trajectory less certain. VCs and private equity funds are struggling to get exits, and money is not being recycled back. Secondary market sales are growing,[25] raising capital has become more challenging and investor confidence has been eroded.[26] Interestingly secondary market sales overtook public market sales as the primary liquidity mechanism for venture capital in the US for a while during 2025. However, sentiment is now improving and is more upbeat for 2026, particularly in the life sciences[27]

At the same time, universities are facing mounting financial pressures for a myriad of reasons including concern over the recently announced levy on income from international students,[28] with Universities UK reporting that 79% of universities surveyed may consider cutbacks to Research & Development in the next three years to manage costs.[29] Despite these challenges, there have been notable improvements in best practices, such as those recommended in the 2023 TenU University Spin-Out Investment Terms (USIT) Guide[30], and the 'Independent review of university spin-out companies'[31]. Additionally, the rise of advanced AI technologies is helping to accelerate research and development efforts.

24. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
25. https://globalventuring.com/corporate/corporate-investors-30bn-secondary-market/
26. https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2025_UCI_Powering_Ideas_to_Innovation_SpinoutsReport_vPublished.pdf
27. US VC secondaries sales leapfrog IPO exit value - PitchBook
28. Budget 2025 (HTML) - GOV.UK
29. https://www.universitiesuk.ac.uk/what-we-do/creating-voice-our-members/media-releases/universities-grip-financial-crisis-what
30. University Spin-Out Investment Terms (USIT) | TenU — TenU
31. Independent review of university spin-out companies - GOV.UK

Markets are inherently cyclical and there is cautious optimism emerging that conditions will improve. This optimism is reinforced by the current era of rapid technological advancement. In just the seven years since the 2019 Rees review 'Independent advice on university investor links'[32], we've seen transformative progress across multiple domains including electric vehicles and battery technologies, robotics, treatments for obesity (for example, glucagon-like peptide-1 drugs), mRNA vaccines, AI transformer models, quantum computing and many more. These breakthroughs not only signal a strong innovation pipeline but also underscore the potential of university spin-outs to play a central role in the UK's future growth strategy.

The UK's innovation landscape is evolving, driven by a generational shift in academic entrepreneurship and an increasingly specialised and expansive venture-building ecosystem. However:

- While our universities continue to produce a rich stream of high-quality ideas and talent, regional disparities in access to investment expertise and capital remain a persistent challenge
- Not enough of the propositions are considered 'investment ready' by investors. Although the UK has improved markedly in its ability to identify and protect ideas emerging from universities, more could be done to improve their conversion rate into companies that investors are willing to invest in.
- There is a lack of the right kinds of investment capital at certain critical stages. This is interrelated with the above. We need both ultra early-stage capital to derisk ideas and get them to the investment-ready stage, and we need later-stage capital to scale them up and keep them in the UK. We need that capital to be distributed appropriately to ensure the best ideas get funded wherever they are found in the UK.
- The current 'risk off' environment means investors are being more selective and funding companies for longer, with venture capital being particularly concentrated around a select group of investors making 'larger bets' in fewer companies.

30. University Spin-Out Investment Terms (USIT) | TenU — TenU

Trends in spin-outs

The UK's sustained long-term investment in knowledge exchange capacity building including through Research England's Higher Education Innovation Funding has helped to build a stable platform for growth, and the announcement that this will be protected in real terms over the current spending review period will further strengthen the ecosystem. During the COVID-19 pandemic there was a clear uptick in university spin-out activity with spin-out production reaching 193 in 2021 and remaining high in 2022, and total VC investment into spin-outs peaking at £3.7 billion in 2021, although reducing to £2.9 billion in 2024 (see Figure 8).[33] This growth has since plateaued, largely due to tighter financial markets and a more cautious investment climate. Given investors are currently adopting a more 'risk-off' approach, making it more difficult for early-stage ventures to secure funding and sustain momentum.

Figure 5 Annual production levels of UK university spin-outs.[34]

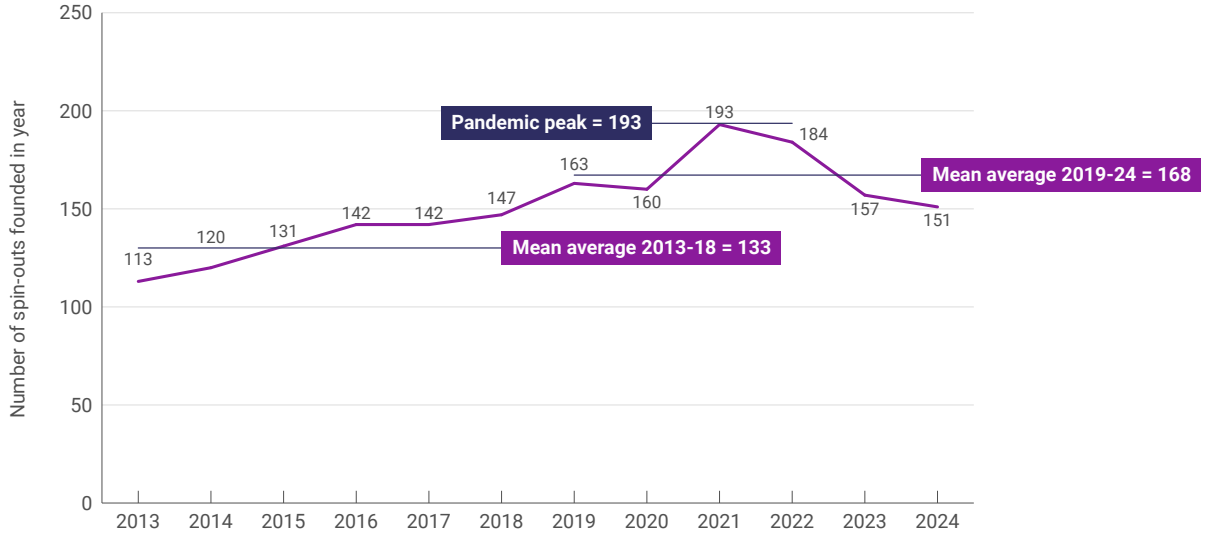
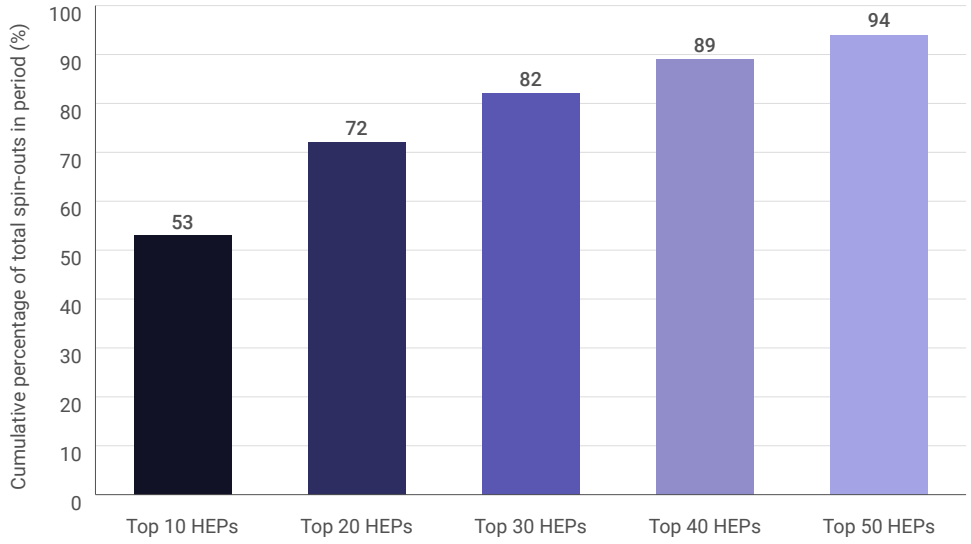


Figure 6 Concentration of spin-out production as percent of spin-outs produced by the top university producers of spin-outs.[35]



Note: HEPs ranked by total numbers of spin-outs founded 2013-2024

34. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
35. Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England..

The majority of universities (57%) now engage in spin-out production, but those universities consume 97.5% of all research income in the UK. However, spin-out activity remains unevenly distributed across the UK and is heavily concentrated in larger and more research-intensive universities where 72% of spin-outs founded between 2013 and 2024 emerged from just 20 universities, of which 39% were from the largest six research universities with research bases of over £300 million (Figures 6). Despite this concentration effect, large research universities outside the traditional spin-out heartlands of the UK's largest research universities are strengthening and now produce spin-outs at comparable levels. This appears to be feeding through to the investment success of their spin-outs.[36]

It is also important to recognise that university spin-outs are distinct from typical start-ups. Unlike general start-ups, the vast majority of university spin-outs emerge from engineering, physical sciences and life science disciplines (92% of spin-outs),[37] with only 10% of ventures linked to the arts, humanities and social sciences.[38] This disciplinary focus likely explains why university-investor engagement has predominantly concentrated on deeptech and life sciences ventures. These spin-outs often grapple with significant technical and market uncertainties, and their journey to commercialisation typically requires considerable time and investment to transform early-stage concepts into scalable, market-ready solutions.

Nonetheless, the creative industries is one of the government's Industrial Strategy 8 sectors and work should be done to better understand and track spin-outs, student start-ups and 'investor mix' in the Social Sciences, Humanities and the Arts for People and the Economy sectors, particularly in subsectors such as 'CreaTech' (for example, gaming, immersive technologies, AI media, haptics and smart fabrics) and social enterprises, many of which need to attract venture investment but do not always follow the same path as companies based in Science, Technology, Engineering, and Mathematics (STEM)-based companies.

There has been large-scale recent investment in creative industries such as the ground-breaking CoSTAR Network, a £75.6 million national research and development network of laboratories in the creative technology space ensuring the UK's screen and performance industries have the research infrastructure as well as the research and innovation skills to compete globally. The network, which is funded by UKRI through the Arts and Humanities Research Council, brings together world leaders in applied technology research including Disguise, Sony Interactive Entertainment, Codebase, Humain, TAIT and Pinewood Studios together with leading research universities Royal Holloway, University of London, Abertay University, University of York, University of Ulster, Goldsmiths and University of Surrey. Another example can be found in the Evolve Programme, which is run by the National Lab based at Pinewood studios[39], providing an accelerator-style six-month intensive access programme which is dedicated to strengthening the business development and commercial innovation capabilities of high-value UK creative technology companies.[40] One company, SAIReco, was shortlisted for the Tech Impact Award at London Tech Week 2025.

It is worth noting that approximately 21% of spin-outs operate without evidence of external investment, instead likely relying on revenue generated from early product or service sales to grow organically in a model commonly referred to as 'bootstrapping' [41], also known as soft start .This model can be particularly prevalent in spin-outs with a service or consulting model. For example, of the 800,000 new companies incorporated every year,[42] only around 1,600 are supported by private capital investors.[43] There are many creative and performing arts microbusinesses which follow the 'bootstrapping' model. These ventures play a valuable role in their regional innovation ecosystems and contribute meaningfully to the UK economy. Whilst they are an important part of the landscape, they are not the primary focus of this review.

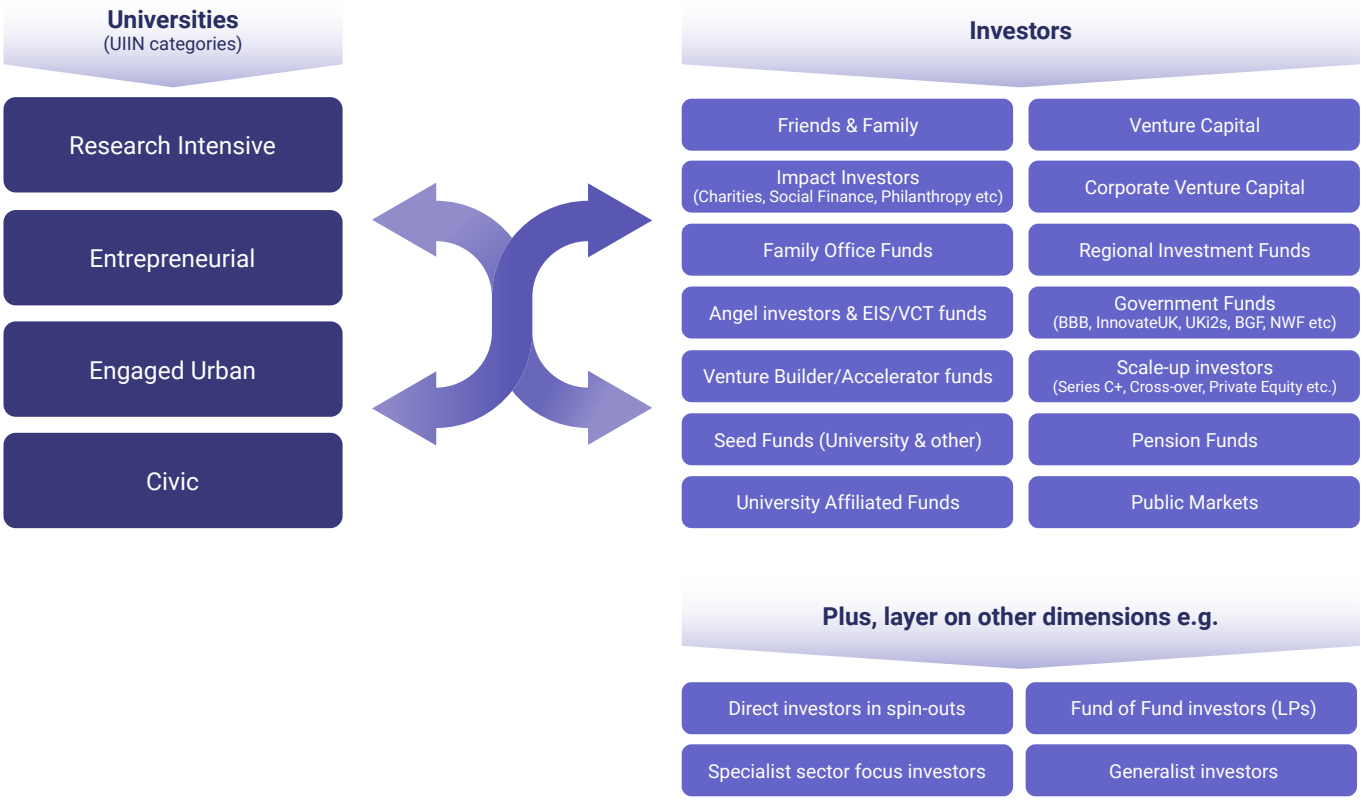
36. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
37. Note that the % do not add up to 100% as a spin-out can have multiple discipline origins across STEM/AHSS.
38. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
39. CoSTAR National Lab – UKRI
40. https://www.costarnetwork.co.uk/calls/evolve-2025
41. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
42. https://www.gov.uk/government/statistics/incorporated-companies-in-the-uk-january-to-march-2025
43. https://www.bvca.co.uk/research/investment-activity.html

The diversity of university-investor engagement

There are a wide variety of universities and investors across the UK, briefly summarised in Figure 7 and explored in more detail in Annex A and Annex B, each with distinct motivations and levels of engagement. This diversity is often overlooked or misunderstood.

Broad generalisations including claims that 'universities are not working well with investors' act to oversimplify the complex and nuanced relationships among these groups. Such statements risk obscuring the real challenges and opportunities that arise from the varied interactions between different types of institutions, ventures and investors.

Figure 7 A brief summary of what is meant by 'universities working with investors' within this report. This includes a variety of potential interactions, all at different stages of proposition maturity and lifecycle of company.[44]



For this review, investors may be categorised as investing in funds and/or directly in spin-outs, and they may range from 'friends and family' microfinance to £100+ million sovereign wealth fund investments. Investments may come from individuals, syndicates, balance sheet vehicles and partnerships. They range from sector specialists offering deep domain expertise, operational experience and strong networks, to generalists investing across sectors often alongside specialists who lead the funding round. Structurally, some operate as regulated closed-end funds, for example, 10-year limited partner and general partner models, while others use subsidiaries or open-ended corporate vehicles that are either private or publicly listed and in which the investors are shareholders. Motivations also vary with some investors focused purely on financial return, while others are interested in impact, and others a blend of the two. The main investors into university spin-outs are shown in Table 2.

44. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Table 2 The main types of investors into UK university spin-outs.[45]

Investor type	Number of deals (excluding grants) involving at least one investor of type							
	2017	2018	2019	2020	2021	2022	2023	2024
Universities	44	59	45	66	78	69	53	52
University-affiliated funds & investment companies	51	68	45	58	60	56	47	50
University-focused funds & investment companies	21	25	18	23	29	33	23	22
Accelerators & venture builders	39	37	59	80	101	91	112	96
Angels (individuals & groups)	30	31	34	42	54	51	40	27
Venture Capital	94	139	138	179	214	200	193	199
Private Equity & Institutional Investors	33	42	44	75	92	85	66	70
Corporate Venture Capital	17	21	23	26	35	33	51	61
Corporations & Companies	32	44	46	54	81	60	80	65
Government (national, regional)	21	17	30	32	38	34	35	32
Government Banks & investment vehicles	6	9	14	24	33	25	33	30
Charities, Foundations & Not-for-Profits	5	2	6	13	11	13	13	17
Family Office	2	4	4	8	7	10	11	6
Other	8	9	4	12	25	32	20	19
Total	**237**	**277**	**279**	**356**	**423**	**398**	**388**	**366**

Sample: all spin-outs reported to the Spin-out Register

There are a variety of approaches and philosophies that underly spin-out formation across both universities and investors. Universities vary in their approach to when they choose to spin out a venture, and investors differ in their preference for when to engage. For instance, some investors prefer 'oven-ready' spin-outs with business plans, customer traction and a CEO already in place, whereas other investors prefer to invest earlier during the build phase where they can help create the technical roadmap, contribute to team formation and leverage their global networks to bring in domain-specific leadership and non-executive directors. Equally, some universities and founders choose to incorporate early, before investor traction has been achieved, whilst others wait until clear investor interest has been signalled.

These differing approaches may create mismatched expectations between universities and investors. Investors seeking 'oven-ready' spin-outs may express frustration when universities launch ventures prematurely, presenting propositions they view as 'uninvestable'. Conversely, 'venture builder' investors may avoid spin-outs that come with rigid structures and CEOs whom they perceive as 'enthusiastic amateurs', believing the effort required to restructure and replace leadership as too high. Universities, including their technology transfer offices (TTOs), face the complex task of navigating and balancing these varied investor expectations and needs.

As such, it is unsurprising that what one investor may conceive as being 'investment ready' may differ substantially from that of another investor, even if they operate at the same stage or in the same sector. Consequently, it is important to qualify that 'investment readiness' requires different types of interventions as each spin-out matures or technologies move up the technology readiness level (TRL) scale.

Venture capital VC investors follow the power law whereby most of the companies they fund will fail and a small number will return enough to pay off the fund and generate a profit (the so called 'fund returners'). When looking at Europe, including the UK, investment data for all start-ups shows that, of VC-backed start-ups, around 5% achieve a 5x return for their investors, 1.5% reach unicorn status, 70% fail and 25% are 'unsung heroes' – small or undisclosed exits or profitable and independent.[46]

45. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
46. https://dealroom.co/guides/europe

Investors need a pipeline of investment-ready propositions to invest in, and this includes knowing that many of the companies they fund will not make a meaningful return. Maturing and delivering the pipeline of investment-ready companies is within the gift of universities to influence. However, to ensure that such ideas are investment ready they need to be better 'exposed' to the right types of specialist investor in a more efficient and systematic way, combined with access to derisking or proof-of-market capital at sufficient scale during the pre-incorporation phase.

The process of securing investment for spin-outs is a dynamic journey which typically involves a series of escalating funding rounds. The composition and type of investors involved changes as the spin-out matures. In addition to this complexity, investor terminology can be inconsistent. For example, what one investor refers to as a 'Seed Round' might be considered a 'Series A Round' by another, particularly when comparing software-focused investors with those in deeptech. This lack of standardisation can create confusion and misalignment when switching between different spin-out types and investor groups.

It is against this complex backdrop that the context of university-investor interactions must be viewed. There is a tendency to assume that 'investors know best', yet the reality is that, given the diversity of spin-out types, the variety of investors and their level of experience can be as variable as that of the universities. It is crucial that investors and universities make an effort to understand each other and that this is not a one-way street where universities need to 'fall in line'. Mutual understanding is required to achieve the best outcomes.

In summary, the UK continues to have a university spin-out and investment ecosystem that is thriving. However, the full potential of the UK research base across the country is not being realised and there are opportunities to enhance collaboration between universities and investors, improve alignment, accelerate innovation pathways and ultimately drive economic growth. By fostering active collaboration among investors, universities, accelerators, regional authorities and developers, supported by clear government commitment, streamlined translational pathways and a rebalanced capital stack addressing the main gaps, the UK can accelerate its high-tech trajectory and achieve the productivity and growth ambitions of the Industrial Strategy.

This report should be read in conjunction with the previous reviews such as by McMillan[47], Dowling[48], Rees[49] and the 'Independent review of university spin-out companies'[50]. It has been compiled following interviews with informed parties from across government, university leadership, founders, investors, businesses, accelerators and TTOs. It attempts to make clear recommendations that reflect the changing nature of the UK's university-investor dynamic, and in an actionable form that are ready to be taken forward. The recommendations reflect the current economic climate but are also intended to be relevant and applicable for the long term.

This report has been compiled drawing on accompanying data analysis commissioned by Research England specifically to support this review authored by Tomas Coates Ulrichsen, entitled 'Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spin-out and investor ecosystem', published alongside this report. Many of the tables and figures in this review have been taken from the data report, which also provides further contextual information, as well as presents additional evidence and analyses, including commenting on robustness of data sources.

47. University Knowledge Exchange (KE) Framework: good practice in technology transfer (McMillan, 2016) - Knowledge Exchange UK
48. https://raeng.org.uk/media/wzqfaq4w/04-09-15-dowling-report-final-updated-contributors.pdf
49. Independent advice on university-investor links: Mike Rees report - National Centre for Universities & Business
50. Independent review of university spin-out companies - GOV.UK

3. Access to finance

3. Access to finance

Summary

The UK is on a promising trajectory, with a more sophisticated investor landscape emerging around its universities over the past two decades. University-affiliated funds are playing an increasingly active role, helping to catalyse innovation within regional clusters. Encouragingly, we are also seeing the rise of a small but growing cohort of serial entrepreneurs, an early but positive indicator of a maturing and resilient innovation ecosystem, consistent with global benchmarks.

Despite this progress, the current investment climate remains challenging, shaped by ongoing economic and geopolitical uncertainties. The notion that there is 'plenty of money available for the best companies' holds true only when capital is effectively matched with quality opportunities. However, fragmented information and persistent asymmetries continue to undermine this alignment.

UK spin-outs continue to face challenges in accessing capital across multiple dimensions:

- Capital gaps at the pre-incorporation (proof of concept, proof of market), pre-seed and scale up stages.
- Regional disparities particularly in access to specialist investors outside major hubs.
- Investor technical literacy and familiarity with spin-outs is still limited in certain domains.
- UK universities face structural disadvantages compared to their US counterparts especially in the availability of substantial endowment funds or alumni donations that can support campus-facing seed investment initiatives.

UK universities consequently need broader access to specialist funds that can invest in and scale early-stage university spin-outs. Yet, the development of such vehicles, for example, balance sheet seed funds or university-affiliated funds, has been slow or stalled for various reasons. These funds offer promising opportunities for future pension fund investment and could form a key component in realising the ambitions of the Mansion House Accord.

Universities play a critical role in preparing this pipeline, but they are only one set of actors, and broader systemic support is required to unlock the spin-out pipeline's full potential. Public financial institutions such as the British Business Bank need to ensure they do more to help build more university-affiliated funds, such as through cornerstone investments, and/or facilitating the creation of more specialist early-stage investors to help lead investments into spin-outs across the UK and increase investor deeptech literacy. The current model of university-affiliated funds has limited replicability and is unlikely to be scalable across all regions. To attract pension fund investment into the higher-risk asset class of spin-out focused funds, new fund structures with a more diverse base of assets and limited partners may be required.

Tackling the challenge of private capital access for spin-outs and scale-ups demands coordinated, system-wide collaboration across universities, investors, funders and policymakers. We must view this as an integrated innovation pipeline, not a siloed 'university' issue. Scaling up without also ensuring a targeted and sufficient supply of early-stage opportunities is ineffective. It's akin to building a powerful engine without supplying a continuous stream of high-quality fuel. University spin-outs are a vital part of this 'fuel mix' and must be supported accordingly. Fortunately, we have a strong foundation to build upon.

Current financial landscape and gaps

The funding for spin-outs since 2019 in the UK is shown in Figure 8. Various data sources suggest that:

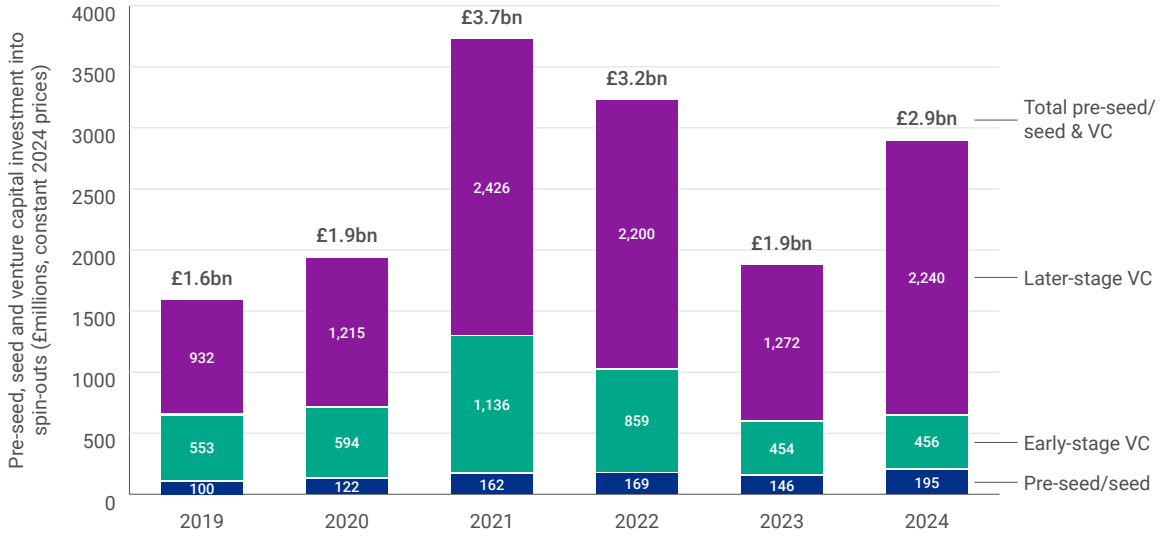
- There is a gap in pre-incorporation funding which includes support for pre-incorporation funding which includes support for translating research via proof-of-concept (PoC) funding carrying out technical derisking work; as well as funding for proof-of-market (PoM) projects which can be particularly important for tech or creative spin-out companies where the risk may be more weighted to establishing market traction rather than technical derisking. There are a variety of sources for such funding including UKRI councils' translational awards and impact acceleration accounts, UKRI PoC, Research England's Higher Education Innovation Funding and Innovate UK's Innovation-to-Commercialisation of University Research, as well as government funded accelerators. It is not possible to accurately define the total pre-incorporation/ translational funding being deployed into spin-outs in the UK, but in financial year 2024-25 UKRI spent at least £400 million supporting knowledge exchange, translation and commercialisation, some of which will have been deployed into university spin-outs[51].

  For the purposes of this review, terms such as PoC, PoM, and other pre-incorporation funding mechanisms should be considered interchangeable.

- Pre-seed/seed stage investments reached £195 million in 2024 which is a 95% increase from £100 million in 2019.[52] It's important to distinguish the unique role of pre-seed funding within the broader innovation landscape, particularly in contrast to PoC and PoM funding, even though the terms may occasionally overlap. Pre-seed funding is typically deployed when there is confidence in preparing a new venture and it can occur either before or after incorporation.
- Early-stage venture capital investment into spin-outs, primarily Series A and Series B, declined to £456 million, which is below that of 2019.
- Later stage venture capital investment, primarily Series C onwards, into spin-outs was £2.24 billion in 2024, which demonstrates a significant step up and a recovery from low levels seen in 2023. 58% of spin-outs have raised more than £500,000 but just 5% have raised more than £100 million. More in depth analysis is needed as to whether this pattern is similar to the general start-up population or not.[53]
- University spin-outs raised 15% of investment into UK start-ups founded during the period 2019-2024. This was up from 9% for spin-outs/start-ups founded in the previous period (2013-2018).[54]
- Parkwalk/Beauhurst data suggests that the average value of equity rounds raised grew from £4.96 million in 2023 to £7.49 million in 2024.[55]

51. Data from UKRI internal sources
52, 53, 54. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.
55. https://parkwalkadvisors.com/wp-content/uploads/2025/10/Parkwalk-Equity-Investment-into-Spinouts-2025_FINAL.pdf

Figure 8 Trends in venture capital and other forms of investment into UK university spin-outs.[56]



	2019	2020	2021	2022	2023	2024
Grants / accelerator*	299	204	162	171	142	43
Other (IPO, M&A, private equity, others)	2,932	1,573	3,672	3,529	12,678	3,169

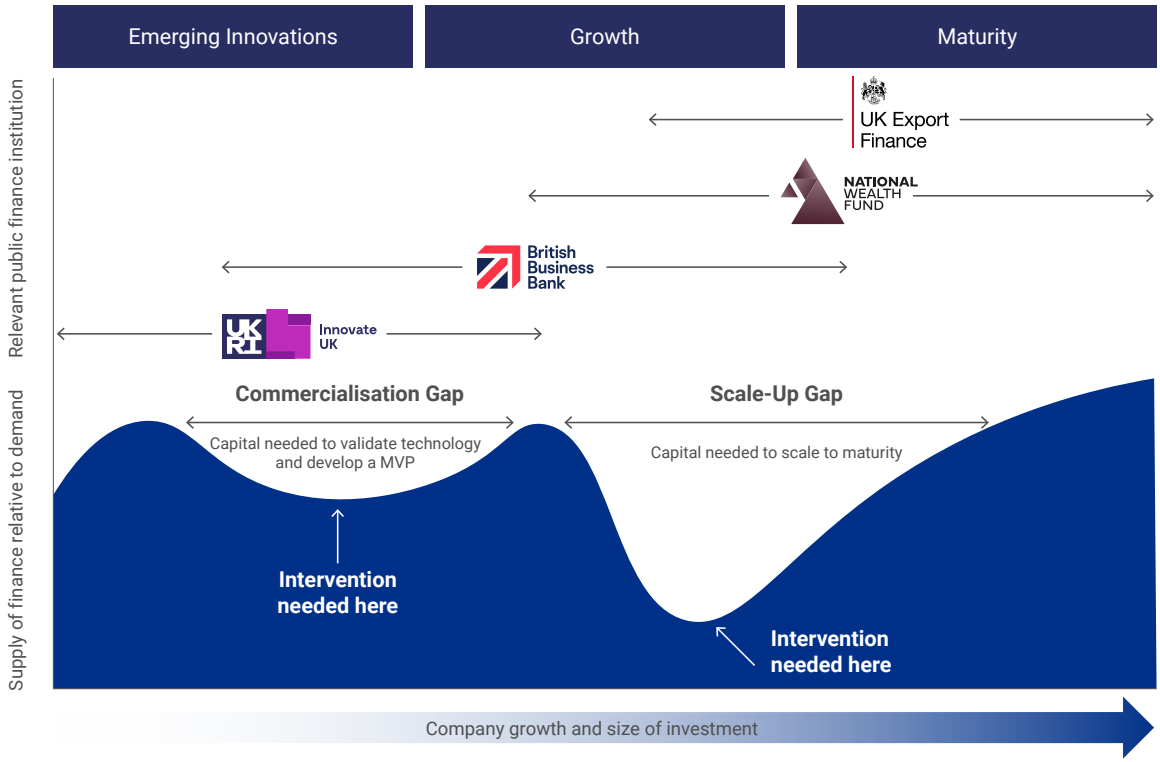
* Note: many grant / accelerator deals identified did not have a deal value

Although views vary on where the gaps in terms of accessing capital are, I spoke with a wide range of stakeholders and the most commonly expressed opinions are detailed below:

- **Pre-incorporation and pre-seed stages.** Universities have identified the pre-incorporation and pre-seed stages as the most underfunded areas in the innovation pipeline, particularly recognising that not every invention will become a spin-out. As a result, there is strong advocacy for prioritising funding at the proof-of-concept and pre-seed stages to help derisk and validate ideas, reducing the likelihood of premature spin-outs formed simply to chase grants or non-dilutive funding.
- **Seed.** There are regional variances in the availability of seed funding. Some universities reported being relatively well served by access to seed funding although more competition and specialism would be appreciated. However, others reported a severe shortage of access to seed investment especially from specialist domain expert seed investors able to lead rounds into deeptech, life science and Social Sciences, Humanities and the Arts for People and the Economy sectors.
- **Scale-up.** There was broad consensus from all parties, including acknowledgement by government, that there is a gap in terms of access to capital for scaling up spin-outs. This is further supported by analysis which shows that private funding available for scale-up investments over £100 million in the US is nine times that of UK ventures, compared to only 3.6 times at the start-up stage.[57]

56. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
57. https://assets.publishing.service.gov.uk/media/61851704e90e07197c0c2cac/Innovation_Finance_Letter.pdf

Figure 9 UK public financial institutions (adapted from: The UK's Industrial Strategy).[58]



Drilling more deeply into the above points, the following observations can be made:

There are regional investment challenges with universities outside the Golden Triangle and major research clusters reporting limited access to specialist seed capital. For example, deeptech spin-out rounds often fail to close without a specialist investor to lead and complete it even when generalist investors are available. Furthermore, those that do raise, often raise too little and endure multiple 'drip feed' seed extension rounds which sap the attention of management, affect valuation and slow progression. A typical example here would be Antiverse, an AI-led antibody services company situated in Cardiff Innovations which has had multiple small grant, accelerator and seed rounds since inception in 2017.[59]

Universities also raised concerns about the concentration of capital among a smaller number of VC funds. This dynamic makes it harder for spin-outs to attract attention and results in lower competition for investment rounds which effectively creates a 'buyers' market' that favours investors. Additionally, many VC funds have become more selective in their deployment of capital, often holding significant reserves of 'dry powder' and choosing to make larger investments in a narrower set of companies.

Some VCs expressed an alternative view. I spoke with a number of the well-capitalised specialist VC funds who believe there is sufficient funding available for the highest potential UK companies and that the market has simply undergone a healthy correction or a so called 'flight to quality.' However, this assumes effective awareness and matching between capital and high-potential companies across the entirety of the UK.

Indeed, some regional university TTOs frequently cited poor awareness and matching between companies and investors due to information asymmetries. Some investors reported universities being 'black boxes' with no way to view the entirety of the UK's IP and spin-out pipeline. At the same time, some larger, more specialist VC funds countered that they are always open to high-quality opportunities from any region and regularly reviewed ideas from across the UK, with a number of interviewees mentioning the example of SV Health's co-funding and investment in Draig Therapeutics, a University of Cardiff spin-out which raised £107 million in June 2025.[60]

58. https://assets.publishing.service.gov.uk/media/68595e56db8e139f95652dc6/industrial_strategy_policy_paper.pdf
59. https://www.antiverse.io/
60. https://www.cardiff.ac.uk/news/view/2920004-$140-million-investment-in-new-therapies-for-neuropsychiatric-disorders

Current public funding for spin-outs

In discussions surrounding government-backed funding, it is often tempting to concentrate on perceived gaps or areas for improvement. However, it is equally important to acknowledge the considerable support that is already in place. While enhancements are always possible, it is worthwhile to pause and reflect on the scale of investment that the UK government currently directs towards emerging ventures.

Organisations such as UKRI and the British Business Bank (BBB) play a pivotal role in enabling start-ups and spin-outs to establish themselves and grow. Insights gathered through my interviews revealed that few individuals possess a comprehensive understanding of the breadth and depth of all of these initiatives. This section seeks to illuminate the mechanisms through which such support is delivered.

There is no shortage of perspectives regarding the deployment of government funding. Some critics contend that the government's involvement may be excessive, potentially crowding out private investment or attempting to select winners, an approach that historical evidence suggests is not a traditional strength of public institutions. Conversely, others argue that funding is frequently channelled to generalist investors who are less inclined to support university spin-outs particularly during the early stages of investment. However, the most significant challenge arises at the scale-up phase where access to sufficient volumes of capital remains notably constrained.

There is a risk that policymakers may assess the aggregate volume of early-stage capital and conclude that the UK performs comparably to the United States and favourably relative to many European nations when examining the earliest stages of investment. However, a more nuanced analysis reveals that, while the overall availability of early-stage venture and angel capital may appear internationally competitive at a national level, its distribution warrants closer scrutiny. BBB data shows that investment in fintech in the UK is double that of the US when GDP-adjusted, yet at the same time, the UK raises 41% less than the US in R&D-intensive sectors and 59% less when the life sciences are singled out.[61] If the UK is to move beyond producing predominantly service-oriented, software-as-a-service and fintech unicorns, and instead scale the next generation of fusion, quantum and engineering biology enterprises, then a more targeted approach to allocating capital towards key sectors and spin-out investment may be required. Specifically, there is a need to cultivate a greater number of specialist investors focused on the very earliest stages of deeptech and life science company commercialisation, and to encourage more unicorns in these sectors.

Finally, in our impatience for growth, there is a tendency to continually 'fiddle' with the system. Sustainable government-backed knowledge exchange funding delivers 10x returns and cutting it would be a false economy. We should be careful not to dismantle or irreparably damage good long-term schemes such as Research England's Higher Education Innovation Funding and Connecting Capability Fund, the Enterprise Investment Scheme and R&D Tax Credits which deliver high returns and/or attract investment. A consistent and long-term approach to such initiatives, which have successfully catalysed collaborations between universities through building critical mass and shared understanding, is vital especially when public funding is limited.

Shifting gaps and motivations

Capital gaps in funding spin-outs are dynamic and tend to shift over time especially at the early stages. The investment landscape is also fluid and effective intervention requires continuous monitoring. For example, investment allocations across different stages show significant year-on-year volatility and the future needs of each capital gap remains uncertain.

It is widely recognised that return-driven investors will not invest in pre-incorporation and pre-seed stages, which is when adequate funding is essential to sustain the base of the ideas pyramid. Without such support, the pyramid's top narrows and good ideas will be left on the shelf. As such, these stages require governments, charities and philanthropy to step-in to bridge the gap with private capital investing at later stages.

Investors, particularly accelerators and seed funds, will often shift their focus over time. Some grow into larger funds and move downstream while others may fail and exit the market entirely. For example, a successful niche early-stage seed investor in a UK region may scale up the size of its fund and move towards more Series A investing which will leave a gap behind them that will likely require government support to incentivise a new early-stage investor to fill it.

61. https://committees.parliament.uk/writtenevidence/131002/pdf/

Furthermore, these accelerator and seed fund models often struggle to deliver strong returns. As such, these investors often aspire to move downstream where larger fund sizes offer better economics such as more fee income to build teams and a greater ability to protect against equity dilution through follow-on investment.

This creates a dynamic ecosystem that demands ongoing oversight and responsive intervention. Therefore, public funding agencies like UKRI and the British Business Bank need to consider their early-stage interventions as requiring a continuous monitoring and infill process, and not a one-off effort to plug a gap.

Pre-incorporation and pre-seed stage funding

The traditional view of technology transfer – securing early-stage invention disclosures, filing intellectual property, adding limited validation data and then pursuing investors or licensees – is becoming increasingly obsolete. Today, both investors and industry expect substantial validation and risk reduction before committing and this responsibility now largely rests with universities which creates an urgent need for expanded proof-of-concept and translational funding. University Technology transfer offices (TTOs) contend that current Proof of Concept (PoC) funding levels are disproportionately small compared to overall research budgets. However, there is significant opposition from nearly everyone I spoke with to diverting UKRI research funds towards this area given the emphasis on maintaining the UK's globally competitive research base.

It is not the availability of ideas that is rate limiting. There are plenty of high-quality ideas from UK academia and the quality and breadth of the pipeline is improving year-on-year across the country. For example, the recent government PoC funding call attracted over 2,700 university applications demonstrating the abundance of ideas. Furthermore, the processes commonly implemented by university TTOs for identifying and capturing these ideas is now agreed to generally be more competent, although some patchiness remains. The challenge lies in efficiently converting the most promising of these ideas into investment-ready ventures by providing founders and spin-outs with timely access to capital and expertise, and clear pathways to market engagement, investor funding or natural attrition.

Oak trees grow from seedlings and the need for increased funding at the pre-incorporation stage has been clearly articulated by others.[62] Notably, the proof-of-concept landscape remains incoherent and fragmented, with limited coordination between UKRI councils and charitable organisations. The UKRI PoC fund represents a valuable addition to this ecosystem and is widely appreciated by the community.[63] However, the fund is small compared to international peers such as Australia's Economic Accelerator (AEA), a AU$1.6 billion programme offering AU$500k 'Ignite' (proof-of-concept) awards and AU$5m 'Innovate' (proof-of-scale) awards in the form of grants to universities.[64] The vision would be to create a single, always-open pathway that could lead seamlessly from pre-incorporation/proof-of-concept funding into pre-seed/seed-stage investment and without jumping between funding agencies and navigating funding windows. Scottish Enterprise provides an example of this (albeit at smaller scale) with its High Growth Spin-out Programme[65]. Greater alignment within UKRI could unlock larger funding allocations, further derisk early-stage projects and enable more effective leveraging of complementary networks and expertise.

It is widely acknowledged that identifying new sources of government funding to plug this hole is particularly challenging at present. In this context, it is worth considering how funding is allocated across the entire capital stack. The proof-of-concept funding gap alone has been estimated at c£100 million annually[66] and the current allocation of £40 million over five years to the UKRI PoC scheme should be seen in context when compared to other major funding commitments such as the £4.5 billion recently pledged to the British Business Bank's (BBB) Industrial Strategy Growth Capital initiative[67]. Given that much of the additional PoC funding is likely to support priorities aligned with the Industrial Strategy, it would not be unreasonable to consider directing a modest portion of this £4.5 billion back towards earlier-stage projects and spin-outs. Doing so would strengthen the innovation pipeline and support the broader ambition to scale transformative technologies. Alternative approaches could include creating tax incentives to attract philanthropists and alumni to donate

62. Proof-of-Concept (POC) Funding To Drive Growth | TenU — TenU
63. https://www.ukri.org/opportunity/proof-of-concept/
64. https://www.aea.gov.au/researcher-applicant/grants
65. https://www.scottish-enterprise.com/how-we-can-help/business-strategy/scale-your-business/high-growth-spinout-programme
66. https://globalventuring.com/university/uk-proof-of-concept-funding/#:~:text=The%20need%20is%20closer%20to,of%20the%20UK%20lagging%20behind.
67. https://www.british-business-bank.co.uk/news-and-events/news/british-business-bank-is-allocated-more-than-p4.5bn-as-part-of-the-governments-backing-your-business-small-business-plan

to universities where such funding was ringfenced for entrepreneurship, proof-of-concept/pre-seed funding or innovation ecosystem support. Such systems have been successfully deployed by other countries. For example, universities in Singapore are encouraged to build sustainable endowments through generous tax breaks for philanthropic donors (250% of tax deduction over five years) as well as matching funding being provided by the government where universities build endowments. Interventions in this space should be considered as part of an integrated university-to-unicorn funding pathway as recommended elsewhere in this review.

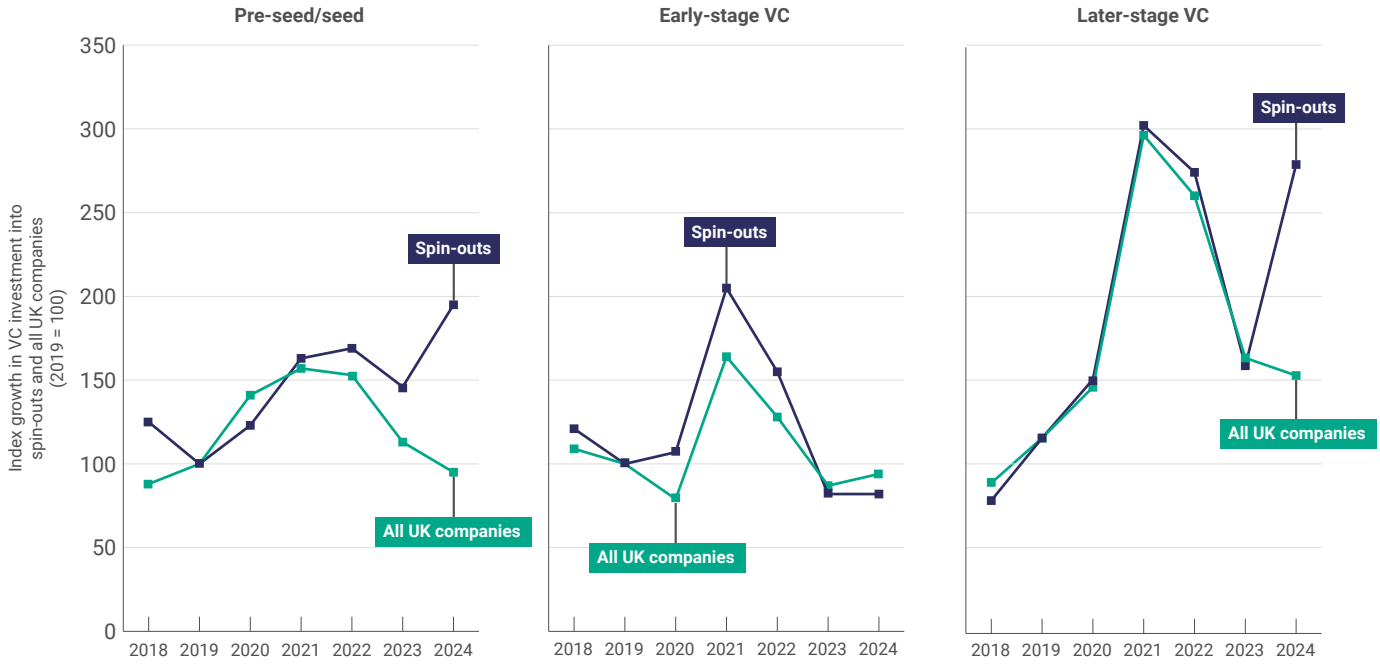
In summary, the supply pipeline of innovation needed to fuel the scale-up funding being supplied by the British Business Bank (BBB) and the trickle back of pension capital expected via Mansion House reforms will likely be inadequate if pre-incorporation funding is not increased and/or Seed Enterprise Investment and Enterprise Investment Schemes are allowed to decline.

Seed and Series A/B funding

The availability of seed funding for spin-outs broadly reflects wider trends observed across UK companies and in aggregate appears relatively robust although regional disparities persist (Figure 10). Data analysis commissioned for this review also indicates a general increase in seed-stage investment for spin-outs which does not appear to be driven by any singular or anomalous events.[68]

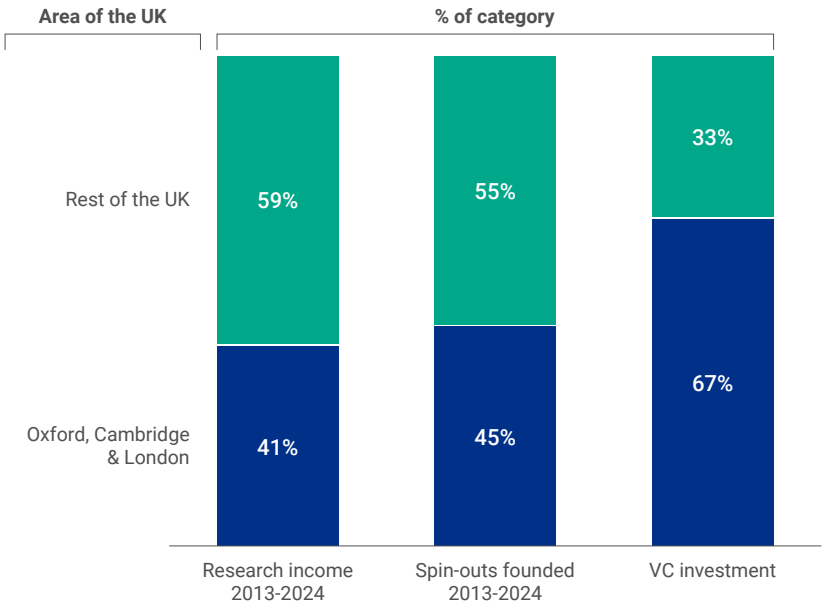
Structural challenges at the seed -stage have been previously documented and the findings from this review reinforce those concerns.[69] While the overall availability of generalist seed and venture capital (VC) in the UK has improved over the past decade, access remains uneven particularly with respect to securing sector-specialist lead investors in certain regions. Of all VC raised by UK university spin-outs founded since 2010, 67% was by those in the Golden Triangle (Figure 11).[70]

Figure 10 A comparison of venture capital VC investments into spin-outs with UK headquartered companies at different stages of development across pre-seed/seed, early-stage VC (Series A and B) and later-stage VC (Series C onwards).[71]



68. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
69. Independent advice on university-investor links: Mike Rees report - National Centre for Universities & Business
70, 71. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Figure 11 Research, spin-out activity and venture capital investment into spin-outs in the Golden Triangle vs the rest of the UK.[72]



Sample: spin-outs founded between 2013 and 2024

It is important that such specialist seed investors are sufficiently capitalised to enable them to focus on funding the highest quality companies more deeply and so that they can reach key milestones. This creates a tension for seed funds. By nature, they are limited in size and must manage portfolio risk, and this often leads to a choice between funding many companies modestly or a few companies well, given that backing fewer companies more deeply increases exposure to failure.

The British Business Bank's (BBB) announced intentions to launch its Investor Pathways Capital initiative in 2026 is a welcome development here.[73] It presents an opportunity to create micro-funds raising £1-10 million with backing from the bank. These funds will generate and train future investors and may also be hyper-specialist in nature, able to invest early at seed stage. The key will be that the bank appropriately adjusts its 'risk bar' to permit investment in such vital early-stage funds that do deeptech, life science, social and creative industry company development. Furthermore, universities should consider whether they can develop spin-out-focused seed funds or co-investment funds that could benefit from this backing.

People have suggested to me that spin-outs from prestigious universities often attract early backing due to academic pedigree which creates the risk of a cycle where visibility, not innovation, drives investment. This would mean that equally promising companies outside these hubs struggle to raise capital thus limiting their ability to hire top talent and progress. In deeptech and life sciences, success should depend on data quality and milestones and not on origin.

Data also shows that more capital deployed and greater quantum per rounds mean faster growth and further investment. Spin-outs backed by Oxford Science Enterprise's (OSE) £850 million pot of funding receive larger round sizes and greater amounts per round and progress to Series A, B and C rounds approximately one year faster at each stage than typical outside of the Golden Triangle.[74] To unlock broader potential, the UK needs more specialist funds willing to take bigger risks, lead larger seed rounds and support innovation across all IS-8 sectors, from quantum and fusion to agritech, environmental biotech and creative industries.

Another contributing factor is the lack of competitive tension among early stage and specialist VC investors. Universities across the UK, including those within and beyond the Golden Triangle, consistently report that many high-potential spin-outs continue to face

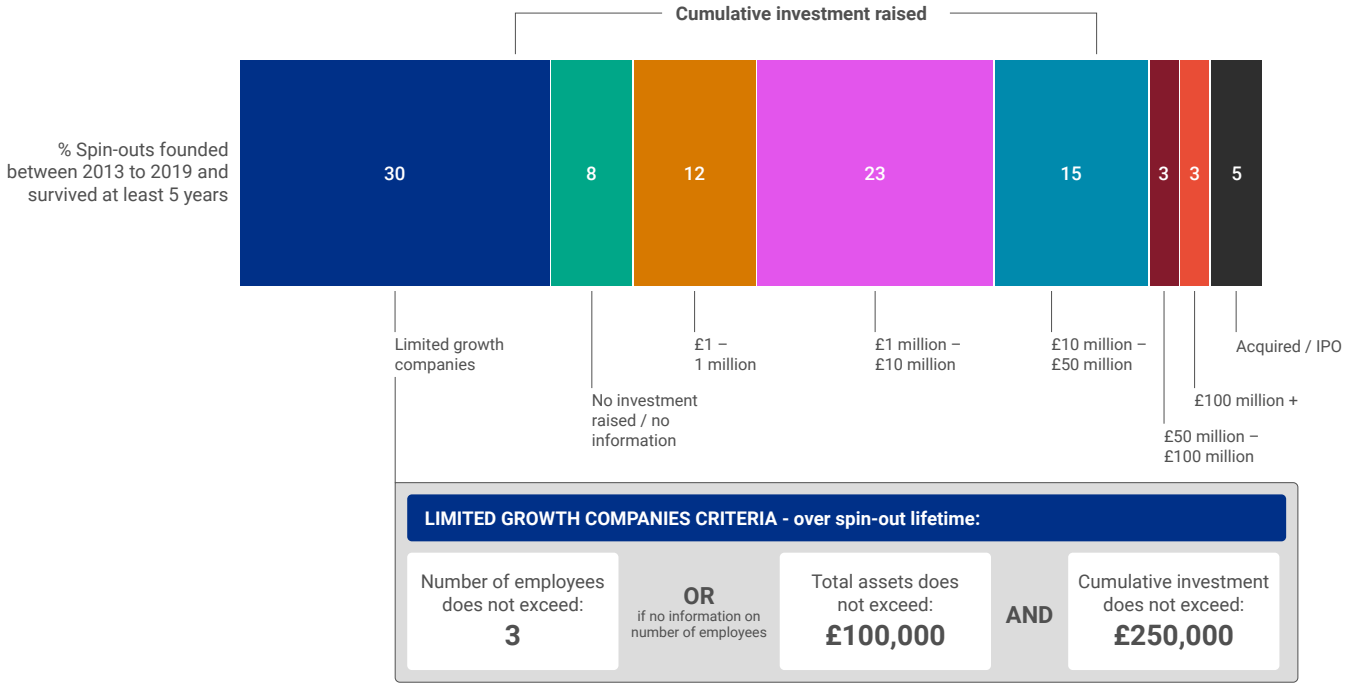
72. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
73. https://www.british-business-bank.co.uk/finance-options/equity-finance/investor-pathways-capital
74. https://thepioneergroup.com/the-henham-report/

challenges in securing adequate seed and Series A funding. This is despite aggregate national figures indicating a relatively healthy level of generalist seed and VC investment.

The importance of spin-outs as consumers of investment capital is growing, and suggests a growing importance of spin-outs in driving entrepreneurial activity in the UK. For instance, a recent report by the Pioneer Group suggests that UK university spin-outs could absorb several billion pounds more in funding annually.[75] Their modelling indicates that, based on extrapolating the performance of OSE model across a wider group of research intensive universities, UK universities could double the number of spin-outs and attract £15 billion in early-stage tech investment over 10 years, leveraging £27 billion in co-investment for a total of £42.6 billion. Smaller investors as well as those currently in the process of raising new funds generally concur that high-quality companies, particularly those based in the regions, are being underserved at the seed and Series A stages.

It is also important to distinguish between different categories of spin-outs facing funding challenges. Some become effectively 'stranded at seed', receiving repeated, 'drip-fed' rounds of funding without progressing to Series A and thereby limiting their growth trajectory. Others may be characterised as low-growth stagnating companies, which are generally unviable but continue to operate due to residual funding, tax incentives or grant support. In contrast, there are high-potential 'unsung hero' ventures that are commercially viable but struggle to attract specialist investors or large rounds, not due to a lack of quality, but because of the limited perceived size of the exit opportunities within their sector meaning investors may not be able to achieve a 'fund returner' type return if they were included in their portfolio.

Figure 12 Spin-out outcomes and the prevalence of limited growth companies.[76]



The key sources of capital at this stage include university seed funds, angel investors, Seed Enterprise Investment Scheme and Enterprise Investment Scheme (S/EIS) funds and specialist seed/Series A funds such as those backed by the BBB. These actors are vital to nurturing early-stage innovation.

However, the economics of seed investing are inherently challenging, where funds under £20-25 million often

75. https://thepioneergroup.com/life-science-start-up-report-2025/
76. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
77. https://globalventuring.com/corporate/overview/small-corporate-venture-capital-funds/

struggle to deliver strong returns due to their limited ability to follow-on and protect equity stakes,[77] and the fact that they generate insufficient fee income to support intensive venture building and due diligence work. However, there is a growing evidence base that some small funds can outperform larger ones.[78]

Subsidies and incentives are essential to attract investors at the very earliest stages of seed and Series A investing. The UK offers globally competitive tax or subsidy schemes like S/EIS, venture capital Trusts and the BBB Enterprise Capital Fund (ECF) programme which helps generate first time fund managers and expand specialist investor capacity. For example, Osney Capital,[79] which is an ECF-backed cyber-focused investor, works closely with national accelerators like CyberASAP and universities across the UK to find new cybersecurity ventures to invest in.

The question is whether the UK is being ambitious enough at this stage especially given that other countries are unashamedly investing at seed and Series A. International models offer useful comparisons:

- Israel's Innovation Authority's $160 million Yozma Fund[80] which gives a 30c in the dollar contribution to investment and waives its relative share of returns either fully or partially.
- Japanese University Fund (JUF)[81] is a state-backed ¥11 trillion endowment model to provide long-term 25-year stability which makes fund-of-fund investments in Japanese university-affiliated funds. Unlike traditional Japanese pension funds, which are focused on meeting minimum return targets, the JUF has a mandate to maximise returns within its risk limits.
- 'America's seed fund' – the Small Business Innovation Research and Small Business Technology Transfer programmes[82] – have mandated for decades that federal agencies allocate a fixed percentage of their budgets (typically 3-4%) to seed and translational funding through a clear tiered structure: Phase I ($50-275k over 6-12 months), Phase II ($750k-$1.8 million over 24 months) and Phase III (commercialisation phase).
- Swiss cantonal banks such as Zürcher Kantonalbank[83] provide a clear 'step-up' pathway investing CHF 180 million across 250+ start-ups: Equity investments of CHF 200k-1 million, plus convertible loans tied to milestones (start-up phase); CHF 800k-1.5 million investments and co-investment alongside private investors (scale-up phase); and access to a dedicated fund and traditional loans once firms achieve positive cash flow (growth phase)[84].

These types of structure enable spin-outs to progress from research to market readiness, sometimes without having to give up equity, by accessing clearly visible future pathways. Examples of national level seed funds in the UK are often small scale compared to the level of demand, for example UKi2s is £115 million and invests £5-10 million per annum, there are some key lessons for the UK from these approaches:

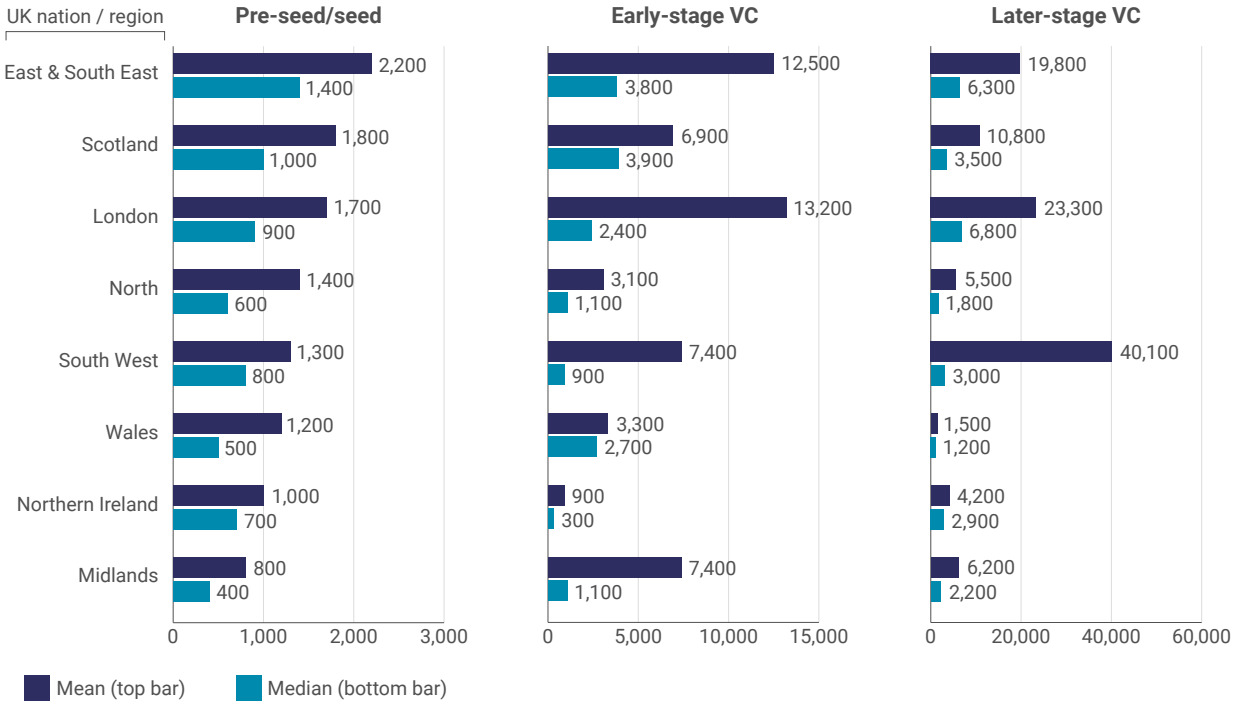
- Consistency: long-term stability builds trust among founders and investors.
- Unified branding: a single brand and a common staged structure across agencies avoids confusion and duplication (whilst still permitting some tailoring per agency).
- Clear progression and 'always open': a staged funding pathway helps founders navigate from idea to scale without jumping between disconnected schemes that may or may not be open at that time.

78. https://carta.com/uk/en/data/vc-fund-size-performance-2024/7/
79. https://www.osneycapital.com
80. Yozma Fund 2.0 - English Innovation Site
81. https://www.top1000funds.com/2025/07/japan-university-fund-expands-active-allocation-guided-by-risk-factors/#
82. About | SBIR
83. https://www.zkb.ch/de/private.html
84. https://www.venturelab.swiss/Trends-in-startup-financing-A-conversation-with-Zuercher-Kantonalbank-executive-Michelle-Tschumi

Scale up – Series C

University spin-outs are important recipients of scale-up capital with later stage venture capital investment (Series C onwards) into these at £2.24 billion and growing significantly between 2019 and 2024 (Figure 8).[85] The gaps of funding at this scaling stage (Series C+) are recognised in the UK government's Industrial Strategy: 'even high-potential start-ups face challenges raising capital to continue their growth journey.' It is worth noting that regional disparities exist at this level too, with the shortage of specialist later stage investors being even more acute (Figure 13). The regional disparity is particularly large outside the Golden Triangle where it appears to my knowledge that few spin-out companies have completed larger Series C+ rounds in recent years.[86]

Figure 13 Average size of investment deals (£000s) for spin-outs emerging from higher education providers based in different UK nations and regions, for deals covering the period 2019-2024.[87]



The relevance of scale-up capital access for universities lies in their potential to collaborate with financial fund experts to facilitate deal flow and help co-design investment vehicles capable of attracting scale-up capital for university spin-outs. This is especially pertinent in the context of university-affiliated funds (UAFs) that are still in the process of trying to close funding rounds. These emerging UAFs expressed to me interest in:

- Accelerating pension reform to speed up access to capital from funds that can invest in UAFs. Without this, spin-out companies risk being drawn to the US and other international locations by investors who place relocation conditions on their funding. Currently, only one Long-Term Asset Fund has been established under the LIFTS programme. British Business Bank (BBB) through its recently established British Growth Partnerships has however been raising institutional capital and is on track to achieve a first close of £200m by the end of the financial year and to deploy capital in 2026.[88,89] Emulating similar models, such as France's Tibi initiative[90], have been suggested by groups like the BioIndustry Association[91], and BBB have announced a new 'Venture Link' initiative to help guide institutional capital to opportunities in venture capital funds.

85, 86, 87. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.
88. https://www.british-business-bank.co.uk/news-and-events/news/british-business-bank-completes-its-ps250m-investment-schroders-capital
89. https://www.british-business-bank.co.uk/finance-options/equity-finance/long-term-investment-technology-and-science
90. Financing the Fourth Industrial Revolution | Direction générale du Trésor
91. https://www.bioindustry.org/static/297679bd-77d1-437b-916e4fd59318e7f8/Influencing-and-shaping-our-sector-BIA-update-Q2-2022.pdf

- Clarifying the BBB investment mandate, particularly regarding projects with strategic or indirect national benefits. There is a question as to whether the current mandate, focused on covering the bank's cost of capital, is appropriate, or if the bank should be allowed to take on greater risk at earlier stages for strategically important projects (as seen in other countries). It is noted that the BBB is very active in the scale-up space and has deployed over £250 million in direct co-investments in UK scale-up companies, of which more than 50% of the 33 technology and life science businesses supported by this funding to date began life as university spin-outs.[92]
- Better defining and publicising the respective roles of the BBB and the National Wealth Fund (NWF). Both entities now have the capacity to make direct and fund-of-fund investments, but it remains unclear how their responsibilities differ when it comes to supporting start-ups that reach scaling stage. The NWF has recently clarified that its minimum ticket size is £25 million and technologies below Technology Readiness Level 7 will not be considered.[93]
- Addressing concerns that pension reforms leading to the creation of mega funds will result in funds that are so large they will actually be more risk-averse and less inclined to invest in smaller, subscale emerging funds – the opposite of what is intended by the Mansion House Accord.

There is broad agreement that the UK must increase pension fund investment in domestic private assets. A significant opportunity lies in the Mansion House Accord, in which 17 pension providers agreed to allocate 5% of their defined contribution (DC) pension funds to private assets including unlisted UK equities. With DC pension assets expected to reach £1 trillion by 2030, this could unlock approximately £50 billion for investment.[94] However, current progress is limited, with signatories to the original Mansion House Compact having allocated just 0.36% of their funds to unlisted equities.

Despite this slow uptake, there are early indications that some pension funds and insurers are beginning to view university commercialisation as a distinct and promising asset class.[95] To accelerate this trend, further incentives may be necessary, along with clearer articulation of the financial benefits of early-stage investments in high-tech start-ups, such as university spin-outs.

University-affiliated funds (UAFs) could play a game-changing and pivotal role as consolidating intermediaries to channel capital into spin-outs. Many UAFs now manage sophisticated and maturing portfolios and are well-positioned to support a new wave of scale-up businesses seeking growth capital. However, the number of UAFs remains limited. To meet pension funds' diversification requirements, a broader base of viable UAFs or similar investment vehicles will likely be needed. This will require greater coordination and innovative approaches, particularly from emerging UAF managers still seeking initial backing.

There are already promising examples of UAFs attracting investment from insurers and financial institutions such as Aviva and Legal and General.[96] While these investors are primarily motivated by financial returns, they may also be drawn to the potential for direct co-investment opportunities as portfolio companies mature and scale.

Local Government Pension Schemes (LGPS) have also begun to invest in UAFs,[97] particularly where trustees have adopted place-based investment strategies alongside their fiduciary responsibilities. The Greater Manchester Pension Fund, for instance, has allocated approximately 0.8% of its portfolio to local equities under such a mandate.[98] However, not all regional or employer-linked pension funds have embraced this approach, despite its potential to attract pension capital into university-linked ventures. Encouraging more LGPS to invest in UAFs that consolidate spin-outs across regions and are embedded in local innovation ecosystems could be a key step forward. It should be recognised that regions lacking mayoral strategic authorities may face additional challenges due to being outside collaboration frameworks and having constrained access to funding as a result.

92. https://www.british-business-bank.co.uk/news-and-events/news/british-business-bank-co-invests-ps250-million-directly-uk-scale-ups
93. https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19206.htm#footnote-319
94. https://www.abi.org.uk/globalassets/files/publications/public/lts/2024/abi-mansion-house-compact.pdf
95. https://blog.landg.com/asset/48f499/globalassets/lgim/_document-library/ra_project-utah-article.pdf
96. We found, fund and build for tomorrow's challenges, today - Oxford Science Enterprises, and Cambridge Innovation Capital - Cambridge Innovation Capital
97. https://www.northern-gritstone.com/
98. https://thepioneergroup.com/the-henham-report-download/

Ultimately, relying on individual actors, whether government bodies, universities, UAFs or investors, risks oversimplifying a complex challenge. Policymakers can play a catalytic role by convening coalitions of aligned stakeholders within defined regional or national innovation ecosystems. With the right structures in place, these coalitions could help channel private capital into higher-risk asset classes with the potential to rapidly scale such as university spin-outs. Other countries are taking action, and it should be noted that the UK is not part of the Scaleup Europe Fund[99], a €5 billion fund backed by the European Investment Bank (EIB), Novo Holdings, various European banks and some pension funds. This fund will focus on providing growth capital into AI, quantum, semiconductor, robotics, energy, space, biotech, medtech, advanced materials and agritech.

Global comparisons

While comparisons are often made, the UK is distinct from both the US and Europe in its approach to spin-out investment. For example, alumni philanthropy in the UK remains relatively underdeveloped compared to the US, and the UK has fewer high-net-worth individuals or serial entrepreneurs actively reinvesting their capital.

Unlike their US counterparts, UK university endowments are relatively small and lack the flexibility to pursue a dual mandate of generating returns while supporting local economic development. Trustees typically prioritise financial performance which leaves little scope for place-based investing. For context, the largest university endowment in the UK (outside of Oxford or Cambridge) is approximately £580 million[100] whereas Stanford University's exceeds $40 billion[101]. In the US, endowments are major investors in venture capital VC) funds, and universities frequently leverage these endowments and alumni donations to support locally focused seed funds aimed at fostering innovation on campus.[102] The trend to set up campus facing US university seed funds has been further exacerbated recently due to growing uncertainty around federal funding.[103] For example, UC Davis has recently set up two new seed funds – a $25 million medicines fund and a $10 million food and health accelerator fund)[104] – which should be compared to much smaller seed funds in the UK such as University of York's VentureOne fund[105], a philanthropy initiative that has supported students and recent graduates with start-up funding of up to £10k. There are larger examples of philanthropic-supported seed funds in the UK such as the £50 million Francis Crick Institute's Research Fund supported by the Chris Banton Foundation[106], though funds of this size are far less common in the UK.

Another source of capital for campus facing university seed funds can be intellectual property (IP) revenue such as from licensing or equity exits. For example, universities such as QMUL[107] and UCL[108] have chosen to redeploy proceeds from licensing and exit revenues back into their balance sheet funds. However, there are only a limited number of UK universities with significant enough volumes of IP revenue to allow this practice to be adopted widely and current pressures on university finances may mean that any such funding may be diverted elsewhere.

In the EU, governments play a more active role in funding the early stages of university-originated technology development though mechanisms such as the European Structural and Investment Funds (ESIF)[109] and the European Innovation Council which offers €6 billion of support to start-ups, research and tech transfer.[110] Public sources of funding take a more proactive role covering pre-incorporation, seed and venture capital phases, as demonstrated by the fact that public money accounted for 37% of all venture capital funds raised in Europe in 2023 compared to just 8.7% in the USA.[111]

The UK also lags behind its European counterparts in terms of domestic limited partners (LPs) actively investing in European venture capital funds. UK companies attracted over a third of all venture capital in Europe during 2023 which is more than any other European country, but UK-based LPs contributed just 11.4% of total LP investments in Europe (including UK) venture capital funds compared to LP contributions from France (37.3%) and southern European regions Spain, Portugal and Greece (20.5%) to the total capital pool.[112]

99. Commission partners with private investors to set up multi-billion Scaleup Europe Fund
100. Finance Director's foreword | Annual Report and Accounts | Finance
101. https://smc.stanford.edu/our-mission/
102. https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19202.htm
103. https://globalventuring.com/corporate/university/us-university-uc-davis-venture-capital-spin-outs/
104. UC Davis Health Ventures Launches Health Venture Studio and 'Investing in the Future of Medicine' Fund to Accelerate Innovation at Aggie Square | UC Davis
105. https://features.york.ac.uk/uoy-venture-one/index.html
106. £50million philanthropic fund to support translational science at the Crick | Crick
107. https://www.qmul.ac.uk/media/news/2017/items/qmul-launches-scheme-to-invest-in-new-university-innovations.html
108. https://ucltf.co.uk/about-us/
109. https://ec.europa.eu/commission/presscorner/detail/en/ip_23_389
110. https://eic.ec.europa.eu/impact_en
111. https://sifted.eu/articles/government-funding-for-vc-rises-amid-tech-sovereignty-push
112. Money map: Where are Europe's most active LPs? - PitchBook

University-affiliated funds

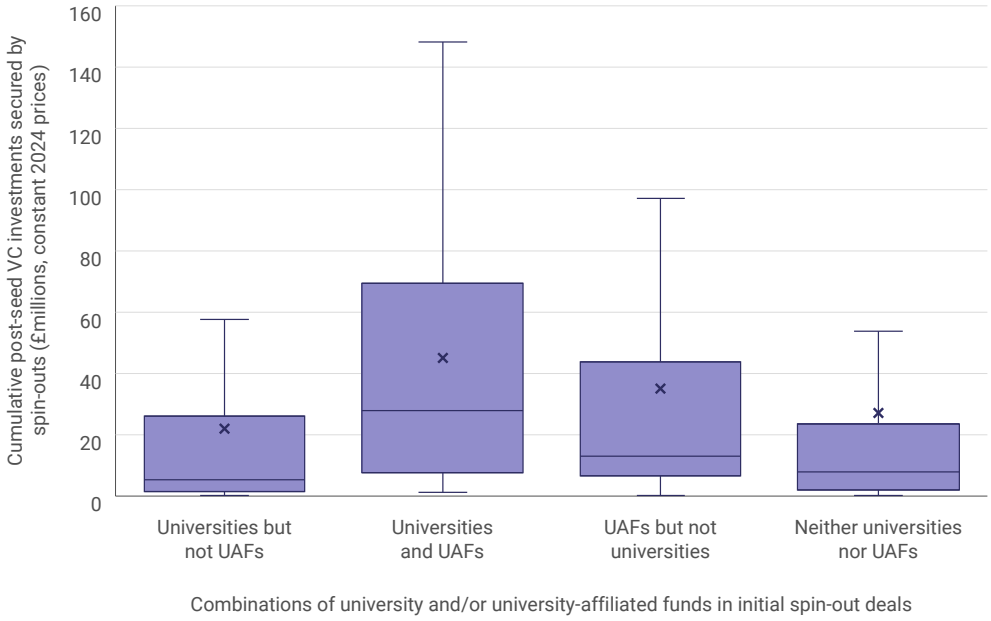
Driven by necessity, the UK has been forging its own path, developing models and mechanisms tailored to its unique environment and funding landscape resulting in a diverse mix of investors on university spin-out capital tables. This diversity reflects a patchwork of UK university initiatives, regional efforts and national interventions aimed at bridging the funding gap.

Over the past two decades, UK universities have entered a period of unprecedented experimentation, establishing their own investment vehicles or partnering with external firms to attract capital for spin-outs and start-ups. Several universities have launched wholly owned in-house seed funds which are financed through various means including reinvested licensing or spin-out exit revenues, university balance sheets, or bond issuance, as well as the philanthropic donations discussed earlier. Fund management may be internal or delegated to subsidiary entities. Furthermore, some universities benefit from student-run investment funds such as the Oxford Seed Fund. While often modest, these funds contribute to the development of investor literacy in the UK by allowing students to develop investment skills whilst still studying. Some investors are in favour of universities progressing ideas further using their seed funds to derisk them ready for investment, whereas other investors express concern that such funds are too insular and do not compare their ideas to the wider market – the echo-chamber effect – and may therefore be prone to making bad investment decisions.

A select group of universities have formed partnerships with third parties to create university-affiliated funds (UAFs). These funds are rarely solely derived from pure financial investors and instead typically draw in capital from a mix of national and regional development banks, insurers, pension funds, state and local authorities, foundations and corporates.

These university-backed funds can play a crucial role in accelerating the creation of spin-out companies, as well as larger later investment (Figure 14).[113] For example, the University of Oxford produced roughly four spin-outs each year before Oxford Science Enterprises was launched in 2015. Following the fund's introduction, that figure grew to around 20 annually. Such funds can play a major role in shaping the national innovation landscape. According to Parkwalk Advisors, the spin-outs its funds have supported, across the UK and beyond, have led to the creation of more than 10,000 jobs.[114]

Figure 14 Cumulative post-seed venture capital investment raised by spin-outs with different combinations of university and UAF involvement in their initial deals.[115]



Sample: Spin-outs founded 2013-19

113. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
114. https://globalventuring.com/report/university-spin-out-funds-a-powerful-new-asset-class-emerges
115. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

The UK is not unique in creating UAFs and they exist across the global landscape. There are over 200 globally, with 85% of Japanese universities, 50% of Australian universities, 40% of European universities (including the UK) and 33% of US universities operating such funds.[116] Examples include University of Dayton Student-Managed Investment Fund which is the largest student-managed fund in the US, the $594 million University of Tokyo Edge Capital Partners which invests internationally (including into Oxford Quantum Circuits), and Australia's Brandon BioCatalyst network which is backed by five superannuation (pension) funds and over 50 medical research organisations and hospitals. It is a multi-university sector-focused UAF designed to address the first 'valley of death' gap and illustrates how coordinated national investment can drive sectoral innovation and attract institutional capital. The fund started as a modest AU$ 30 million fund in 2007 and its latest close (2025) was for AU$ 439 million. It is interesting to note that the superannuation pension funds state that they invested in it to generate both strong returns for their members but also to grow local industry, create jobs and to benefit the health of patients.

The most successful UK universities have built tiered investment ecosystems over time which include a partnership with a UAF as part of the mix. For instance, the University of Cambridge benefits from a translational proof-of-concept fund, an internal seed fund, an alumni-backed Enterprise Investment Scheme co-investment fund managed by Parkwalk Advisors and a strategic partnership with Cambridge Innovation Capital[117] These are complemented by access to one of the UK's most active deeptech and life sciences investment communities.

Many universities across the UK are now collaborating to create 'platform aggregators' that combine deal flow at a regional level. Northern Gritstone is a prime example, having raised £362 million to date and deploying this across its core partner universities of Manchester, Sheffield, Liverpool and Leeds, as well as across the region in general.[118] This trend towards university-affiliated platform aggregators is also observed internationally with multi-university venture funds commonly found in Australia,[119] Sweden,[120] Belgium,[121] and Ireland.[122]

However, the UK's 'UAF movement' appears to have stalled with no new substantive UAFs being raised since 2022. This may be because UAFs funds require considerable patience before they can begin to truly deliver. For example, IP Group is a listed investment company that has built a portfolio of more than 500 companies spanning the UK, Australasia and the US, with total investments surpassing $2.3 billion. Its origins trace back to a 2001 UAF deal with the University of Oxford's chemistry department. It is only now, after a decade of investment, that UAFs such as Cambridge Innovation Capital are beginning to consistently roll off companies that are ready to consume significant scale-up capital.

While the UK's UAF model is innovative, it is not infinitely replicable across all regions of the UK with some limited partner investors suggesting that the future proliferation of new UAF models may only be viable in well-developed clusters with a strong track record of deal flow and exits. Not every area can replicate the success of ecosystems like Boston or Silicon Valley, and it is important to acknowledge that not every UK region can or should aim to replicate models like Oxford Science Enterprises or Northern Gritstone. The hiatus in new UAF launches may simply be a function of market conditions and, as the cycle turns, a new wave of UAFs may emerge. Equally, there may be a need for new models of UAFs which could include partnering with financial experts or local authorities to develop hub-and-spoke structures or blended capital approaches, for example blending university property assets together with spin-outs, or sector-specific national pan-university models.

An example of this is Inspire, the new Northeast Universities Spin Out Fund[123] which will invest in spin-out companies associated with Durham, Newcastle, Northumbria, Sunderland and Teesside Universities over a five-year programme. This collaborative intervention has been developed through the Northern Accelerator programme working with North East Combined Authority (NECA). Investment into the fund will bring together NECA, coinvesting £10 million alongside £12.5 million from the five universities totalling a £22.5 million seed fund. The funding will be invested through a Limited

116. https://globalventuring.com/report/university-spin-out-funds-a-powerful-new-asset-class-emerges
117. https://www.enterprise.cam.ac.uk/wp-content/uploads/2025/03/Cambridge-Enterprise-Annual-Review-2023-24.pdf
118. https://www.northern-gritstone.com/
119. https://brandonbiocatalyst.com/
120. https://www.turbinecapital.vc/
121. https://www.qbic.be/
122. https://www.abven.com/university-bridge-fund/
123. https://www.northeastfund.org/funds/spinout-inspire-fund/

Liability Partnership, supported by procured fund management, and will invest in pre-seed, seed and Series A stages with proportions ringfenced for these elements.

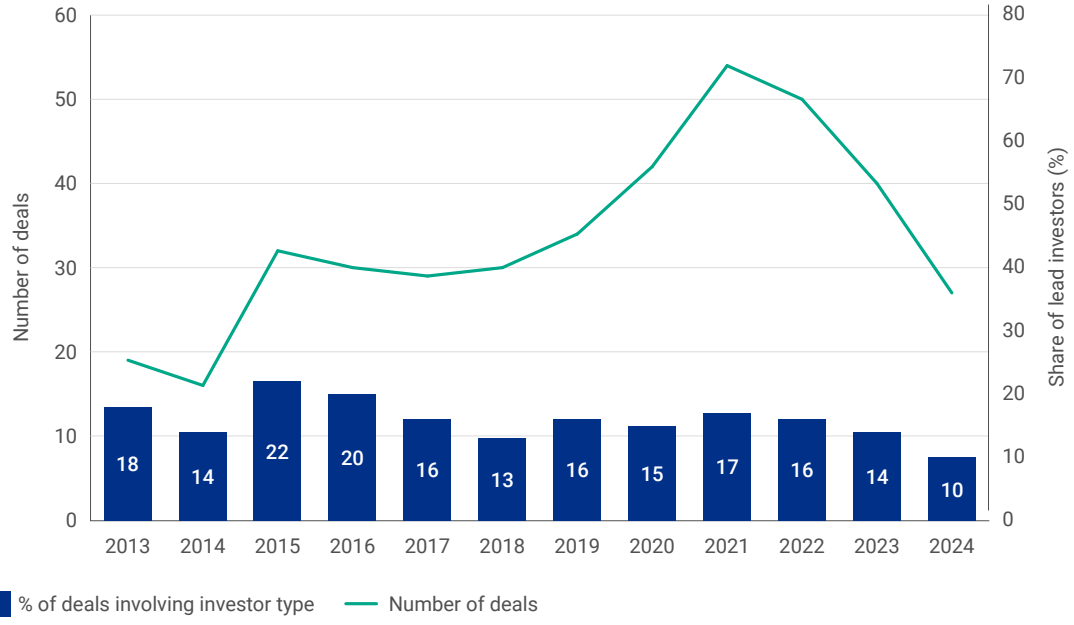
The potential for an evergreen balance sheet model to attract institutional capital into riskier asset classes can be seen with the British Growth Fund (BGF), which was established by Barclays, HSBC, Lloyds Bank, the Royal Bank of Scotland and Standard Chartered. It recently announced a £3 billion commitment to support UK businesses over the next five years, as part of which it proposes to dedicate £500 million of this investment to early-stage start-ups in deeptech and life sciences.[124]

Access to business angel investors

Business angel investors, also referred to as angel investors, are individuals who invest personal capital into early-stage companies typically acquiring a minority equity stake. Many are seasoned entrepreneurs or professionals with significant business experience.[125] The UK is home to over 18,000 angel investors, making it the largest angel investment market in Europe and second only to the US globally in terms of maturity and sophistication.[126] While exact figures are hard to pinpoint, it is estimated that annual angel investment in early-stage UK businesses is estimated at £1.5 billion annually.[127]

A significant number (60%) of UK scale-ups received angel investment as a key driver of their growth journey.[128] When looking at angel investing in university spin-outs in 2022 to 2024, angels were identified in around 10-20% of all deals involving investors (Figure 15).[129] Looking at different deal stages, angels were involved in 21% of deals at pre-seed/seed, 11% at early-stage venture capital investment (Series A and B) and 11% at later stage venture capital investment (Series C).[130] When they engage, they often do so in a 'hands-on' manner, with many working closely with the founders over several years. Their investment in spin-outs tends to reflect broader market trends, where they align with shifts in investor sentiment and sector performance.

Figure 15 Number of deals (excluding grants and accelerators) involving at least one angel investor.[131]



124. https://www.cityam.com/bgfs-3bn-pledge-offers-hope-amid-concerns-over-uk-competitiveness/
125. https://www.british-business-bank.co.uk/business-guidance/guidance-articles/finance/angel-investment
126. https://committees.parliament.uk/writtenevidence/109214/pdf/
127. https://committees.parliament.uk/writtenevidence/109214/pdf/
128. Scale-Up Institute Annual review on the State of UK Scale-ups 2021
129, 130, 131. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

Angel investors are primarily motivated by financial returns, but they often appear to also be less sensitive to failure due to the availability of generous tax reliefs. Notably, 87% of angel investors make use of the Seed Enterprise Investment and Enterprise Investment Schemes (S/EIS) to mitigate the risks associated with early-stage investments, particularly in spin-outs and start-ups. 86% of angels report that these schemes increase their appetite for risk[132].

This dynamic can make angels seem more flexible on valuations compared to lead non-angel investors which may make working with angels seem initially appealing to spin-out founders. However, in a system heavily reliant on tax incentives, there is a risk that angel investing could inadvertently sustain underperforming ventures with limited growth potential (i.e. holding on for an exit). Conversely, without these incentives, angels may be less inclined to support high-risk, early-stage opportunities such as university spin-outs.

Angels may invest individually or through clubs and syndicates which allows for greater pooling of resources and expertise. Some universities report 'super angels' with deep pockets as being consistent investors in their deeptech spin-outs. Such super angels may invest directly in their own name or via their family office fund. Others report seeing more syndicated investments and the adoption of more rigorous, venture capital style practices including deeper due diligence and larger funding rounds. BBB backed co-investment vehicles like the Angel CoFund have further strengthened this syndication capacity in certain regions.[133] However, the Angel CoFund can only be approached by angels and not investee companies or technology transfer offices, so the take up for university spin-outs has not been high. Allowing other parties to approach the Angel CoFund on behalf of a group of angel investors that have coalesced around a spin-out may help further unlock this crucial funding.

A number of angel syndicates have evolved into full scale venture funds, for example PAR Equity which is now part of the PXN Group began as an angel syndicate before transitioning into a venture investment firm. Angels often co-invest with venture capital funds, venture capital trusts, BBB funds, crowdfunding platforms, Innovate UK grants and regional programmes. For example, we are beginning to see angel networks like Minerva working more closely with regional university-affiliated investment companies like Midlands Mindforge.

Angels often invest locally, and many are part time or casual investors. Nonetheless, 25% of deals occur outside their originating region or internationally.[134] The most active UK angel networks are based in London and Edinburgh, with concentrations also found in Glasgow, Cambridge, Oxford and Bristol.[135] Such angels play a vital role in deeptech investment, and there is a growing need for more specialist lead angels across the UK, such as those found in groups like Cambridge Angels[136] and the Archangels network.[137] As the ecosystem matures, successful entrepreneurs who have exited their spin-out often reinvest as angels in their regions. For example, the chip designer Arm Holdings is often credited with being a 'founder factory' for the Cambridge region, as many former employees went on to start or fund their own and other companies.[138]

However, many angels still lack domain expertise, especially outside of major UK hubs. There is a very important distinct subset of specialist 'lead angels' who will lead and manage investment deals as well as investing 'smart money.' these experienced lead angels offer mentorship, strategic guidance and access to valuable networks which significantly enhance the prospects of the spin-outs they support. There is a need to better link specialist lead angels harbouring deep domain expertise with other angel groups and spin-outs around the UK. Some national efforts to coordinate communities including angels in a discrete sector area are already underway such as the ASPECT community network in the Social Sciences, Humanities and the Arts for People and the Economy sector,[139] and some university groupings like SETsquared previously teamed up with the UK Business Angels Association to deliver Innovate UK funded initiatives such as the Regional Angel Investment Accelerator (RAIA).[140] These acted to support angel investors in backing spin-outs by enabling early-stage, deep-tech start-ups to unlock private and Innovate UK grant funding concurrently. The RAIA went through two rounds and has now been retired.

132. https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2022-11/Business-Angel-Reportweb.pdf
133. Angel CoFund programme - British Business Bank
134. https://committees.parliament.uk/writtenevidence/64297/html/
135. https://www.beauhurst.com/blog/top-angel-networks-uk/
136. Welcome to the Cambridge Angels
137. https://archangelsonline.com/
138. https://sifted.eu/articles/pxn-plots-golden-triangle-for-north-of-uk
139. https://aspect.ac.uk
140. https://www.setsquared.co.uk/setsquareds-angel-investment-network-backs-new-cohort-of-companies/

Angel groups also reported that their members have been preserving their capital to support existing portfolio companies in volatile times and are having to wait much longer to recycle their capital due to the issues with exits.

Given the importance of angel investment in spin-outs, the government's commitment to long-term support for schemes such as S/EIS is very welcome. Nearly 50% of UK unicorns received EIS backing earlier in their journeys to market.[141] However, a number of investors reported that further improvements to these schemes could be made including:

- Creating a knowledge intensive or a university spin-out focused version of SEIS to stimulate further appetite at the riskiest, earliest stage of investing. Changes would include a higher investment cap, enhanced tax relief and pre-incorporation eligibility (which would resolve convertible loan conflicts with the current need to place a valuation under these schemes' rules).
- Raising EIS limits for knowledge-intensive companies who are scaling, particularly in capital intensive areas like life sciences where rounds can quickly exceed the £20m limit. An expansion of the EIS scheme was announced at Budget 2025.[142]

Regional access to angel investment is also variable with 59% of angel investment concentrated in the Golden Triangle, 12% in Scotland, and other UK regions 3-7%.[143] To help address this gap the British Business Bank has created the Regional Angels Programme, which is a c. £285 million fund that has invested in a number of spin-out active funds including Empirical Ventures, Par Equity, Praetura, Sciences Creates Ventures, SFC Capital and others.[144]

Interestingly, I heard no reference to the use of crowdfunding platforms from any interviews and therefore suspect that they are not widely used for spin-outs (despite being one of the most frequent investor types in start-ups in general). Given that 45% of angels have participated in crowdfunding deals,[145] more research into the importance of crowdfunding for spin-outs is recommended.

Finally, angel investment may not always be the most appropriate investors into spin-outs, so it is important that founders consider their cap table construction carefully. For example, not all capital intensive deeptech or life sciences companies may suit early angel funding due to long-term high capital needs and the potential for incompatibility between early investors and later stage investors.

141. https://www.beauhurst.com/wp-content/uploads/2024/09/Beauhurst-EIS-30th-Anniversary-report.pdf
142. https://www.gov.uk/government/publications/budget-2025-document/budget-2025-html
143. committees.parliament.uk/writtenevidence/109214/pdf/
144. https://www.british-business-bank.co.uk/finance-options/equity-finance/regional-angels-programme
145. https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2023-07/230315-Equity-crowdfunding-report-final.pdf

Access to international investors

UK spin-outs will require access to both domestic and international capital as they grow and scale. Scaling often depends on attracting global investors who bring deeper funding pools and international market access.

Analysis of spin-out data commissioned for this report shows a similar pattern to other UK start-ups as they scale, the relative domestic funding proportion drops and foreign investors increasingly take over the cap table as shown in Figure 16 and Figure 17.[146]

Figure 16 Headquarter locations of lead investors into UK spin-outs.[147]

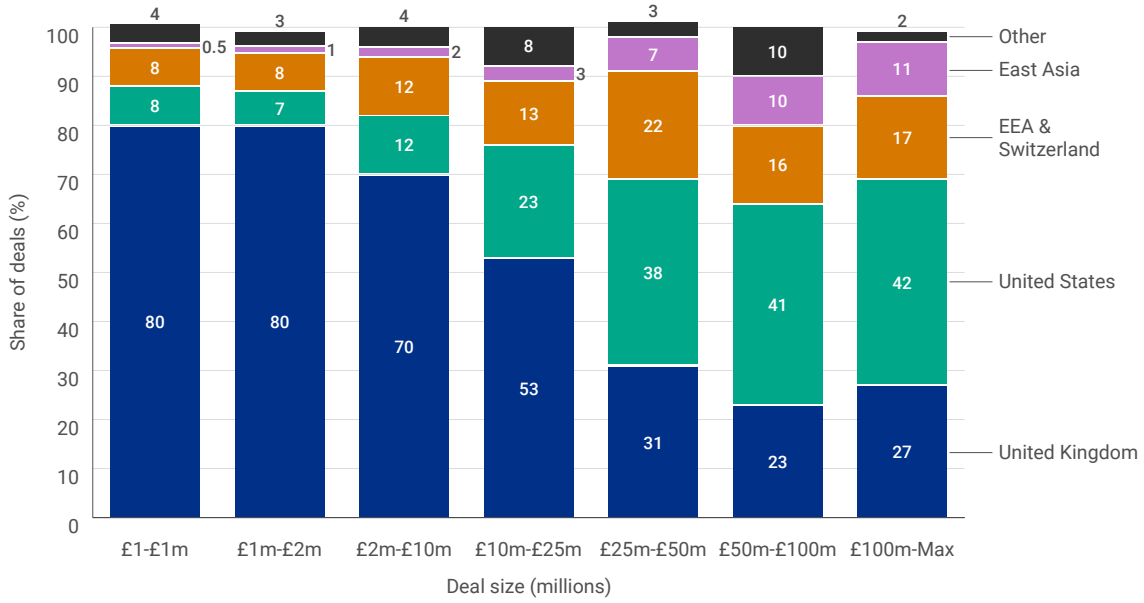
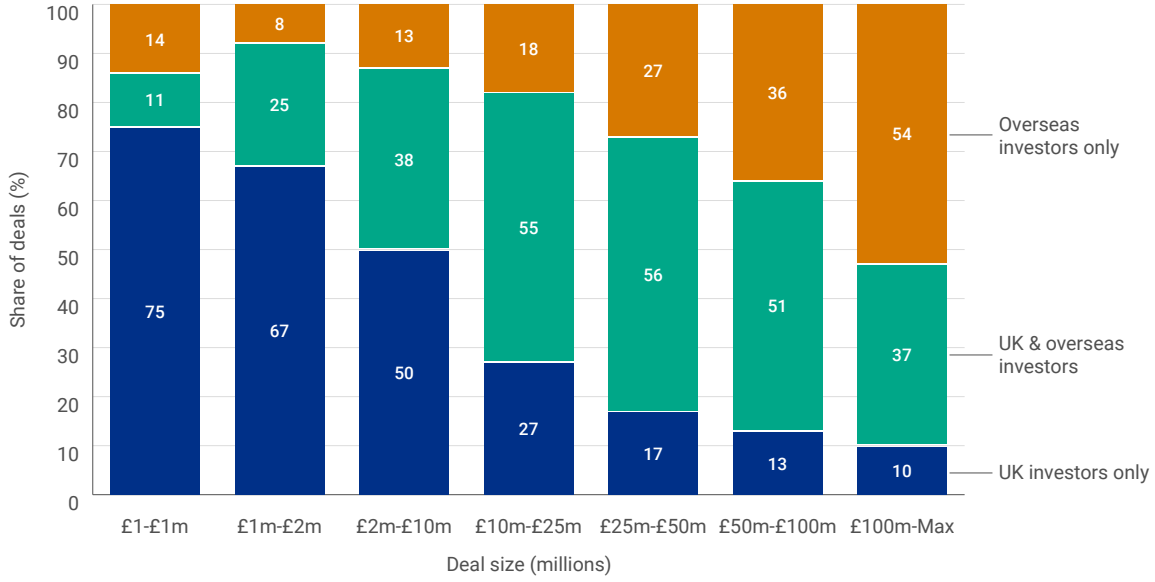


Figure 17 Headquarter locations of all investors into UK spin-outs.[148]



146, 147, 148. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

Pension funds from Canada, Australia and Norway, alongside sovereign wealth funds from countries such as Oman, Qatar and Singapore actively invest in UK markets, including investing in university-affiliated funds. These investors much prefer to invest in propositions where the UK government is also prepared to back the fund, which underscores the importance of securing UK government participation through public finance institutions such as British Business Bank and the National Wealth Fund to build confidence and share risk.

Government funding is at its most effective when paired with supportive incentives such as R&D tax credits, and access to university talent and national research facilities like the National Graphene Institute,[149] the Diamond Light Source[150] and UKAEA Fusion Energy's MAST.[151] These resources not only strengthen the UK's innovation ecosystem but also enhance its appeal to international investors seeking distinctive and high-potential opportunities.

Some universities are proactively courting international investors. For example, Warwick University is involved in developing a programme (PrimeUS) bringing US early-stage investors into contact with UK spin-outs specifically looking to access US resources, including investment capital.[152]

There is an opportunity to build on the Department for Business and Trade's (DBT) venture capital showcases. These could evolve into a series of nationally coordinated technology exhibitions, each aligned with the industrial strategy priorities, where university spin-outs in relevant sectors would be invited to take a supporting role (demonstrating future pipeline depth) alongside scaling companies that would constitute the main attraction. The Spin-out Register created in partnership by Research England, Higher Education Statistics Agency (HESA) and Policy Evidence Unit for University Commercialisation and Innovation (UCI), could be used to identify best-in-class participants by sector.[153]

These national investor showcases would aim to attract both domestic investors (across early-stage and scale-up phases) and international investors, including overseas venture capital firms and sovereign wealth funds. Delivering such events would likely require coordinated efforts between UKRI, the British Business Bank, and the National Wealth Fund.

Access to specialist investors: Social enterprises

Social enterprises are a vital but often overlooked form of university spin-outs which contribute to public service innovation and tackling social inequalities in areas like education, healthcare and local governance. For example, the Smart Data Foundry from the University of Edinburgh is a not-for-profit organisation which enables impactful research and informed decision-making to help reduce poverty and inequality and improve economic wellbeing by making private financial data both accessible and discoverable.[154]

As of 2024, around 5% of registered spin-outs were operating as social enterprises, with some overlap with creative ventures under the general Social Sciences, Humanities and the Arts for People and the Economy umbrella.[155] Family offices are increasingly backing social enterprises, especially in sectors like education, healthcare and affordable housing.

The key barriers reported by universities working with these types of ventures include:

- **Misconceptions:** Founders and investors may not realise that for-profit ventures with social missions can be both impactful and investable.
- **Terminology gaps:** A lack of shared language around 'social' and 'impact' ventures hinders understanding and investment.
- **Investor awareness:** Traditional investors may struggle to see the financial potential of impact-led business models.

Some universities are actively addressing these barriers with initiatives such as ImpactU[156] which offers an 'investor finder' to help match social ventures with aligned investors and offers alternative finance options, and the Research England-funded London Social Ventures Fund[157] which provides mentorship, market access and links to local authorities to help spin-outs establish a proof of market.

149. https://www.graphene.manchester.ac.uk/ngi/
150. https://www.diamond.ac.uk/Home.html
151. https://www.ukaea.org/work/mast-upgrade/
152. Warwick Innovations
153. Spin-out register | HESA
154. https://smartdatafoundry.com/
155. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
156. https://www.impact-u.co.uk
157. https://londonsocialventures.com/

Access to specialist investors: Arts and the creative industries

There is a need for improved understanding and tracking of spin-outs, student-led start-ups and the investor landscape within the Social Sciences, Humanities and the Arts for People and the Economy (SHAPE) disciplines, especially the Arts for people and the economy given that the creative industries have been designated as one of the UK government's industrial strategy priority sectors. Investment in this sector remains poorly understood across government and investment communities, with many requiring patient capital but following different development pathways compared to Science, Technology, Engineering and mathematics) STEM-based companies. Of particular relevance to investors are emerging subsectors such as 'CreaTech', which includes gaming, immersive technologies, AI-driven media, haptics and smart fabrics as well as social enterprises.

Intellectual property (IP) arising from creative arts differs from STEM-originated IP in several important ways. While creative ventures are often rich in IP, they typically involve fewer patents. Instead, they rely heavily on non-patent forms of IP such as copyright, design rights and creative content. Many creative spin-outs are service-based and tend to bootstrap their way to market. However, a subset of these ventures, particularly those with scalable business models, require substantial investment, similar to STEM-based companies. I heard frequently that creative start-ups are often student-led or formed by university staff in collaboration with their institutions. While many operate as microbusinesses, in music or performing arts for example, others resemble traditional high-growth ventures. Despite demonstrating strong growth ambition, creative businesses face significant barriers to accessing capital. These challenges often derive from low investor awareness of the sector and limited founder knowledge of available funding options.[158]

Connecting spin-outs with investors who understand creative industries remains a challenge for universities, and specialist investment in this space is still limited. There is a shortage of venture builders and accelerators focused on SHAPE sectors like CreaTech although some progress is being made. Specialist arts universities like University of the Arts London and the Royal College of Art are leading the way with access to campus-based incubators and embedded entrepreneurship programmes. At the same time independent creative accelerators are growing, such as the government's £150 million Creative Places Growth Fund[159] and the Tramshed in Cardiff, which runs start-up accelerator programmes for early-stage tech start-ups and businesses to raise pre-seed funding, develop their products and prepare them for growth and scalability.[160] Interestingly, despite the general feeling that this is an unexploited area, one venture firm with extensive European experience reported to me that they felt the UK was leading the way in Europe in terms of its approach to innovation in the SHAPE sector.

Non-dilutive funding: Grants, loans and venture debt as a source of spin-out funding

University spin-outs often face challenges in securing seed, angel or venture capital funding during their first-year post-formation. This may be due to several factors:

- The ventures may lack strong commercial potential and therefore do not merit investment.
- They may have promising ideas but struggle to find and engage with suitable investors who can lead or complete the funding round.
- They may be viable ideas but are perceived as not yet ready for investment, even when they do connect with appropriate investors.

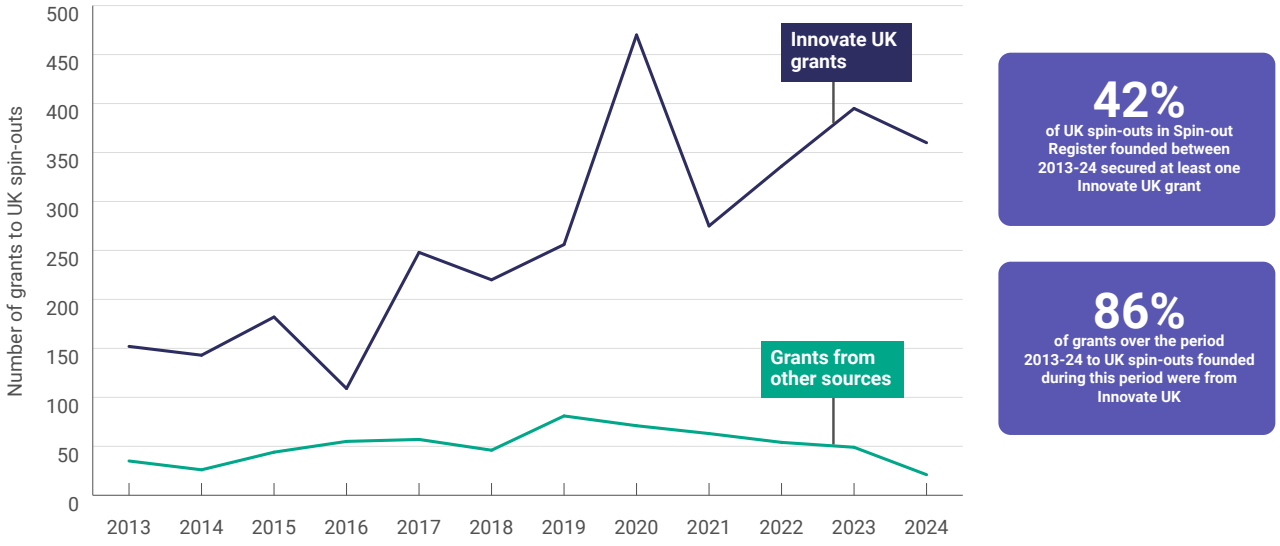
In such cases, these companies may resort to government-supported grants or innovation loans. While this can provide temporary relief helping to reduce technical risk or validate market demand, it can also lead to a cycle of dependency, where businesses either remain small and grant-reliant or fail to evolve beyond lifestyle enterprises. A key concern is that without early exposure to investor scrutiny and candid feedback, these companies may continue on a suboptimal path or miss critical opportunities to pivot and grow. In some cases, companies may even 'overfit' their grant proposals to suit the grant call, distracting them from their core focus.

158. https://www.gov.uk/government/publications/creative-industries-sector-plan
159. https://www.gov.uk/government/news/380-million-boost-for-creative-industries-to-help-drive-innovation-regional-growth-and-investment
160. https://www.tramshedtech.co.uk/programmes/startup-academy/

Grant funding into spin-outs is typically provided by government agencies, such as UKRI, and appears more evenly distributed across the UK's regions than equity investment.[161] This funding is not technically an investment, but a form of non-dilutive financial support and it plays a crucial role in helping early-stage start-ups reduce initial risk thus making them more attractive to investors. These grants can serve as a catalyst for private investment especially in high-risk technology driven spin-outs by offsetting early development costs. Spin-outs that have secured additional grant support are 25% more likely to be active today compared to those who have not. However, some believe that the UK extends grant provision too far into the commercialisation journey, leading to over-reliance on grants that can in turn lead to low-growth companies or companies stuck at seed stage; 38% of spin-outs that survived five years or more (2013-2019) can be categorised as 'limited growth' companies or companies that have raised no investment.

Nearly half (46%) of all spin-outs are reported by Beauhurst to have been awarded additional post-incorporation funding support of which 86% originated from Innovate UK.[162] Furthermore, 42% of UK companies in the Spin-out Register and founded between 2013-2024 secured at least one Innovate UK grant (Figure 18). Furthermore, the data suggests that the timing of deals in relation to securing private investment may matter, with those securing grants alonside private investment performing better than those that secure it too far in advance, but this warrants further study.[163]

Figure 18 Trends in grants to UK spin-outs from Innovate UK and other sources.[164]



Clearly, Innovate UK grants play a vital role in early-stage technology development in spin-outs and are valued by investors, especially angel investors. However, their small size and complex application process often discourages more mature spin-outs from applying and can encourage founders to incorporate prematurely. Some founders reported that the ability to write good grants is becoming a more important skill than having a promising idea or technology, with some companies having become adept at winning multiple grants consistently. Innovate UK has acknowledged that it needs to rebuild its grant allocations process and to include more human interactions with founders.[165]

With regards to debts and loans, it is worth noting that many first-time pre-seed or seed investments into spin-outs use convertible loads or the Simple Agreement for Future Equity agreements. These have the advantage of using recognised wording, allowing faster transacting and deferring awkward valuation debates with founders whilst rewarding the earliest investors for taking the risk via a discount to next round price.

161. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
162. https://www.ukri.org/wp-content/uploads/2025/05/UKRI-190525-SpinOuts-Analysis-2023.pdf
163, 164. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.
165. https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19202.htm

However, some feel they obscure founders' visibility of dilution and can create 'stacking risk' and investor misalignment. Some founders also reported concerns around financially stressed universities looking to call in the loans, thus putting additional pressure on finding investment. These tools may simplify negotiations but are also incompatible with Seed Enterprise Investment and Enterprise Investment schemes (S/EIS) which require a valuation to be made, and as such this can limit their use by universities, accelerators and other seed funds in the UK where S/EIS funds or angel investors are involved.

Studies have shown that spin-out founders in the Social Sciences, Humanities and the Arts for People (SHAPE) and the Economy and creative sectors are hesitant to take on debt due to low awareness or cultural aversion despite their businesses being well suited to taking on debt – fast to revenue and in some cases Intellectual Property (IP) rich.[166]

Investors also expressed caution that the British Business Bank and the Intellectual Property Office's ongoing investigation into how to support lending to IP-rich sectors, needs to tread carefully in terms of ensuring any such IP backed lending does not deter future investment by equity investors, for example by securitising the IP which is often the core asset that investors are investing in.

Finally, venture debt remains underused in the UK, partly due to limited understanding and its applicability being mainly from Series A onwards. HSBC Innovation Bank suggest that the UK is a long way behind the USA in its sophistication and appetite to use venture debt as an instrument to scale.[167] The recent raising of £175 million in venture debt by Oxford Science Enterprises is a positive sign in terms of raising the profile of venture debt as a form of funding,[168] but more work could be done here to increase awareness.

166. https://assets.publishing.service.gov.uk/media/5a78f116e5274a2acd18afc1/CE-ReportDec2012e-without-Registration1.pdf
167. https://www.about.us.hsbc.com/newsroom/press-releases/hsbc-us-innovation-banking-expands-venture-debt-offering
168. https://globalventuring.com/university/europe/oxford-university-vc-firm-ose-raises-232m-from-banks/

Recommendations

1. **Significantly boost pre-incorporation and pre-seed funding.** The UK significant trails behind international peers and underinvestment at this stage poses long-term risks to producing the next generation of scaling spin-outs. Specifically,
   a. UKRI should expand funding for proof-of-concept to c£100 million annually. UKRI should continue delivering it through a hybrid model. This model should combine devolved funding to support locally-driven innovation with centralised funding aligned to national and regional priorities, particularly those set out in the Industrial Strategy. This should be additional funding, or a repurposing of money earmarked for scaling via the British Business Bank. It should not repurpose the existing R&D budget. To maximise impact, UKRI should also permit flexible use of this funding across the pre-incorporation and pre-seed stages, especially where spin-outs are involved. Finally, UKRI should consider a fixed percent of its budget being publicly earmarked and ring-fenced for translational, proof-of-concept, pre-seed funding to signal its vital role in shoring up a pipeline of investment to enable starting and scaling businesses in the UK to drive economic growth. This funding requires a well-resourced ecosystem around it, from talent to infrastructure, to maximise its value.
   b. UKRI should explore use of a formula-based funding for centralised proof-of-concept funding in addition to open competition. This would ensure the very best ideas emerging from universities are supported nationwide and funding is not spread too thinly which can arise from demand management of open competition.
   c. Universities should be required to demonstrate that they are involving domain experts, industry or investors, in the deployment of devolved translational or pre-incorporation (proof-of-concept) funding.
   d. UKRI should establish a seamless, common-branded funding pathway that integrates the currently fragmented landscape of council translational awards with Innovate UK funding. This would create a clear and visible journey for founders, reducing unnecessary incorporation barriers and enabling smoother progression from research to commercialisation.
   e. Ideally, this pathway would serve as the first stage of a broader, well-defined 'university to unicorn' roadmap, developed in collaboration with Innovate UK and the British Business Bank and intended to defeat the 'leaky pipeline' problem identified in the recent House of Lords report.[169]
2. **Improve access to scale-up finance for spin-outs**, specifically,
   a. Actors in this space including Innovate UK, British Business Bank and the National Wealth Fund should define their responsibilities and more clearly delineate their roles and strategic mandates. This echoes the recommendation made in 2019 by Mike Rees.[170]
   b. The government should accelerate pension reform to mobilise capital within the next two years. Unlocking pension capital is critical to supporting high-growth, high-risk ventures such as spin-outs. Reform should prioritise mechanisms that enable and incentivise institutional investment in innovation.
   c. The government should leverage the incoming place-based mandate for local government pension scheme investing by encouraging pension fund trustees to support regional spin-out funding and support local economic development.

169. https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19202.htm
170. https://www.ncub.co.uk/insight/independent-advice-on-university-investor-links-mike-rees-report/

d. UKRI and universities should work together to consider how they can convene a more strategic UK-wide approach to building a network of university-affiliated funds by encouraging institutions to work with fund managers to explore innovative models that can attract the future flows of pension capital into risky asset classes such as spin-outs.

3. **Provide consistency and commitment to key funding programmes.** Strengthen, stabilise and continue to invest in mechanisms which are working well. Specifically,

   a. UKRI, the British Business Bank and policymakers should build investor confidence through sustained commitment to successful funding programmes such as Research England's Higher Education Innovation Funding and Connecting Capability Fund; Seed Enterprise Investment & Enterprise Investment schemes; and the British Business Bank's Enterprise Capital Fund.

   b. The government is launching a consultation on how the tax system can support entrepreneurs as well as a targeted review with founders and investors.[171] The government should consult and review Seed Enterprise Investment and Enterprise Investment (S/EIS) schemes to explore whether a knowledge-intensive SEIS would further enhance deeptech investment at the earliest stages; and consider ways to make S/EIS investments from business angels compatible with the convertible loan note and Simple Agreement for Future Equity agreements used by many seed funds for first investments.

4. **Expand specialist deeptech capital access** and widen investor networks to address gaps in investor expertise and capital availability across the UK in line with the eight priority sectors identified in the Industrial Strategy. Specifically,

   a. UKRI should map the gaps in seed, venture and scale up funding across regions and sectors at a granular specialist level (such as quantum, cybersecurity, diagnostics). These efforts should align with existing efforts in this space including the UK Spin-out Register and similar activities within Innovate UK and the British Business Bank.

   b. There should be additional funding for UKRI to fill specialism gaps through the creation of sector-specific accelerators and venture builders such as Science Creates Engineering Biology Accelerator. This could be partially offset by reduced funding for more generic 'software model' accelerator models.

   c. Efforts should be made to expand funding for British Business Bank's Enterprise Capital Fund (ECF) programme and to ensure funding is directed into supporting new sector specialist investment funds and first-time investment fund managers (acting to increase investor specialist literacy over the long term). Universities should consider creating specialist microfunds or co-investment funds that may benefit from British Business Bank backing via its forthcoming Investor Pathways Capital initiative and British Business Bank should ensure the risk appetite is set appropriately to back them.

   d. British Business Bank should explore whether the £5 million investment cap on ECF-funded investment funds acts to restrain fund viability and reduce new specialist fund applications in high-cost sectors like life sciences.

   e. Universities, investors and funders should work together to strengthen regional innovation ecosystems by connecting regional angel networks with others across the UK to spread expertise, improve funding access and link up specialist lead angels to spin-outs across the UK.

171. https://www.gov.uk/government/publications/budget-2025-document/budget-2025-html

4. Behaviours and relationships

4. Behaviours and relationships

Summary

UK universities are increasingly embracing entrepreneurship, driven by a new generation of academics and students and supported by frameworks such as the Research Excellence Framework and the Knowledge Exchange Framework. Despite this momentum, key gaps remain, particularly around institutional support for entrepreneurial career pathways, access to early-stage funding, and the cultivation of serial entrepreneurs and institutional support for entrepreneurial career pathways. Recent announcements around Enterprise Fellowships and entrepreneurial focused doctoral training schemes are a step in the right direction here.

University-investor relationships are improving, though cultural and operational differences continue to pose challenges. For example, university technology transfer offices must balance social and economic impact with institutional financial goals, while investors typically focus on high-growth, high-return ventures. Universities with dedicated venture teams and internal seed funds are perceived to provide greater credibility and alignment with investor expectations. This follows the wider trend of universities needing to adapt from a world where they predominately licensed intellectual property (IP) to large industry partners, to one where they focus more on company creation and licensing their IP to spin-outs.

The timing of spin-out formation varies across institutions. Some favour early incorporation to accelerate progress, while others wait for market traction before formalising. Investor preferences also differ, requiring agility and ongoing dialogue between founders and funders.

Sector familiarity also plays a role, with deeptech and life sciences investors appearing to be generally more attuned to university processes than those in general tech and software.

Successful university-investor partnerships depend on mutual understanding, clear collaboration frameworks and effective engagement. This hinges on the 3Rs:

- Right technology – meeting investible criteria
- Right investor – aligned with the sector and stage
- Right time – matching the technology cycle, market cycle and investor fund cycle

The relationship between universities and investors is multifaceted, and while generally strengthening, it is often shaped by perceptions, past deal experiences, individual personalities and shifts in the investment landscape. It is fair to say that a small but vocal subset of investors still remains highly dissatisfied.

There is a cultural mismatch between the underlying philosophies of universities and investors, which can unintentionally create barriers to collaboration. For example, universities often operate within funding models that prioritise academic research excellence over innovation potential, which can result in limited incentives to focus on research commercialisation. In contrast, investors are typically driven by financial returns and time constraints, which can lead to perceptions that universities are slow-moving or difficult to engage. These tensions are further complicated by universities' broader responsibilities, such as increasing pressure to make research tools and data openly accessible, which may conflict with investor expectations around proprietary assets.

The underlying principles for a successful investor-university relationship are recognising:

- the importance of trust and track record, which takes time to build;
- the individuality of different investors and different universities;
- and the individuality of spin-outs, for example not every spin-out needs to be a unicorn to have significant impact and financial potential.

This includes mutual understanding of different types of investors and different types of universities, as well as of the complexities of each other's roles. Investors can misunderstand or undervalue the complexity of technology transfer, university intellectual property (IP), university operations and risk appetite.

Investors report being very short on time. However, those who find the time to learn how universities operate, report stronger, more productive interactions. Examples include UK funds like Parkwalk Associates and Octopus Ventures, and US funds such as Osage University Partners (OUP), which has raised over $800 million across four university-focused funds using a participation rights model. OUP attribute their success to going through a steep initial learning curve, progressing from dealing with challenges in assessing early-stage, non-market-ready technologies towards building collaborative relationships with technology transfer offices. They also deployed tactical early investments to strengthen university ecosystems and stimulate demand, paving the way for better deal flow, trust, and ultimately higher returns and successful fundraising. Oxford Science Enterprises appears to have adopted a similar approach in its early years.

Many university TTOs face the challenge of balancing impact with financial sustainability. Their core missions and values are to enable societal and economic impact, but they are often expected to generate at least some income to cover their operational costs, and ideally contribute further to the university. This dual mandate can create internal tensions within universities and affect how they engage with external partners.

Furthermore, it is clear that most TTOs generally try to provide founders with some support both before and after company formation. The level of that support depends upon how well the TTO is resourced, how much that support is readily available from the local ecosystem, and the attitude of the TTO towards founder support. For example, does the TTO see itself having a role in curating and introducing investor networks to founders or does it feel that is the responsibility of the founders (which is the prevalent attitude in some major US universities)?

Universities and investors often have very different approaches to portfolio building. Some investors expressed concern that universities tend to spread small proof-of-concept grants across a wide range of early-stage projects, hoping that a few will gain traction. In contrast, investors typically prefer to concentrate larger amounts of funding on a smaller number of high-potential ventures. They argue this 'high-conviction' approach improves focus and increases the likelihood of success.

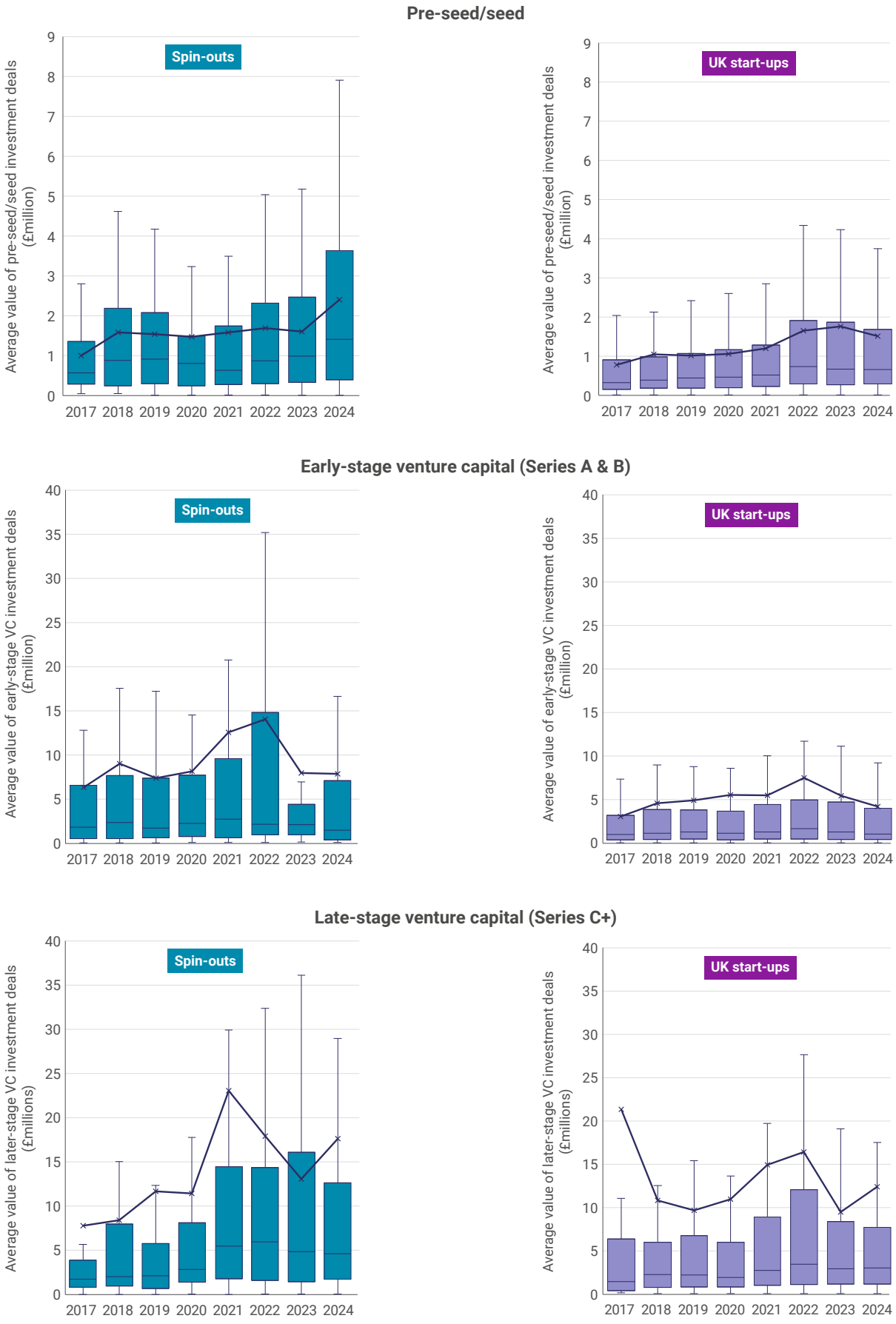
However, universities operate in environments in which identifying a clear 'winner' at the earliest stages of innovation is simply not feasible and over-selectivity may result in missing promising innovations. At that point, there are typically only weak signals available, with only limited information about the technology's potential or the future market landscape to make high-confidence decisions. I heard examples from proof-of-concept panels, where even the industry and investor experts on such panels requested more data before making a go/no-go call.

As a result, TTOs tend to adopt a much larger portfolio approach than investors such as venture capitalists. They operate a 'wide funnel' when onboarding new ideas and look to rapidly narrow the portfolio via derisking and market testing. Universities accordingly support a broader range of early-stage ideas to allow sufficient time for maturation and validation, which is crucial given university spin-outs are on average nine years old at exit.[172] However, this broad approach does not mean that everything gets funded without scrutiny. University TTOs are constantly making informed decisions based on derisking experiments, market signals and commercial potential. Filing IP on everything based on the precautionary principle is not a sound strategy. However, given the inherent uncertainty at the earliest stages, TTOs often have little choice but to run a broad portfolio to allow the best ideas to develop before market forces can be applied to help further narrow the field.

More conventional portfolio theory then applies once spin-outs reach the market and receive investment. Recent investment data underscores this, with the top 10% of spin-outs ranked by total investment consistently securing significantly more funding at every stage of their journey compared to the median and general start-ups.[173] At the pre-seed and seed stages, their average deal size is eight times larger and at the venture capital stage, it's 30 times greater (Figure 19).[174]Among spin-outs founded between 2013 and 2018, 12% were acquired or listed, 5% raised more than £50 million and 27% failed.[175]

172. https://www.beauhurst.com/wp-content/uploads/2025/03/Beauhurst_Royal-Academy-of-Engineering_Spotlight-on-Spinouts-2025.pdf
173. https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2025_UCI_Powering_Ideas_to_Innovation_SpinoutsReport_vPublished.pdf
174, 175. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

Figure 19 Average and distribution of deal size for UK spin-outs (left) compared to the wider population of UK start-ups founded between 2013-2024 (right) for (top) pre-seed/seed stage, (middle) early venture capital stage which is Series A & B, and (bottom) later venture capital stage which is Series C onwards



Academic culture

Serial entrepreneurs and exit pressure

The UK's academic base is strong but there remains a cadre of senior researchers who still view entrepreneurship as a distraction. Incentives shape behaviour and empowering researchers to pursue commercialisation is key but this needs to be balanced appropriately against academic interests to avoid undermining our world-class research base. Shifting this mindset could be supported by better linking grant funding to translational outcomes and entrepreneurial activity.

The UK is experiencing a slow but steady rise in serial entrepreneurship and a growing culture of innovation within universities, which is driven by a new wave of entrepreneurial academics and students alongside improved access to accelerators and innovation support programmes. Furthermore, the cultural stigma that has been traditionally associated with failure is steadily fading, particularly as a new generation of student-researchers enters academia. Many of these early career researchers are bringing with them a fresh perspective that excellence in research and entrepreneurship can coexist, and they have often already engaged with accelerators and entrepreneurship programmes during their studies. The positive cultural change being observed is somewhat at odds with data from Ulrichsen, T.C. (2026) which shows a rise in the UK's 'fear of failure'. However, this may relate to the difficulties in attracting investment funding in deep tech areas and more work is needed to understand the drivers here.

This positive cultural change is supported by a broader embracing of impact, which is now actively measured through frameworks such as the Research Excellence Framework and the Knowledge Exchange Framework, which have helped catalyse this cultural revolution. However, academic career progression still prioritises publications over external engagement, and these existing frameworks should evolve to align with government priorities. Investigations should be undertaken as to whether appropriate commercialisation metrics can be further embedded in these frameworks without adding undue additional bureaucracy or damaging the excellence that makes our universities so great.

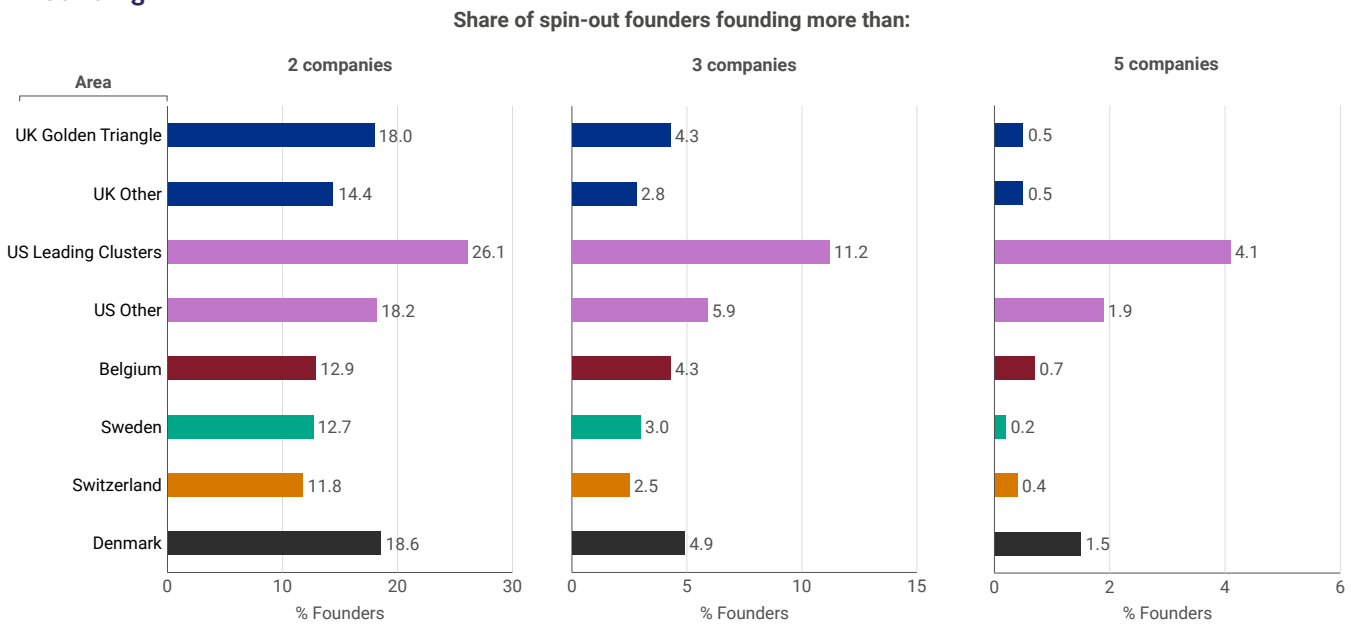
Despite this steady progress, some take the view that the UK is still a generation behind the USA in terms of entrepreneurial culture, and that we are still in the relative 'foothills' of cultural maturity compared to major global hubs such as Boston and San Francisco. Nonetheless, there was a feeling from many that I spoke to that we are gradually closing the gap. In the meantime, there remain lessons to be learned from these more developed ecosystems, which would accelerate our development, and it is evident that we do not yet have all the ingredients that characterise a mature innovation ecosystem, namely:

- Widespread institutional formal recognition of entrepreneurial behaviours.
- Adequate specialist investment expertise and capital at the pre-seed and seed stages.
- Sufficient competition among venture finance providers.
- A robust supply of serial entrepreneurs and founder role models.

As stated above, an important ingredient is a strong pipeline of serial founders who reinvest their time, capital and experience in new companies and act as role models for other researchers. These are the backbone of thriving innovation ecosystems. The proportion of founders who have started three or more companies is similar across leading UK spin-out universities and higher than at many European institutions. In contrast, US universities in entrepreneurial hotspots have significantly more founders who are serial entrepreneurs, having started five or more ventures (Figure 20).[176] Very few founders in Europe, including the UK, reach this level. A similar trend is seen among founders who become investors, with US university founders far more likely to be VC or angel investors than their European counterparts (Figure 21).[177]

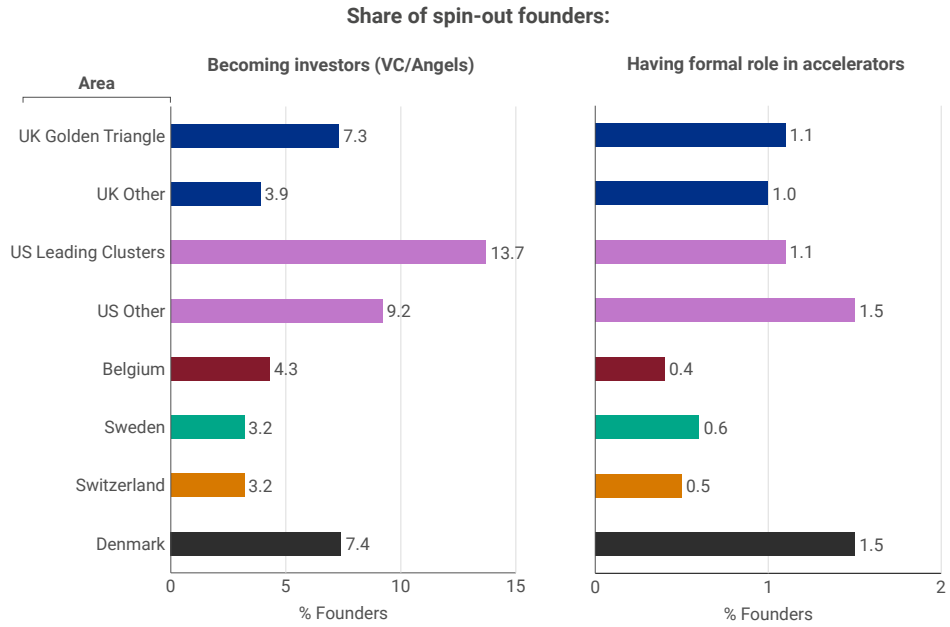
176, 177. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

Figure 20 International comparison of how many companies spin-out founders have been involved in founding.[178]



Sample limited to founders of spin-outs founded between 2013-2024

Figure 21 International comparison of the proportion of spin-out founders that have become investors or have a formal role involved in accelerators/incubators.[179]



Sample limited to founders of spin-outs founded between 2013-2024

Other cultural issues, such as founders exiting too early, are underpinned by mechanistic processes that need addressing. Spin-out founders need to be encouraged to build and scale their companies within the UK, rather than exiting prematurely due to limited access to liquidity during their growth journey. Exploring innovative mechanisms that allow founders to realise partial liquidity in their shares without triggering a full exit is essential. University-affiliated funds such as Oxford Science Enterprises (OSE) have recognised this need and already offer spin-out founders the opportunity to sell up to 10% of their equity back to OSE at predetermined intervals. Emerging platforms like the Private Intermittent Securities and Capital Exchange System (PISCES) may also have a role to play, provided they are accessible to spin-out founders and aligned with investor expectations.

178, 179. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

However, founders will need to be prepared to accept the discount typically applied to secondary share sales. In addition, for deeptech ventures especially, the timing of an exit is often dictated by investors, who by that stage may hold controlling stakes and have obligations to deliver returns to their limited partner investors. Furthermore, there was also some scepticism expressed to me that PISCES will make a difference to founder and/or angel liquidity at the early stages unless the investment agreements they sign specifically allow them to trade a proposition of their shares via such a mechanism.

Entrepreneurship education and exposure

Over the last decade there has been steady progress in advancing entrepreneurship by universities including facilitating entrepreneurial cultures via career incentives, fellowships and intellectual property (IP) training. Additionally, new senior leadership roles such as 'vice provost of enterprise' have emerged in many universities which is helping to ensure that innovation is taken seriously at the highest level in universities.

There is broad agreement amongst all stakeholders that universities need to do more to deeply integrate business skills and entrepreneurial training into their core educational offerings, as well as stronger incentives and formal recognition for entrepreneurial activity within academic institutions. This is reflected by Oxford University's recent benchmarking of innovation ecosystems,[180] which found that entrepreneurship education is routinely embedded in US curricula, whereas in the UK it is more sporadic and often delivered through standalone initiatives. The call to embed entrepreneurship and reward these behaviours has been regularly cited in the literature,[181] and is a consistent theme across previous reviews[182,183,184] yet progress remains patchy, fragmented and limited.

However, there are pockets of excellence from which lessons can be learnt such as the UK's arts colleges which routinely embed such training in their curricula and provide on-campus incubation facilities because so many of their students and staff go on to form microbusinesses and are inherently entrepreneurial. For example, the University of the Arts London (UAL) is ranked the number one UK university for producing entrepreneurs,[185] and in 2021 through a partnership with Royal Northern College of Music and Royal Central School of Speech and Drama, created a dedicated entrepreneurship programme StART, funded by Research England and the Office for Students (OfS) to support professional development within the creative arts and engaging over 1,000 students and graduates over two phases[186].

Additionally, there are examples of some universities which have taken proactive steps on their own. For example, the University of Edinburgh's new Innovation Career Pathway,[187] Exeter University's Developing Business Aware Academics[188], Birmingham University's Medici Enterprise Training Programme[189], UCL's IO Inspire Programme[190], QMUL's Innovation and Enterprise MRes[191] and predoctoral training from the Royal Agricultural University's Ignite Enterprise programme.[192] Some universities also provide extensive support for student and recent alumni companies such as the University of Aberdeen's ABVentures service[193] and the University of the West of England's Launch Space[194].

The National Centre for Entrepreneurship in Education (NCEE) is a recognised actor here, helping to promote and develop entrepreneurial universities in the UK and internationally.[195] The learned societies provide UK-wide support as well. For instance, the Royal Society of Edinburgh and the Royal Academy of Engineering both offer support to graduates and researchers with their

180. https://committees.parliament.uk/writtenevidence/135461/pdf/
181. https://www.cambridge.org/engage/api-gateway/coe/assets/orp/resource/item/65481096c573f893f1e00aba/original/a-quantitative-single-site-study-of-technology-transfer-procedures-and-outcomes.pdf
182. University Knowledge Exchange (KE) Framework: good practice in technology transfer (McMillan, 2016) - Knowledge Exchange UK
183. Independent advice on university-investor links: Mike Rees report - National Centre for Universities & Business
184. Independent review of university spin-out companies - GOV.UK
185. https://www.arts.ac.uk/about-ual/press-office/stories/ual-ranked-number-one-uk-university-for-producing-entrepreneurs
186. https://www.arts.ac.uk/about-ual/press-office/stories/start-redefining-what-it-means-to-be-a-creative-entrepreneur and RNCM receives £900,000 to support students' professional development - Royal Northern College of Music
187. https://uoe-edinburgh-innovations.ed.ac.uk/for-staff/innovation-career-pathway
188. https://business-aware-academics.org/
189. https://www.birmingham.ac.uk/collaborate/enterprise/business-incubation-training-and-support/medici-enterprise-training-programme
190. https://www.uclb.com/events/io-inspire-programme-spring-2025/
191. https://www.qmul.ac.uk/postgraduate/taught/coursefinder/courses/innovation-and-enterprise-mres/
192. https://www.rau.ac.uk/student-life/enterprise-and-entrepreneurship
193. https://www.abdn.ac.uk/students/support/entrepreneurial-skills/adventures/
194. https://www.uwe.ac.uk/life/campus-and-facilities/careers-and-enterprise-facilities/launch-space
195. https://ncee.org.uk/
196. https://rse.org.uk/wp-content/uploads/2021/11/Enterprise-Fellowship-Brochure-Jan21-Deadline.pdf
197. https://enterprisehub.raeng.org.uk/programmes/enterprise-fellowships/

Enterprise Fellowships programme.[196,197] The RSE's programme has already trained over 266 entrepreneurs across 42 institutions and offers one year of academic salary coverage and £10k of business support funding[198]. Spin-out founders of companies like Geoptic[199] (University of Sheffield, Durham University, St Mary's University) and Elasmogen[200] (University of Aberdeen) have benefited from this programme.

Despite these advances broader implementation is still needed and each university inventing a bespoke new entrepreneurship education platform may be inefficient despite the need for locally tailored offerings.

Education with exposure and immersion

Some investors suggested that classroom-based entrepreneurial education is not enough and it needs to be coupled with exposure and immersion. Not every student or researcher needs or wants to be educated in such matters and a degree of self-selection is required. For instance, enabling PhD students to engage with start-up companies alongside their academic work can immerse them in the dynamic environment of small enterprises. This exposure helps build their understanding of business and investment, ultimately fostering greater entrepreneurial thinking and making them more attractive to future investors. The recently announced £25m for new entrepreneurship doctoral training schemes[201] are a welcome addition to the landscape.

A practical example of this approach is offered by Zinc Innovation Partners[202], whose fellowship programme connects postdoctoral researchers with ventures tackling major societal challenges. These ventures benefit from access to academic talent, while the fellows gain valuable commercial insight and hands-on experience in early-stage innovation. An alternative approach can be seen in programmes such as Conception X[203] which provides a nine-month entrepreneurial training cohort alongside continuing the PhD. One early-stage investor, Deep Science Ventures, has gone even further and created a Venture Science Doctorate programme.[204] This comprises a three-year, fully-funded, sector-agnostic PhD programme backed by Germany's Advanced Research and Invention Agency (ARIA) equivalent (SPRIN-D) which aims to ultimately scale up to train 1,000 science entrepreneurs per year.

The reason that such training and support needs some element of tailoring is to reflect the diverse needs of academic entrepreneurs. Not every academic needs or wants to become a start-up founder and instead may require just enough guidance to understand how to build the right team and effectively engage with investors. It is important that differentiated support is provided that distinguishes between those aiming to lead ventures with those who will contribute through guidance, advice and informed decision-making. For example, some researchers will choose to leave academia to join their spin-outs while others prefer to remain within the university system. Sector differences can be observed with many therapeutics companies being founded by researchers who remain in their academic posts, whilst many tech companies have founders that transition into the business. Therefore, the UK needs a framework that supports both paths – a system that encourages fluid movement between academia and spin-outs without penalising career progression. It is noted that UKRI programmes have been created to help embrace this kind of porosity such as the BBSRC's Flexible Talent Mobility Accounts.

Finally, cultural change in universities works best when it is augmented by 'bottom-up' approaches from the grassroots level, with student-led entrepreneurship groups for example, the Crick Science Entrepreneurship Network playing a key role. These initiatives, which are typically driven by passionate students or early career researchers, can sometimes be short-lived and transient but are still impactful in terms of cultural signalling. There are also external organisations such as Nucleate which also support student entrepreneurship across the UK by helping source investment and provide training in venture skills.

198. https://rse.org.uk/wp-content/uploads/2021/11/Enterprise-Fellowship-Brochure-Jan21-Deadline.pdf
199. https://rse.org.uk/new-cohort-of-rse-enterprise-fellows-announced/ and https://geoptic.co.uk/
200. https://elasmogen.com/elasmogen-ltd-shark-proteins-for-drug-discovery/
201. https://www.gov.uk/government/publications/budget-2025-document/budget-2025-html
202. https://innovationpartners.zinc.vc/#container07
203. https://www.conceptionx.org/
204. https://www.deepscienceventures.com/venture-science-doctorate

University and investor relationships and interactions

Traditional licensing to major corporations is waning, with universities now expected to advance technologies further and reduce risk before industry engagement. This has resulted in some universities reconfiguring their technology transfer offices operations to focus on spin-out creation and funding. One emerging observation is that universities who have built dedicated venture teams, particularly those managing internal seed funds, are generally perceived by investors as more credible and professionally engaged. Operating an in-house seed fund helps universities better understand investor perspectives and also plays a crucial role in strengthening the capabilities of their venture teams. This, in turn, improves the quality and investment-readiness of spin-out propositions. However, in some cases these teams may be perceived as gatekeepers and as potentially limiting direct investor access to the academic talent. If they do not invest it can also be perceived as a negative signal. Clearly it is not feasible for every university to hire a ventures team or run its own seed fund, but teaming up across universities to aggregate deal flow through SET squared or Forging Ahead for example, or partnering with firms that can provide such services, offers a viable alternative to all but the smallest institutes.

It was also clear that investor perspectives on university spin-out interactions vary significantly across sectors. Generally, tech investors seem to operate on faster timelines and engage with technologies that require minimal university-based development and limited access to institutional resources or intellectual property. In contrast, deeptech and life science investors tend to have a deeper appreciation for the long gestation periods typical of university-originated technologies.

Furthermore, the frequency with which investors encounter university spin-outs likely also influences their perceptions. Tech investors may only come across one spin-out for every 20 start-ups they evaluate, given that only around 5% of UK AI or Machine Learning start-ups originate from universities.[205] This limited exposure can result in unfamiliarity with university processes, frustration with speed and a perceived reluctance to engage. Some investors admitted they actively avoid spin-outs due to expectations around complexity and effort. Conversely, specialist deeptech and life sciences investors interact with universities far more often and as a result, I saw and heard much greater understanding and patience. Many of these investors recognise the challenges faced by university TTOs, including balancing multiple stakeholders and institutional missions. These investors tend to place more value on the university's role in nurturing the underlying technology and they exhibit more tolerance in their interactions, even if they remain frustrated by pace.

Of course, it is important to avoid broad generalisations, as positive and negative experiences exist across both tech and deeptech/life science investor interactions. The reality is far more nuanced, with outcomes often shaped by the experience levels, resources and the approaches adopted by individual universities and investors. While some tech investors may struggle with university processes, others engage productively. Similarly, not all deeptech investors are universally supportive. The diversity of interactions reflects the complexity of the ecosystem rather than a simple divide between sectors.

Alignment of expectations

One of the most common causes of breakdown in university-investor relationships is misalignment of expectations. Therefore, building mutual understanding between different types of investors and universities is essential particularly given the complexity of their respective roles and the wide variation in experience and expertise on both sides (see Figure 22 for an illustration).

Successful partnerships tend to occur when experienced investors engage with well-prepared universities, supported by clear frameworks for collaboration including defined roles, responsibilities, decision-making authority and accountability. Misunderstandings can arise when either party lacks experience. For example, inexperienced investors may propose terms that universities cannot reasonably accept such as immediate intellectual property (IP) assignment, non-compete clauses for founders, restrictions on academic publishing, free access to future IP or broad warranties. On the other hand, inexperienced universities may overvalue their IP due to limited benchmarking, underestimate the costs and risks of commercialisation, lack market insight or introduce unempowered negotiators to the table.

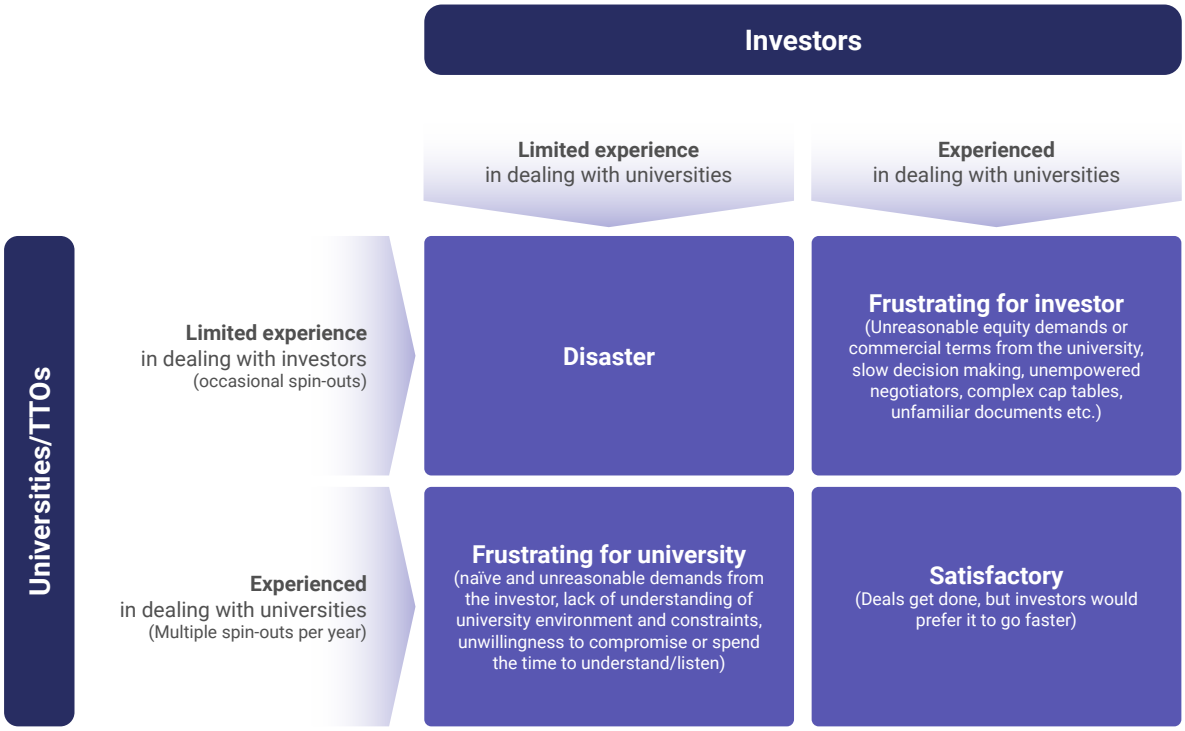
Power imbalances can further complicate matters. Less experienced institutions may feel pressured into accepting unfavourable terms, especially when facing sophisticated investors or where they lack a strong advisory network. As mentioned above, there are also

205. https://www.ifm.eng.cam.ac.uk/research/uci-policy-unit/uci-news/spinout-register-analytical-report/

frequent frustrations when university spin-outs are compared to non-university start-ups which often move faster. However, this comparison overlooks the inherent complexity of universities, which must navigate cross-institutional collaboration, publication requirements, retained rights, financial constraints, liability concerns and diverse funding sources.

Unsurprisingly, the most effective collaborations tend to occur when investors familiar with university environments engage with well-resourced, experienced technology transfer offices that handle a high volume of spin-out activity. Investors express frustration when dealing with underfunded or inexperienced TTOs, citing slow processes or unrealistic demands. However, the reverse is also true. Larger, more capable TTOs often encounter investors who lack experience working with universities and may propose impractical terms or react negatively when expectations are not met. These mismatches can lead to friction on both sides, highlighting the importance of mutual understanding, clear communication and realistic expectations in building productive partnerships.

Figure 22 University-investor interactions



Some of the most effective investor interfaces I observed were those that effectively coordinated the entirety of the university ecosystem, bringing together investor interactions arising from their TTOs, business schools, entrepreneurship programmes, student enterprise initiatives, accelerators and mentoring schemes. Well integrated and co-ordinated enterprise programmes ensure that investor networks are not duplicated across multiple departments within the university, approaches to investors are more carefully curated and relationships better nurtured over time. For example, Oxford's EnSpire programme is a collaboration between the different parts of the university that impinge on entrepreneurship and enterprise including Oxford University Innovation, the Saïd business school and the Careers Office all working together to create a co-ordinated offering which includes venture scouts and investor networks.[206]

Finally, universities could do more to tell their success stories here, given that anecdotal attacks from investors are often driven by an acute experience of 'a case gone wrong.' It's likely that those investors lack awareness of all the good stories and positive investor experiences that are happening elsewhere around universities and their perception is entirely shaped by a bad experience. To escape the 'tyranny of the anecdotes', universities could do more to work together to run awareness campaigns showcasing more university spin-out success stories and this could be facilitated by UKRI or organisations such as Knowledge Exchange UK (KEUK).

206. https://enspire.ox.ac.uk/home

Timing can be critical

In most universities, the technology transfer offices typically lead investor engagement. However, some institutions adopt a more founder-centric model, encouraging academics to build direct relationships with investors. Likewise, certain investors prefer early engagement with founders around emerging ideas, involving the TTO only once potential has been established.

As a result, TTOs and investors have developed varying philosophies around the timing of spin-out formation and investor engagement. The diagram below (Figure 23) illustrates these differing approaches. Some TTOs or founders opt to incorporate spin-outs early (sometimes to access grant funding), which can accelerate the process and present a ready-to-go structure to investors. However, this carries the risk of misalignment with investor preferences. Others wait until there is a clear investor on board or customer traction has been established before forming the company, which offers greater certainty but requires investors to endure the complexities and slowness of incorporation and intellectual prioperty transfer. Additionally, investor preferences also vary with some wanting to engage early to help proactively shape the venture, including recruiting the management team via their domain networks. Others prefer to see a more developed 'oven-ready' proposition, complete with a business plan, CEO and market traction. These differing approaches require universities and founders to remain agile and continuously seek feedback from potential investors to avoid missteps in timing or structure.

Figure 23 Diverse philosophies and approaches to spin-out formation

The 3 Rs: Right technology, Right investor, Right time

For successful matching between universities and investors, it is important to get the 3 Rs right:

- **Right technology package or market proposition.** This means ensuring the opportunity is investor-ready and appropriately de-risked. For non-technology spin-outs more emphasis may be placed on discovering the right market and having a clear go-to-market strategy and early customer traction.
- **Right investor.** Different stages of development will require different types of capital. Therefore, understanding and navigating the landscape of investment types such as grants, seed, venture and scale-up funding is crucial to ensure alignment with the right investor at the right time. Engaging with investors with a sector specialism and who can bring domain relevant co-investors, management and customer networks is critical.
- **Right time.** Timing is influenced by several factors including: the maturity of the technology, market conditions such as economic cycles and interest rates, and the phase of the investor's fund cycle. Whilst building one-to-one university-investor relationships can be time-consuming for university technology transfer offices and founders, this long-term engagement can help investors stay close to emerging opportunities. This frequency of interaction is important because many projects are deemed 'too early,' or one that investors were previously cool on may suddenly become hot.

One of the largest challenges to these 3Rs is information asymmetry. Specialist investors who act nationally but focus mainly on large deeptech clusters feel they see most (not all) of the important deal flow and so do not feel short of deal flow, and regional universities are often well connected with regional investment funds and local angel networks and information flows well at that level. However, angel clubs (with a few exceptions) are not necessarily efficiently exposed to opportunities outside their region and large non-specialist investors acting nationally may not encounter every proposition they could invest in as they are reliant on others to feed them deal flow or invite them into their syndicates.

Recommendations

1. **Strengthen the entrepreneurial culture in academia**. This echoes recommendations in previous reviews and while progress has been made, more could be done.
   a. Building on the recently announced £25 million for entrepreneurial doctoral training schemes, UKRI should adopt a more strategic approach to embedding entrepreneurship within academic career pathways and curricula. This could include incorporating progress in this area into the Knowledge Exchange Framework, and through working with partners on best practice concordats, disseminating best practices from the growing number of initiatives in this space as well as funding common core modules that can then be tailored to local contexts.
   b. Universities supported by other actors including UKRI should enable fluid movement and porosity between academia and spin-outs, for example by encouraging some universities to trial allowing longer academic sabbaticals in spin-outs with the ability to return to the university afterwards. It should be noted that previous reviews[207,208,209] have recommended greater porosity and it is unclear how or if these recommendations have been taken forward. UKRI's recent announcement around Enterprise Fellowships may begin to make headway here but more will be needed.
   c. Universities should expand ubiquitous access to entrepreneurship education and combining business skills with hands on experience for PhD students and researchers in start-ups alongside PhDs or in accelerator cohorts. UKRI should reflect on its current offer and how it could further support universities in this endeavour.
2. **Celebrate and recognise success.**
   a. All actors including universities and funders should better track and promote serial entrepreneurship by celebrating successful academic founders and promoting their success across the UK to paint them as role models.
   b. All actors should improve storytelling around spin-out types to help investors understand the diversity of opportunities and to encourage founders to engage. This recommendation echoes those made in previous reviews[210] and it is not clear that much progress has been made here.
   c. Universities should introduce formal recognition and reward systems for entrepreneurial and translational activity in promotion and tenure processes.
3. **Improve institutional support and infrastructure.**
   a. Universities and investors should either build internal venture teams and seed funds however small, to increase understanding and alignment with investors; and/or partner across regions or sectors with others who can provide this support.
   b. Universities should coordinate investor engagement across their departments at the enterprise interface to avoid internal duplication of investor networks and strengthen these strategic relationships.

207. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
208. https://www.ncub.co.uk/insight/independent-advice-on-university-investor-links-mike-rees-report/
209. https://ke.org.uk/resources/university-knowledge-exchange-ke-framework-good-practice-technology-transfer-mcmillan-2016/
210. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies

4. Address misalignment between universities and investors.

a. Investors and universities need to work together to foster long-term, trust-based partnerships with each other rather than transactional interactions. Examples could be hiring fractional or shared investor-relations managers across university consortia to help with coordinating investor networks.

b. Investors should offer an equity liquidity mechanism to founders, at the founders' discretion, during their journey to increase the chances of the founders not seeking an early exit (simply to access a cash payout) and providing them with the option to recycle such capital into their next venture or others.

5. Investor interactions

5. Investor interactions

Summary

While progress has been made in strengthening university-investor relationships, challenges remain particularly around the pace of spin-out formation which has emerged as a key concern.

Misalignment persists between universities and investors, especially regarding intellectual property terms and spin-out processes. Support for founders varies significantly and some technology transfer offices (TTOs) or affiliated funds are still perceived as gatekeepers rather than enablers.

Although attitudes toward university equity stakes are improving, they remain a point of contention for some investors and founders which is driven largely by a lack of transparency around intellectual property policies and lingering trust issues. However, there is growing consensus that the focus of conversation should now shift from equity negotiations to improving access to capital and accelerating the spin-out process.

Spin-out creation continues to be slow and inconsistent. Currently, forming a spin-out takes an average of 11 months.[211] Legal complexity and rigid institutional frameworks contribute to delays. Standardised term sheets, template agreements and access to legal counsel with experience of academic interaction could help streamline this process. The University Spin-Out Investment Terms guides offer a promising step toward harmonising equity approaches but they are not a complete solution and not yet universally adopted.

Too many spin-outs are launched prematurely, lack investment readiness or are unlikely to secure funding. Enhanced pre-incorporation support and earlier investor engagement are essential to address this. Some universities have adopted embedded virtual business models that can help delay premature incorporation of trading platforms until the underlying venture is truly market-ready.

Whilst the UK boasts a wide range of accelerators and venture-building programmes, their quality and relevance vary. Deeptech and Social Sciences, Humanities and the Arts for People and the Economy (SHAPE) sector focused areas are less well supported compared to generalist accelerators. However, specialist accelerators, venture studios and Entrepreneurs-in-Residence schemes are emerging that show real promise in bridging these gaps. Building long-term and sustained relationships between universities and investors is becoming as important as pitching events and demo days in terms of increasing the chances of investment. Aggregator platforms and pooled deal flow, via shared TTOs for example, can also improve the visibility of university spin-outs to investors, but founders need the tools to assess investors effectively and make the right matches to those who can add value and grow the business with them.

UKRI needs to signal that what universities do in this space matters. Spin-outs will be a vital part of delivering the Industrial Strategy. Consequently, the metrics used to assess success need to evolve beyond just tracking incorporation and survival and to instead focus on productivity and investment raised with more relevant measures of quality rather than quantity.

Finally, university spin-outs are not just about tech, deeptech and life sciences. There should be better support, access to investors and tracking of both student and SHAPE sector start-ups including creative industries spin-outs and social enterprises.

211. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies

Addressing barriers in spin-out formation for investors and universities

The UK spin-out environment has improved significantly over the past decade. Initiatives like the Independent Spin-out Review and the adoption of the University Spin-Out Investment Terms and Knowledge Assets Spin-outs guides[212,213] have helped standardise practices, especially among smaller universities. Shared technology transfer offices (TTOs) models and regional collaborations are also gaining traction. Yet, persistent barriers remain.

From the investor perspective, where they see the main challenges appears to differ depending on their access to funds under management. Well-funded investors cite investment readiness, talent and ecosystem maturity as the key issues. Those still raising capital see access to funding as the main hurdle.

It should be noted that whilst all TTOs try to cover their costs, and many are pressured by their university parents to do so, few TTOs globally have been able to achieve profitability on a consistent basis. Many university ecosystems are nascent and spin-out equity sales and licence royalties can take over a decade to materialise. In this context, whilst almost all TTOs believe that opting to reduce their equity stakes was the right thing to be done, it means less income will be available to help TTOs cover some of their costs going forward. Public funds such as Research England's Higher Education Innovation Funding (HEIF) funding will continue to play an important underpinning role until ecosystems fully mature, and the growth in high-potential spin-outs delivers higher equity and licence returns.

Investors also report inconsistent experiences with TTOs, citing concerns over equity expectations, unclear intellectual properties (IP) policies and slow, overly engineered processes. Some feel TTOs act more as gatekeepers than enablers, and that spin-outs are often launched before they are truly ready, with limited post-formation support regarding access to facilities or sponsoring research for example.

Rigid and inconsistent processes can hinder progress and, while the principle that 'one size does not fit all' is valid, the over reliance on this mantra can stall sector-wide improvements. UK universities are rightly autonomous and a single mandated framework is neither feasible nor desirable, just as expecting total uniformity amongst investors would be unrealistic. Building on the USIT guides, a flexible toolkit of standard documents and term sheets could help streamline practices without compromising autonomy.

Universities that have not adopted the USIT guides risk reinforcing negative perceptions. Alongside this, poor practices, such as appointing senior academics to spin-out boards without clearly adding value also act to undermine credibility.

Meanwhile, the venture support landscape remains fragmented. Founders often struggle to navigate accelerators, incubators and venture builders, some of which demand equity or fees without delivering real value.

It is against this backdrop that it can feel somewhat trite to talk about all the progress that has been made, but there has been a lot of progress (Annex C). The sophistication of university technology transfer offices is undoubtedly much higher than a decade ago which has been fuelled by long-term sustainable public investment.

Many of the better resourced TTOs now manage and deliver a range of support services, including: promoting investment prospects through curated events; assisting founders in strengthening their business concepts such as connecting them with regional accelerator initiatives and offering support to craft investor-focused presentations; delivering training to enhance commercial acumen before launching a company; equipping founders for investor interactions; soliciting informal input from trusted investors to refine and validate the business value proposition ahead of formal presentations; cultivating investor networks; enabling warm investor connections, coordinating pitch forums; engaging with venture capital firms that expressed interest; and offering independent guidance through access to mentorship.

Equity stakes – time to move on?

The whole area of equity stakes and the different models being employed is a considerable topic in itself and a subject which was explored extensively in the Independent Spin-out Review.[214] Some investors still raise concerns, whilst others view the issue as overstated, suggesting perhaps that the conversation should now shift to more pressing challenges.

212. https://www.ten-u.org/usit
213. https://gott.blog.gov.uk/2025/05/09/transforming-potential-into-impact-introducing-the-knowledge-asset-spinouts-guide/
214. https://assets.publishing.service.gov.uk/media/6549fcb23ff5770013a88131/independent_review_of_university_spin-out_companies.pdf

There is clearly no 'one-size-fits-all' model for equity stakes anywhere yet. Indeed, the net result of the sector's willingness to adapt has seen the systems being adopted in the UK and Europe move from a clear but inequitable fixed model of equity, such as 50% to the university, to a variety of different equity approaches now being adopted that span the continuum from 'university chooses' to 'founder chooses' and equity stakes in the 0-25% range[215]. The University Spin-Out Investment Terms (USIT) guides have helped to standardise expectations, offering a 'safe landing zone' for negotiations and reducing outlier practices. Over 58 universities have adopted the guides, though not all have signed on and some still operate at the higher end of the range.

Average university stakes have dropped from 25% to around 16% over the past decade, with many now taking 5-15%.[216] There's little evidence that equity levels alone deter founders or investors. More often, spin-out activity is driven by access to capital, as seen in Oxford and Cambridge, where spin-out rates rose significantly when increased local investment became available.[217,] While still early days, there seems to have been little change in spin-out rates or investment raised at such universities since their equity policies subsequently changed.

Outlier universities who still demand very high equity stakes in spin-outs are not helping the situation. Such universities should be encouraged to align with sector norms. But a race to the bottom is not helpful either. Simplistic claims and comparisons to international peers such as 'US universities take 5%' but then neglect to mention the antidilution protection that comes with it or 'ETH takes 2%' but neglect to mention the higher royalties and 'equity add-ons' for the additional services they offer are not helpful. Investors need to stop 'cherry picking' the components of the formula they like and ignoring the parts they do not.

Another area needing attention is how equity is split among academic founders. Entrenched academic power imbalances can lead to unfair distributions, with senior academics sometimes taking disproportionate shares versus their students or post-docs. Clearer guidance on equity allocation based on both inventive contribution and commitment would support fairer outcomes.

Ultimately, universities act rationally within their legal and financial constraints. As exempt charities, they must balance public benefit with financial sustainability, often sharing equity with funders or collaborators. Most investors that I spoke to accept that universities do indeed deserve a reasonable share of future value, though views differ on what 'reasonable' means. Only a small minority expressed a view that the 'professors' privilege' model of intellectual property ownership should be adopted.

In summary, while equity remains a sensitive issue, it is no longer the primary barrier to spin-out success. The focus should now shift to more impactful areas like investment readiness, access to capital and speeding up formation processes.

IP policies, transparency and trust

The trust of founders and investors must be earned by universities and this requires greater transparency. Previous reviews have recommended that universities should publish clear and accessible information on their intellectual property and equity policies, and report deal terms to the extent that is possible (anonymised if necessary),[218] to allow comparisons and benchmarking to be undertaken. However, it appears that the situation has only marginally improved despite these recommendations. The widespread adoption of the USIT guides is a good start and the publicly available list of adopters[219] shows which universities are adopting good practices which in turn generates trust.

Founders are often cautious about their university's policies and may assume that other institutions offer more favourable conditions. They can also be sceptical of their university technology transfer offices and may perceive them more as university servants than allies. This can lead to concerns about whether the advice they receive genuinely serves their interests.

Based on conversations with many TTOs, it seems unlikely that most TTO-provided guidance is generally misaligned with founders' best interests – they are highly motivated for the founders and the company to be successful. However, it is important to acknowledge that there is a stage in the process where TTOs must negotiate commercial terms with the spin-out, which can

215. https://assets.publishing.service.gov.uk/media/6549fcb23ff5770013a88131/independent_review_of_university_spin-out_companies.pdf
216. https://www.beauhurst.com/wp-content/uploads/2025/03/Beauhurst_Royal-Academy-of-Engineering_Spotlight-on-Spinouts-2025.pdf
217. https://innovation.ox.ac.uk/wp-content/uploads/2025/01/Spinout-timeline-2025-v2.jpg
218. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
219. https://www.ukri.org/publications/spin-outs-review-implementation-best-practices-adoption-list/spin-outs-best-practice-adoption-list/

sometimes feel like an adversarial 'switching of sides' from the founder's and/or investor's perspective. This is because most UK TTOs provide support to help spin-outs get started, alongside representing the university's best interests upon intellectual property (IP) transfer. In contrast, some of the major US TTOs who operate in vibrant clusters and are surrounded by investors, provide far less direct support – other functions and the ecosystem provide this – and operate more clearly on 'one side' as IP licensors into the spin-out.

While each university should retain the flexibility to design solutions that suit their unique ecosystem, the ideal outcome would be for every founder to have access to at least one trusted advisor. This should be someone who understands university procedures but can also offer independent, experience-based guidance on whether the founder is receiving a fair and reasonable deal. Selecting such advisors carefully is essential to ensure their advice is informed by broad experience across university-TTO-investor interactions and not shaped by outdated or biased perspectives. It may also not be affordable nor accessible for many smaller universities.

To address the above concerns, universities should provide founders with transparent access to clear institutional policies on IP/equity and more ubiquitous access to independent external advisors should be provided, which aligns with previous recommendations.[220,221] This would enable founders to make meaningful comparisons across institutions and give them greater access to independent advice. UKRI support may be necessary to ensure these recommendations are implemented.

Intellectual property access, pace and agility

It is clear from interview feedback that the pace of formation has emerged as the next most significant issued after equity stakes and investment readiness. Many investors feel that the spin-out process is overengineered resulting in frustrations about the time taken to spin-out. At the same time, the general 'clock speed' of innovation has been accelerating influenced by factors such as Chinese biotech fast-followers[222] and AI efficiencies in coding.[223]

Many of the key factors influencing pace have been previously identified[224]: Technology transfer offices capability and authority to negotiate flexibly; complexity of the intellectual property package such as simple patent vs multi-party; external approvals, for example, multiple funding partners such as charities and/or universities involved; founder's prior spin-out experience and their institutional influence; investor type, risk appetite and familiarity with university processes; use of legal advisors experienced in university spin-outs; timing of company formation and intellectual property (IP) access – pre- or post-investor engagement; and whether templated processes or bespoke processes to formation are employed.

Investors in fast-paced industries like software and tech reported that they found university spin-out processes slow and cumbersome. A number of such investors stated that they preferred to engage directly with founders or attempt to bypass university channels altogether which sometimes results in informal spin-outs or 'sneak-outs.' This may be attributable to a lack of familiarity of tech investors with university spin-outs given fewer than 2% of tech start-ups in the UK originate from universities.[225] This suggests that tech investors likely encounter university spin-out less frequently and when they do, the additional burden of university requirements relating to IP, publication, liability and so on, may appear onerous. Deeptech and life science investors were equally frustrated by speed but generally appeared more tolerant and understanding of university requirements.

Some investors cited that having to deal with IP from multiple sources or universities increased IP complexity and slowed negotiations. Whilst this is undoubtedly a factor, it should be noted that recent data from the UK Spin-out Register only identified 91 'collaborative spin-outs,' whereby the IP originates from multiple parent universities, out of a total of 2,307 spin-outs.[226]

It is worth quickly re-exploring why spin-outs can be more complex than general start-ups. Setting up a new spin-out company requires detailed background checks and forward planning. Establishing the source, ownership and consents for the background IP takes time and may involve funders and research collaborators.

220. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
221. https://www.ncub.co.uk/insight/independent-advice-on-university-investor-links-mike-rees-report/
222. https://www.mckinsey.com/industries/life-sciences/our-insights/the-dawn-of-china-biopharma-innovation
223. https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/how-an-ai-enabled-software-product-development-life-cycle-will-fuel-innovation
224. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
225, 226. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem.
A Technical Report for Research England.

Inventions often involve multiple inventors and funding sources which can stretch back over many years. Some investors may also require a suite of ancillary agreements to be put in place as a pre-condition of investment including consultancy, facilities access, sponsored research funding and IP improvements agreements which all require additional permissions and complexity. Each university will also have its views on warranties, indemnities and liability, all of which require bespoke negotiation.

Another factor that was consistently cited as affecting formation pace was the involvement of experienced legal counsel. Several accounts described situations where founders or investors had insisted on using external law firms unfamiliar with university spin-out processes and this had led to prolonged negotiations, whilst concepts which seasoned university spin-out advisors would have recognised immediately had to be explained to inexperienced legal teams. The result was not only delay but significantly inflated legal costs for both founders and investors. Ensuring that universities with low spin-out volumes have access to legal professionals with relevant university experience and exposure is important. This is something that shared TTOs may be able to help with.

Intellectual property and spin-out formation – is a more harmonised approach feasible?

Frustrations over pace and complexity have led a number of commentators to call for a more harmonised or universal approach to spin-out formation and intellectual property (IP) transfer across UK universities. For example, National Centre for Universities and Business (NCUB) has called for a national framework to be developed and some universities are piloting a deal readiness toolkit.[227] However, universities in the UK are also fiercely protective of their independence and often for good reason. They are autonomous entities with different missions, budgets and environments and as such they struggle to understand why complete harmonisation of their processes is any more appropriate than asking every investor to adopt identical documents and processes. The main concern expressed by universities and some law firms was that they needed the flexibility to cater for the large variety of possible scenarios they manage.

Investors report that they feel university IP frameworks act to trap founders in layers of bureaucracy with lengthy negotiations and extended legal scrutiny which complicates the spin-out process far more than is needed. They feel that clearer and more consistent spin-out approaches and agreements across universities would help, especially those which cut down on the legal and IP complexity.

At the same time some investors nonetheless prefer to start with their own legal templates or documents. These may be entirely bespoke or adapted from existing third-party templates such as the British Private Equity and venture capital Association (BVCA) template[228] which is targeted at Series A rounds onwards or the UK Business Angels Association (UKBAA) template agreements[229]. Universities reported that investors generally feel that they hold the upper hand in negotiations, especially given the limited investor pool and lack of competition for investment rounds in the UK and thus dictate which agreement templates will be used.

This does not mean that some headway cannot be made between the two positions. In the past, template agreement initiatives such as the Lambert toolkit[230] have shown that the adoption of common format documents by both sides of the deal table may be initially slow, but even partial uptake such as using common definitions can reduce friction and gradual adoption over time. Furthermore, sharing best practices on approaches to IP and approaches to investor due diligence, indemnities and warranties would act to improve transparency and accelerate spin-out formation, even if complete harmonisation was ultimately impossible. When drafting such documents and toolkits, care should be taken not to 'reinvent the wheel' and any new materials such as terms-sheet templates, would need to cover:

- pre-seed and seed funding scenarios and will need to build on or bring together the plethora of existing work to avoid 'template proliferation' and lack of widespread adoption;
- the full range of early-stage investment mechanisms including convertible loans, Simple Agreement for Future Equity agreements, Seed Enterprise Investment and Enterprise Investment schemes plus direct equity investments; and
- IP transfer mechanisms such as licence or assignment for example the US-Bolt license template[231] developed in the USA and the Express Licence template from Oxford University[232].

227. https://www.ncub.co.uk/wp-content/uploads/2021/07/State-of-the-Relationship-2024.pdf
228. https://www.bvca.co.uk/policy/industry-guidance-standardised-documents/model-documents-for-early-stage-investments.html
229. https://ukbaa.org.uk/investing-basics/the-term-sheet/
230. https://www.gov.uk/guidance/university-and-business-collaboration-agreements-lambert-toolkit
231. https://autm.net/surveys-and-tools/agreements/us-bolt-life-science-license-agreement
232. https://innovation.ox.ac.uk/wp-content/uploads/2018/07/2025.04.17-Express-Licence.pdf

The BVCA is working on a version of its document templates for seed stage investing, and the initial work in this space by SETSquared (ImpactIP) on a 'deal-readiness' toolkit[233] for their region, is a promising start. UKRI should examine whether an initiative such as this can be scaled up and adopted across the UK. If so, broad stakeholder buy-in will be critical and it would need to include UK-wide sector support comprising universities, investors, the BVCA, the UKBAA, Knowledge Exchange UK (KEUK) and law firms. In short, the practical challenges in covering so many scenarios are large, but they may not be insurmountable and this should be further investigated.

Investment readiness

Many investors report that a large proportion of spin-outs show promise but are not yet ready for investment. In this context, investment readiness refers to having the essential documents and structures in place, such as incorporation paperwork, intellectual property ownership, financial models and investor materials. Investor readiness means having tested the market, engaged with potential investors and developed a clear go-to-market strategy and pitch. For the purpose of this review, the terms are used interchangeably and should be taken to mean getting both investment and investor ready when used.[234]

Academic research has demonstrated that spin-outs often lag behind other start-ups in meeting the expectations of investors.[235] Investor readiness is subjective and varies by investor, often depending on their stage focus, risk appetite, herd mentality and fund maturity. Investor readiness is largely in the eye of the beholder and therefore what qualifies as investment ready varies widely among investors. Engaging with a broad range of investors improves the chances of finding the right fit given these differences.

A common concern cited by investors was that some spin-outs form too early, often to access grants, without sufficient preparation or the required amount of capital to reach the next stage. This can leave them underdeveloped, stranded and reliant on small, piecemeal 'drip-fed' funding. Addressing artificial barriers and perverse incentives within government-backed grant and investment schemes would help here.

To avoid this, some universities have been experimenting with models that allow early-stage ventures to test ideas before formal incorporation. The University of Birmingham's Operating Division model, for example, enables early pre-trading within the university environment without the need to incorporate a company.[236] Similarly, the Virtual Business Unit model, used by institutions like UAL, Lancaster, Warwick and others, lets founders explore commercial potential without the burden of spinning out too soon.[237] This approach can be particularly effective for social enterprises and service-based businesses, which create as many jobs as patent-based spin-outs, while achieving 36% higher turnover at half the cost.[238]

Given the diversity of investor expectations and spin-out maturity levels it is unsurprising that what one investor may conceive as being 'investment ready' may differ substantially from that of another investor, even if they operate at the same stage or within the same sector. It is important to qualify that investment readiness requires different types of interventions as each spin-out matures or moves up the technology readiness levels.

Investment readiness support programmes

Despite a wide range of tools and training available across the UK, conversion from first investor contact to actual investment remains low for deeptech, life sciences and creative spin-outs. Clearly online resources like pitch decks and checklists alone are not enough to make ventures truly investible.

In response, the UK's business support landscape has become vast but bewildering. Innovate UK[239], local authorities (via Investment Readiness Advisory Services)[240], the British Business Bank[241], Catapults and others offer a variety of programmes[242,243,244], yet many

233. https://toolkit.setsquared.co.uk/
234. https://www.crick.ac.uk/news/2025-07-30_becoming-investor-ready
235. https://www.sciencedirect.com/science/article/abs/pii/S0048733306000369
236. https://www.birmingham.ac.uk/collaborate/enterprise/about/annual-review-2023-24/operating-divisions
237. https://www.ukri.org/wp-content/uploads/2021/02/RE-240924-CCF-RED-shared-technology-transfer-office-functions-pilot-projects.pdf
238. Information supplied directly by the STAGE project: https://www.ukri.org/publications/projects-funded-by-the-connecting-capability-fund-research-england-development-fund/
239. https://iuk-business-connect.org.uk/business-growth/investment-activities/training/; https://iuk-business-connect.org.uk/business-growth/investment-activities/; https://iuk.immersivetechnetwork.org/funding-resources/investment-readiness-programme-from-the-london-business-hub/; https://nolimits.ukri.org/opportunity/virtual-investor-readiness-programmes-for-startups-across-the-uk; https://nolimits.ukri.org/opportunity/is-your-business-ready-to-attract-angel-investors; https://iuk-business-connect.org.uk/programme/icure/
240. https://www.westofengland-ca.gov.uk/growth-hub/financial-business-support/iras/
241. https://www.british-business-bank.co.uk/business-guidance/guidance-articles/finance/get-investor-ready
242. https://www.fundinghero.co.uk/
243. https://www.bridgeforstart-ups.com/
244. https://www.htgf.de/wp-content/uploads/2025/07/DeepTechMatrix.pdf

founders are unaware of what's available or which options best suit high-tech university spin-outs. The absence of a clear 'jumping on' point for Innovate UK support further complicates engagement, although the Innovate UK Growth Catalyst is trying to remedy this. Equally, services such as the Business.gov.uk website provide only generic high-level links and are not very useful in helping university spin-outs grow.

Not every university innovation is suited to spin-out or investment. In some cases, licensing is more appropriate and spin-outs that form purely to access funding can be counterproductive. Programmes that encourage earlier customer engagement help founders assess commercial potential and decide the best route for their technology. Such programmes can help to attract investors, especially in customer-traction-led sectors like creative industries, social enterprise and agritech. Even in deeptech and life sciences, early user input can also guide product development, despite revenues being years away.

Customer discovery programmes such as Innovate UK's Innovation-to-Commercialisation of University Research have proven effective in this area and often lead to increased equity investment. ICURe is widely perceived as being a popular and successful tool, with the introduction of 'ICURe lite' versions being appreciated by those with smaller budgets. A few universities were vocal about the burden of keeping up with the programme changes, and a number were vocal about their disappointment with the removal of the opportunity to access finance at the end of the process.

With ICURe now being revamped to align with the Industrial Strategy sectors, there's a window of opportunity to better integrate it with government-backed proof-of-concept schemes, shared technology transfer offices and university-affiliated funds funds. Organisations such as Midlands Mindforge have proposed that this could be combined with investor relations managers (see later section) and activation partners such as accelerator or venture builder partners that can help shape new spin-outs and signpost sector specific initiatives.

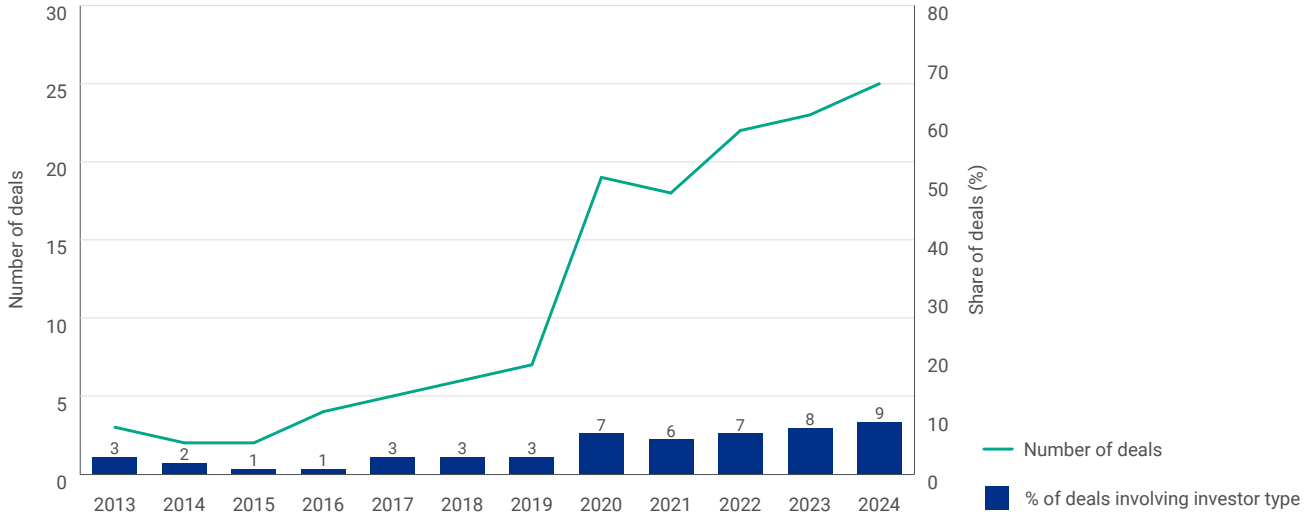
The role of accelerators and venture builders

The UK has one of the most active start-up ecosystems in the world, and one of the most well supported landscapes globally, with over 440 incubators, 314 accelerators and 108 other programmes as of 2022.[245] Many initiatives provide valuable mentorship, workspaces and networks which can be very helpful for spin-outs to become investment ready. However, their effectiveness varies widely and navigating them can be challenging due to inconsistent offerings and generic support.

In addition, quantity does not result in quality with many of the accelerator and incubator programmes across the UK being short-lived, generic and disconnected from specialist investors. This makes it harder for spin-out founders to find the right type of tailored and relevant support they need and for investors to trust the outcomes.

Accelerators and venture builders are examined in this report because of their important role in acting as intermediary agents between spin-outs and investors, and also because a growing number of accelerators are beginning to act as small-scale investors in their own right (Figure 24).

Figure 24 Involvement of accelerators and venture builders as investors in UK spin-out deals[246]



245. https://www.centreforentrepreneurs.org/ian/directory

246. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Accelerators who also invest can act to attract spin-outs seeking early-stage capital. However, the value proposition for accelerators is mainly about training and connections, and spin-outs should be wary of chasing small amounts of investment too early on. Apparently, 48% of UK accelerators explicitly offer investor connections and access and only 29% offer direct investment funding.[247]

The terminology associated with accelerators, incubators and venture builders is often confusing with the definitions becoming increasingly blurred and overlapping:

- General business support includes advice but is often lacking the investment focus or hands-on support of accelerators or venture builders.
- Accelerators are short intensive cohort-based programmes that help get spin-outs investor ready. They tend to follow a 'low commitment, high volume' approach. Many follow the Y-combinator model[248] which was established in 2005. Software accelerators are easier to sustain because they can deliver exits in 3+ years whereas deeptech spin-outs can take 9+ years to exit.
- Incubators offer longer-term support and physical infrastructure such as office space, lab space and/or mentoring. They may also offer accelerator programmes as part of their menu and are typically fee/rent-based and less selective than accelerators.
- Venture builders are organisations which build spin-outs from scratch internally by combining ideas, teams and funding. Some people associate them with identifying a problem and working backwards to find the solutions or founders to solve them, such as Deep Science Ventures[249] or Mass Challenge[250]. They can sometimes be referred to as venture studios although even here, definitions differ.
- Entrepreneurs in Residence (EiRs) within the university context vary, but are often taken to mean programmes that bring in a seasoned and accomplished business founder who typically takes a short-term role for 6-12 months for example, to share their knowledge and insights with students and faculty, alongside identifying and helping to build and shape new ventures emerging from academia. They support aspiring spin-out founders through offering mentorship, advising on start-up strategy, helping build investor networks and sometimes pursuing their own business ideas. They are an alternative or sometimes complementary approach to spin-out venture building via accelerators .

As detailed elsewhere in this report, university technology transfer offices provide a range of energy-intensive support services, and this energy intensity is perhaps the reason why so many TTOs partner with accelerators, venture builders or entrepreneurs in residence to help spread the effort required to build new businesses.

There are several example models emerging for universities including:

- those led directly by universities such as the University of Edinburgh's Venture Builder Incubator[251], Imperial College London's DT Prime[252] and Oxford Brookes' in-house EIR scheme.[253]
- those led by university-affiliated funders such as Northern Gritstone NG Studios[254], and Cambridge Innovation Capital[255] which bring in third parties to support them with early venture building. For example, Oxford Science Enterprises (OSE) hired Deeptech Labs to act as their in-house venture builder alongside their successful EiR model where they assign an EiR to each of their companies to act as a launch manager[256]; and
- those which are outsourced or run as joint ventures by universities in a region such as Digispin WM[257] which is a collaboration run by Funding Hero and which brings together the University of Wolverhampton, Coventry University and Birmingham City University to help prepare founders to get investment ready; and the Northern Accelerator[258] which brings together six universities (Durham University, Newcastle University, Northumbria University, University of Sunderland, Teesside University and University of York) in collaboration with local authorities Durham County Council and the North East Combined Authority. The programme brings academics and business leaders together to create spin-outs with the net result being an uptick from producing two spin-outs/year (eight years ago), to now producing 10 a year.

247. https://www.tenentrepreneurs.org/full-speed-ahead
248. https://www.ycombinator.com/
249. https://www.deepscienceventures.com/
250. https://masschallenge.org/
251. https://bayes-centre.ed.ac.uk/accelerating-entrepreneurship/venture-builder-incubator
252. https://www.imperial.ac.uk/deep-tech-entrepreneurship/dt-prime/
253. https://www.brookes.ac.uk/about-brookes/structure-and-governance/faculties-and-schools/business/about/entrepreneurs-in-residence
254. https://www.northern-gritstone.com/ng-studios
255. https://www.cic.vc/purpose/
256. https://dtl.vc/

Navigating the accelerator maze

Accelerator and venture builder support is unevenly distributed across the UK, with London hosting nearly 60% of all programmes, largely due to its strengths in software and fintech. Other regions, such as the Midlands and North East, have far fewer options. While mapping tools exist to help founders navigate this complex landscape, they are often underutilised or quickly become outdated, limiting their effectiveness for founders and technology transfer offices (TTOs). TTOs play a key role in guiding founders toward suitable partners and conducting due diligence, though their advice is not always followed. UKRI could enhance support here by funding a UK equivalent of the University Studio Guild[259], a US-based network for sharing best practices among universities and start-up studios. It could also improve programme evaluation by moving beyond basic activity metrics to more meaningful indicators like investment raised, job creation, revenue growth, and exit outcomes, tracked over the long term.

Assessing value for money

Not all accelerators offer good value and some are bad actors in the ecosystem. They may demand high equity stakes and charge significant fees, which may be justified if they provide access to top-tier management and capital, as seen with Syncona's Slingshot[260]. However, others provide generic services and offer little value-add, leading to unnecessary founder dilution and limited progression.

Investors views of accelerators

Many investors told me they are sceptical of accelerators, viewing them as too generic, especially when spin-outs 'accelerator-hop' from one programme to another without clear progress. Investors value programmes that offer not just training, but also access to customers, collaborators, investors and domain expertise. While generalist accelerators can help early-career researchers and first-time founders build business acumen, deeptech and life sciences investors often prefer to build ventures themselves.

This creates a paradox: investors want more investment-ready spin-outs but often dismiss the very programmes designed to bridge that gap. Some have responded by launching their own venture builders such as Sofinnova's Biovelotica[261], Illumina for Startups[262], Telefónica's Wayra[263], though many now operate further downstream or with limited university engagement. Some corporates have partnered with existing builders, such as Cambridge Future Tech's collaborations with AngloAmerican, CERN, and Nokia Bell Labs.

The need for specialist support

Many accelerators still follow the one-size-fits-all generic model which was originally designed for fast-moving software start-ups. These approaches often fail to meet the needs of deeptech, life sciences or creative industry spin-outs, many of which require longer development timelines, sector-specific expertise and early funding, not just training or demo days.

Specialist accelerators, tailored to high-tech, capital-intensive ventures are better suited to these needs. Their numbers have grown since 2019,[264] supported by Research England, Innovate UK and private funders.

Examples include:

1. CyberASAP [265] – commercialising cybersecurity research;
2. EngBio Accelerator [265] – supporting engineering biology start-ups;
3. AI SuperConnector – linking AI spin-outs across UK universities;[267]
4. London Social Ventures Fund [268] – promoting socially impactful entrepreneurship.

These specialist programmes help spin-outs become investor-ready and connect with relevant stakeholders.

257. https://www.warwicksciencepark.co.uk/digispin-wm/; https://www.coventry.ac.uk/news/2024/west-midlandsuniversities-forge-a-new-path-for-innovation-with-digispin-wm/
258. https://northernaccelerator.org/
259. https://www.universitystudioguild.com/
260. https://www.synconaltd.com/portfolio/pre-clinical-companies/slingshot-therapeutics/
261. https://sofinnovapartners.com/strategy/biovelocita
262. https://emea.illumina.com/company/illumina-for-startups.html
263. https://www.telefonica.com/en/sustainability-innovation/innovation/wayra/
264. https://www.centreforentrepreneurs.org/research/report/incubation-nation/r/recqS0zPeG1xcTAjG
265. https://iuk-business-connect.org.uk/programme/cyberasap/
266. https://www.sciencecreates.co.uk/programme/engbio3
267. Home - AI SuperConnector
268. https://londonsocialventures.com/

Evolving models: Venture studios and collision spaces

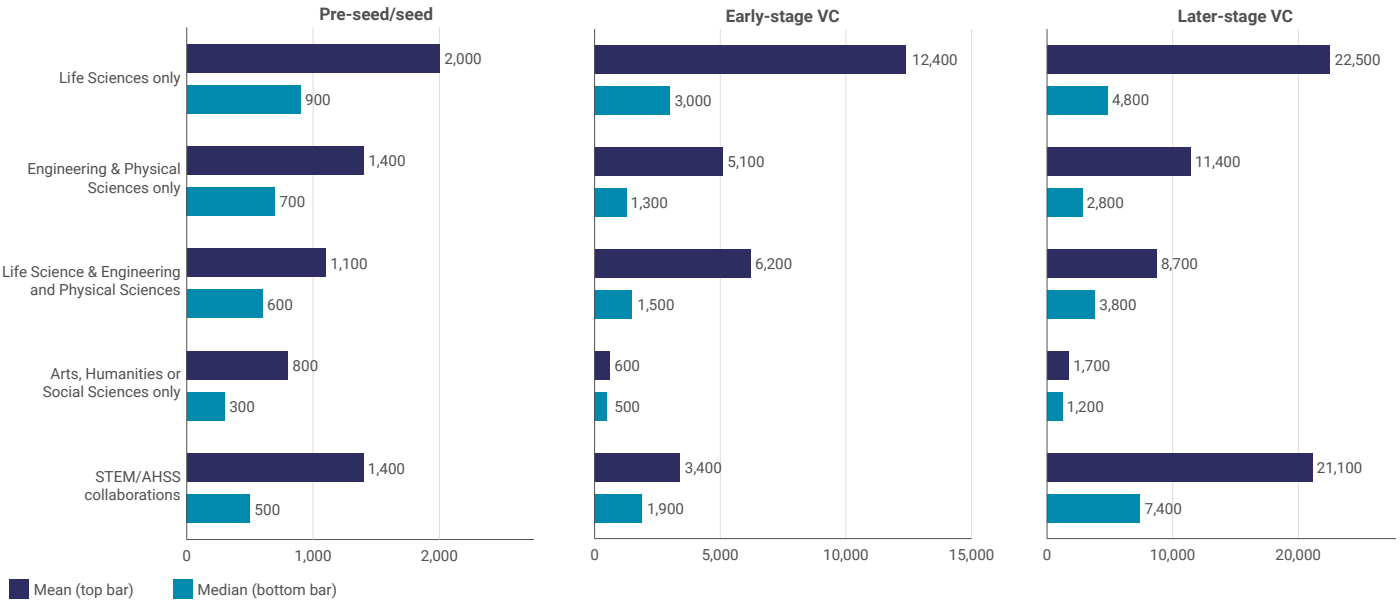
Venture studios that combine capital, advice and infrastructure in the form of 'collision spaces' are proving effective in attracting start-ups and investors. This may reflect why regions such as Manchester and Bristol saw the highest growth in spin-out populations in 2023.[269] Kendall Square in Cambridge, Massachusetts (MA), offers a global example of how integrated support ecosystems can drive innovation.[270]

Providing lab space or accelerators alone is not enough; success depends on aligning these with funding and expert guidance. The UK's Catapult Network is well-positioned to lead here, offering domain expertise, infrastructure and increasingly, seed investment capital. Some Catapults now run Fit-To-Fund programmes and offer pre-seed funding via convertible loan notes. For instance, the Centre for Process Innovation Enterprise uses a co-investment model to de-risk ventures and attract private capital, having supported 14 companies to date, including one exit.[271]

Accelerators and venture builders for SHAPE

SHAPE sector spin-outs may particularly benefit from access to an increasing number of specialist accelerators and venture builders to help enhance investment readiness and connect them to investors. A recent analysis of university spin-outs looking at levels of investment raised showed that Arts, Humanities and Social Sciences spin-outs raise less than their Science, Technology, Engineering and Mathematics counterparts at each stage of the investment journey (Figure 25).[272] Some initiatives, such as the Aspect Research Commercialisation Accelerator[273], are beginning to address this gap but activity remains relatively nascent compared to other sectors.

Figure 25 Average size of investment deals (£000's) for spin-outs emerging from different disciplines, for deals covering the period 2019-2024 (constant 2024 prices).[274]



269. https://raeng.org.uk/media/mlgnaqv1/spotlight-on-spinouts-2023-uk-academic-spinout-trends-2.pdf
270. https://kendallsquare.org/
271. https://www.uk-cpi.com/invest
272. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
273. Aspect Research Commercialisation (ARC) Accelerator - Aspect
274. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Entrepreneurs in Residence

Entrepreneurs in Residence (EiRs) are now widely used across UK universities, though their roles and structures vary. There's no single best model, and each institution must tailor its approach to fit local needs.

In this review, I heard that EiRs were often credited with helping shape early-stage ideas into investment-ready spin-outs. Unlike technology transfer offices (TTO), EiRs are not solely focused on invention disclosures and intellectual property, making them well-placed to spot emerging ideas and foster cross-disciplinary ventures. They may be embedded in specific projects or work more broadly across departments, and some go on to join the spin-outs they help create.

However, investor views on EiRs were more mixed. While strong EiRs can add real value, ineffective ones may hinder progress. A well-regarded example is the Royal Society Entrepreneur in Residence scheme[275], which places experienced industry professionals in universities part-time to support bespoke projects. This model offers founders access to impartial, expert advice and is widely regarded as a valuable resource.

Some TTOs reported having had negative experiences with EiRs who acted to undermine institutional processes, but such issues appear to be less common now. Most current EiR programmes are generally now seen as constructive and helpful.

Despite their focus on the academic interface, university-affiliated funds also reported that many spin-out proposals are not investment ready. To address this, some have partnered with venture builders, accelerators, or EiR programmes to help refine ideas. For instance, Northern Gritstone has engaged KQ Labs to support its life sciences pipeline, while Cambridge Innovation Capital (CIC) is launching a rolling EiR programme to identify and develop promising opportunities.

In summary, when carefully selected and supported, EiRs and specialist venture builders can significantly benefit spin-out founders. TTOs should help steer founders away from accelerators that offer limited value in exchange for high equity or fees. If a university adopts an EiR model, it should ensure rigorous selection, fair compensation, or partner with organisations that can provide this support to ensure that such EiRs are a catalyst for success, not a barrier to growth.

Decision-making and getting earlier high-quality advice from investors

Early, informal engagement with investors is crucial for developing successful spin-outs. Regular, non-confidential conversations help test market interest, gather feedback and align with investor expectations. While concerns about intellectual property (IP) leakage can sometimes deter founders, given most investors will not sign NDAs at first contact, open dialogue at early stages often proves more valuable. Non disclosure agreements (NDA) can always be introduced once serious interest emerges.

To support this, universities use various approaches: sector-specific advisory panels, trusted investor networks, investors in residence (see below), and regular demo days. Involving investors in translational funding panels also improves decision-making. Institutions that build long-term investor relationships and integrate them into governance processes tend to lead in best practice.

A generally held rule of thumb is that investment panel composition should evolve with project maturity. Smaller proof-of-concept awards of £50,000 for example are often reviewed by internal panels, while larger awards such as £250,000 benefit from external investor input. Examples of strong models include Cambridge University's Technology Innovation Fund[276] and Harvard's Blavatnik Biomedical Accelerator[277], both of which embed investors in their decision-making structures.

For universities outside major hubs, limited investor access could be addressed through better tapping their alumni networks, regional partnerships or shared technology transfer offices (TTOs). Investors report that larger TTOs with seed funds are often better at balancing university and investor priorities. Clear separation between making university seed fund investment decisions and IP negotiations with the spin-out is also key to avoiding conflicts.

Investors in Residence (IiRs)

A limited number of organisations benefit from having Investors in Residence (IiRs), experienced investors who provide part-time or informal advice on investment strategy and decision-making. IiRs (or similar investment advisors) can help to shape early-stage opportunities and build investor confidence and are most likely to be found in institutions with in-house funds.

275. https://royalsociety.org/grants/entrepreneur-in-residence/
276. https://www.enterprise.cam.ac.uk/pioneering-research-innovations/develop-a-commercial-opportunity/translational-funding/technology-investment-fund/
277. https://otd.harvard.edu/accelerators/blavatnik-biomedical-accelerator/

Clearly not every institution can attract or afford their own IiR. In regional university groupings, shared funds may be able to engage IiRs to advise across pooled deal flow, offering more consistent guidance than ad hoc investor input. While a single IiR brings valuable insight, it brings with it the risk of only one voice, and incorporating multiple perspectives would strengthen decision-making (hence some universities use investment advisory panels instead).

Operating within the confidential 'walled garden' of the university at an early stage, IiRs or investment advisory panels can advise on company formations, enhance credibility with external investors and support strategic portfolio-level thinking. Even fractional access, such as through shared technology transfer offices (TTOs), could be highly beneficial. However, potential conflicts of interest will need to be managed when active investors take on these roles.

Getting spin-outs in front of investors

A key barrier to investor engagement is uneven access to information. National specialist deeptech and life sciences investors often feel they already see the best opportunities, while regional universities maintain strong ties with their local generalist funds and angel networks. However, angel groups outside major hubs and large non-specialist investors can miss promising ventures from across the UK due to limited visibility or reliance on intermediaries.

The surge in AI-generated submissions to venture capital (VC) funds has overwhelmed investors with low-quality funding propositions, making it harder for them to identify standout founders. As a result, many VCs now prefer 'warm' introductions, which can disadvantage high-potential entrepreneurs without established networks, particularly those outside the Golden Triangle.

Investor alignment and matching mechanisms

Digital matchmaking platforms aim to bridge these gaps, though their effectiveness is debated. Some investors see them as a last resort, while others find them useful for connecting with founders who lack networks. University-led initiatives like Midlands Mindforge [278] are showing promise.Their recently launched Midlands Ecosystem Platform offers open access to data on 6,000 start-ups, including 400 spin-outs, and connects users to science parks, accelerators, corporates and over 1,000 investors.[279] Similar platforms could benefit other regions, especially through shared technology transfer offices (TTOs).

UK-wide national connectivity tools like ImpactU's Impact Investor Finder[280] also help connect founders with investors in underrepresented sectors or regions, improving capital access.

The Innovate UK Investor Partnerships Scheme[281] is perhaps the most well-known initiative in this space and provides a structured mechanism that brings together Innovate UK's non-dilutive funding and investor partners' aligned funding and expertise to micro, small and medium sized enterprises (SMEs). Between 2022-25, the programme allocated £80 million to support R&D-intensive SMEs. The intention behind this programme is well-conceived and most people I spoke with were supportive, with feedback suggesting that the investor vetting process was robust.

Concerns remain about inconsistent quality of referred ventures, limited thematic organisation and high engagement burdens for smaller investors. There are also some who worry the use of the scheme by a few investors to secure non-dilutive grants for their existing portfolios, rather than harnessing the non-dilutive funding to invest in brand-new opportunities for investors, which was part of the original intention of the product.

The scheme could be improved by expanding beyond an investment fund focus and by widening access to sector-specific angel communities alongside enhanced proposition filtering to prioritise quality over quantity. Innovate UK is already working on evolving this programme, with focused efforts on angel community and late-stage start-ups.

While connecting spin-outs with investors is essential, it's equally important that founders are equipped to evaluate these investors as potential long-term partners. Yet, guidance on evaluating investors is limited. Some accelerators offer 'reverse pitching' events, where investors present to start-ups, but these remain niche.

UKRI could help by developing tools and guidance for founders and TTOs to conduct investor due diligence. While Innovate UK's scheme vets investors upon entry, most interactions happen outside this programme, making structured guidance for investor evaluation increasingly necessary.

278. https://midlandsmindforge.com/
279. https://midlandsinnovation.org.uk/explore-the-midlands-ecosystem/
280. https://investors.impact12.com/
281. https://iuk-business-connect.org.uk/programme/investor-partnerships/

Pitching events vs long-term relationship building

Universities and regional groups often organise demo days and investor pitching events to showcase their start-ups. These can be valuable when well-executed and aligned with investor interests, especially when held in major investor hubs.[282] However, many events suffer from low investor turnout or attract the wrong audience such as peers or service providers. Despite universities' extensive outreach efforts, investor awareness of these activities also remains low. Some investors view demo days as too generalist or premature, preferring to build deeper, relationship-based engagement.

The consensus among investors is clear: long-term relationships are more effective than one-off showcases. Rather than collecting investor contacts like stamps, universities should be encouraged to foster ongoing, strategic engagement that allows investors to help them shape their ventures early. While not all investors are willing to invest time upfront, those who do often see more deal flow and better outcomes. Realising this, some university technology transfer offices (TTOs) such as Cambridge Enterprise have recently opened offices in London to be closer to national and international investors.[283]

Some institutions have hired dedicated investor relationship managers to help manage and build relationships. For universities with fewer spin-outs or limited resources, such as many post-92 institutions, hiring fractional positions or sharing such roles through regional collaborations may be required. For example, the SCENE programme in the North East brings together five universities to build a stronger commercialisation ecosystem. As part of this, an 'access to finance specialist' will work with the Northern Accelerator to deepen investor engagement and maximise co-investment opportunities.[284]

Pooling deal flow

Previous reviews[285] and funding schemes[286] have encouraged universities to team up to consolidate their deal flow making it easier for investors to access critical mass, as well as creating potential additional benefits such as standardisation and simplified approaches.

This requires universities to balance activities which are best conducted alone with those which benefit from collective actions such as building critical mass deal flow alongside sharing networks and attracting private capital. Most of the consolidation efforts seen to date have been at the regional /geographic level. The next stage in the evolution of this process should consider pooling and curating deal flow at a more granular sector specific level because specialist deeptech investors tend to hunt by sector, not by region.

Measures and incentives

Metrics drive behaviours. It is important that UKRI is clear about what it wishes to see and expects from universities over the next decade and in line with the new national strategy.

Given the variety of important spin-out outcomes, traditional metrics such as revenue and profit alone fail to capture the long-term value of the innovation-led spin-outs coming out of universities, many of which may never sell a product before they are acquired. Furthermore, the long-term impacts of spin-outs, particularly those commercialising groundbreaking technologies that could radically shape future opportunities, will take many years, possibly decades, to realise. More nuanced additional indicators are therefore required that are both timely and responsive to the types of interventions that need to be tracked such as UKRI investment. Examples include trajectory-focused measures that capture whether the spin-out is on a pathway that increases its likelihood of a positive outcome, such as investment milestones and cumulative non-public investment funding, hitting relevant employment thresholds, and metrics capturing product launch and market penetration. Exits such as acquisition/buyout, public listings and other positive outcomes relevant to different types of spin-outs could also provide meaningful signals of longer-term success. This will require UKRI to reassess spin-out tracking to reflect quality and impact and not just volume or survival. The specific set of metrics should ideally be tailored to different categories of spin-outs where their outcomes and development pathways are expected to differ significantly.

282. https://www.setsquared.co.uk/programme/investment-futures/
283. https://www.enterprise.cam.ac.uk/news/cambridge-enterprise-opens-london-office-to-underline-global-ambition-for-university-innovation/
284. https://www.ukri.org/news/30-million-to-grow-regional-research-commercialisation-ecosystems/
285. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
286. https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/connecting-capability-fund/

It should also be noted that many of the metrics traditionally used to measure spin-out success say little about the extent to which the UK is not just creating these impacts but is able to capture value from success to benefit its citizens. This could be through high-wage employment in the UK, realised tax revenues, and from companies and individuals based in the UK being able to consume and benefit from the products and services underpinned by intellectual property (IP) developed within the university base. We must therefore also increase our effort to measure not just our ability in the UK to seed spin-outs that become successful, but our ability to capture value from them as they develop and grow.

The UK's Spin-out Register[287] offers a unique opportunity to lead globally in understanding spin-outs as national assets.The register could be used to more deeply understand the pattern of early-stage investment into spin-outs by angels, family offices and so on. A productivity overlay on the register could assess spin-out quality, longevity and economic contribution. Metrics could include post-acquisition performance and policy influence. Importantly, the register should be used to analyse investment types, sectors and investor profiles to guide targeted support and broaden investment beyond traditional Science, Technology, Engineering and Mathematics (STEM) areas.

One note of caution should be given regarding assessing the productivity of spin-outs. Many spin-outs, particularly those in deeptech pursuing an equity-backed investment growth pathway, may take years before achieving any meaningful revenue. Simple measures of productivity, for example based on turnover per employee, used on their own would fail to capture their economic contribution during this phase of their development. In addition, for successful spin-outs commercialising platform technologies and services, the effect on their customers and end-consumers may dwarf the long-term impacts realised by the spin-out company alone, as measured by turnover, employment and productivity, for example.

Beyond the specific spin-out and the technology/IP being commercialised, in focusing on short-term metrics, we often overlook other, wider areas of longer-term impacts. This includes, for example, the contributions universities and their spin-outs make to the building of entrepreneurial talent with alumni trajectories, innovation ecosystem building and regional economic growth often overlooked. Because of its well-tracked longitudinal datasets, the UK has a unique opportunity to build a suite of value-adding, productivity and growth-related tracking metrics to ensure it targets future funding in the right areas.

Finally, support could be strengthened for student start-ups, where student-led ventures are under-tracked despite their potential economic impact. UKRI should implement enhanced tracking and support for student start-ups including those requiring early-stage capital, and universities should better coordinate investor engagement across student enterprise and staff enterprise units including local accelerators and technology transfer offices.

287. https://www.hesa.ac.uk/data-and-analysis/business-community/spin-out-register

Recommendations

1. Enhance transparency and build trust between universities and investors.

a. Universities should provide clearer guidance on calculating equity allocation, particularly between principal investigators and founding teams, to address confusion and inconsistency.

b. UKRI should require universities to publicly disclose intellectual property and equity policies and indicate alignment with recognised benchmarks such as University Spin-Out Investment Terms (USIT). This would support benchmarking, reduce misinformation and foster trust across the ecosystem.

2. Accelerate spin-out formation and reduce spinning out too soon.

a. UKRI should convene a national task force to speed up spin-out formation and reduce time from investor interest to deal completion. The task force should include universities, investors, investor groups such as UK Business Angels Association (UKBAA), British Private Equity and Venture Capital Association (BVCA) and legal experts to ensure practical, scalable solutions and demonstrate stakeholder buy in.

b. The task force should build on the pilot deal-readiness toolkit and the BVCA and UKBAA templates already being developed and expand to include:

   i. Standardised term sheets, corporate and intellectual property transfer templates for life sciences, software, deeptech/hardware and climate tech.

   ii. Ensure complete coverage of pre-seed to seed stages, incorporating all potential investment mechanisms such as convertible loans, Simple Agreement for Future Equity (SAFE) agreements, Seed Enterprise Investment Scheme and Enterprise Investment Scheme (S/EIS) investments and direct equity investment.

c. UKRI should maintain and publish a list of universities adopting these templates to encourage uptake and consistency, recognising that not all investors will agree to use them.

d. UKRI and universities should share best practice and encourage adoption of alternative models to spinning out too soon such as universities running pre-trading 'virtual business' schemes to delay incorporation until readiness is achieved.

3. Strengthen early investor engagement and interfaces

a. Expand and enhance access to Entrepreneurs in Residence programmes: UKRI should provide funding to broaden access to existing UKRI and Royal Society programmes supporting Entrepreneurs-in-Residence, Investors-in-Residence and staff exchanges with investors to foster mutual understanding and ensure more coverage across the UK.

b. Universities should embed more commercial expertise and involve investors earlier in university decision-making such as proof-of-concept (PoC) panels and seed fund panels to improve investment readiness. UKRI should consider making PoC funding available to only those who demonstrate they are taking external and relevant advice prior to deploying it.

c. Universities should broaden investor networks: Encourage engagement with diverse investor types such as corporate venture capital, family offices and social finance, and facilitate network sharing across universities. Boundary-spanning roles such as investor relations managers could help here.

d. Leverage alumni networks: Universities who struggle to access or engage investors routinely should strategically engage their alumni, especially those in high technology sectors, as potential investors, partners and connectors.

e. Create a national community of accelerators: Establish a UK equivalent of the University Studio Guild to connect technology transfer offices, entrepreneurship centres and start-up studios for best practice sharing and helping to navigate this complex and dynamic scene.

4. Support founders in selecting the right investors as partners

a. Due diligence guidance: Provide clear guidance for founders and universities on assessing investors, including alignment of values, track record and terms.

b. Independent advice: Ensure founders have access to impartial advice during spin-out formation and investor negotiations.

5. Improve metrics and tracking

a. Define success clearly: UKRI should articulate a vision for spin-out outcomes and success, supported by metrics that reflect quality such as time to revenue, investment raised, sector impact, rather than quantity or survival alone.

b. Use the Spin-out Register strategically: Leverage the register to understand and publish investor profiles for spin-outs, student companies and non-Science, Technology, Engineering and Mathematics (STEM) sectors (such as Social Sciences, Humanities and the Arts for People and the Economy (SHAPE)) and guide future targeted policy interventions where gaps emerge.

6. Capacity, capability and place

6. Capacity, capability and place

Summary

UK spin-outs need more than just capital to thrive; they require visionary leadership, tailored support systems, investor-ready pipelines, specialised infrastructure and access to skilled talent.

Universities are uniquely positioned to catalyse regional and national growth by curating high-quality investment opportunities, fostering regional innovation clusters and anchoring companies within the UK. Spin-outs closely associated with key national facilities or capabilities are less likely to move away and more likely to retain a presence in the UK or that region.

While the creation of spin-outs is geographically widespread, investment remains disproportionately concentrated in the Greater South East. This imbalance highlights the need to better connect regional innovation with capital and to ensure that promising ventures across the UK have equitable access to growth opportunities. Sector-specific national showcases and innovative financial models may be required to enhance interactions and attract new sources of capital to spin-out investing.

Spin-out management and leadership quality is critical for investors and successful programmes which enable better access to talent at regional levels should be scaled and disseminated. Flexible lab, office or incubator space and preferential access to unique national assets are essential to attract and retain spin-outs in the UK.

UK university technology transfer offices play a complex role balancing multiple stakeholders. Sustained UKRI investment has improved capability but the engagement with investors remains inconsistent due to resource disparities, staff turnover and limited scale at many institutions. A pilot of shared TTOs which aimed to consolidate expertise and deal flow across universities has recently been run and lessons learned are to be disseminated. They offer benefits like consolidated pipelines and harmonised processes but may not yet have gone far enough to fulfil investor expectations. Sector-based models may better align with investor needs than geographic clusters and it is likely that both will be required going forward.

Investor literacy in deeptech is limited especially at later stages. Initiatives are helping, but broader long-term interventions alongside patience are needed to build a more technically knowledgeable investor base in the UK.

There is an ongoing debate about whether efforts should be concentrated in high-performing regions or distributed to unlock the full economic potential of emerging areas. Place-based investing has an important role to play here, helping to retain spin-outs in clusters that offer clear local and sector-based strengths and encouraging UK-wide mobility in situations where companies will grow faster elsewhere. Adopting both approaches will help to better anchor companies, not only within the UK, but across its diverse regions.

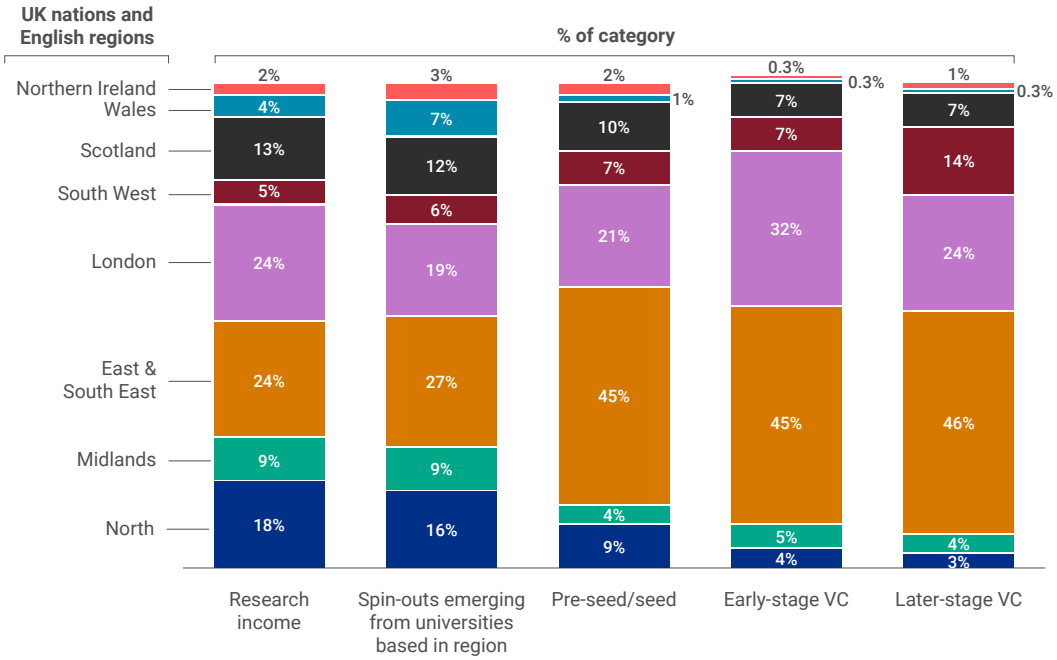
However, an excessive focus on retention, whether regional or national, can be counterproductive if it hampers scale or limits exit opportunities for investors. A balanced strategy is essential: one that nurtures growth, embeds a meaningful presence in the UK and enables global engagement. This is the foundation for long-term success.

The UK government's Industrial Strategy is explicitly place-based and recognises that stronger regional growth is essential for the competitiveness of the UK's strategic sectors and the resilience of the national economy.

Access to capital, the cultural alignment between universities and investors, and the maturity of innovation ecosystems vary significantly across the UK. These differences reflect the diversity of the higher education sector as well as the individuality of investors and broader regional disparities in infrastructure and support. Spin-outs are emerging as a recognised asset class, but growth rates vary widely across regions.

The current distribution of investment in spin-outs is highly uneven and fragmented (Figure 26). The availability of generalist regional investment capital needs to be carefully matched to specialist business angels and investment funds who can analyse propositions and lead rounds. To drive meaningful growth the UK will likely need to strike a careful balance between regional development and national strategic priorities. This will likely require making difficult, deliberate decisions on whether to concentrate resources where they can have the greatest impact rather than spreading efforts too thinly and risking underperformance across the board.

Figure 26 A comparison of the distributions of research income, spin-out production and equity investment across the UK nations and regions.[288]



The UK's long-term and sustained investment into innovation at universities including technology transfer offices (TTOs) via UKRI funding has led to a general upskilling and higher resource levels. A fact that is recognised by many US and European TTOs. Nonetheless, there is still some remaining heterogeneity leading to patchiness in university-investor interactions in the UK due to varying levels of experience, quality and resources across universities and investors.

It is also important to consider the wider operating context where there are challenges with high staff turnover, particularly in universities. This can disrupt established relationships and a lead to a loss of corporate memory. In turn, this can result in investors and universities feeling like they are 'reinventing the wheel' during interactions. This is further compounded by many universities lacking the scale or experience to build consistent long-term investor relationships and who only experience low-frequency interactions at best. In addition, sector-specific differences, for example deeptech vs software, mean a one-size-fits-all approach does not always work.

This landscape is doubly challenged given that many universities are under considerable financial pressures. As such, it is crucial that long-term, consistent and sustainable support for knowledge exchange and commercialisation is ring-fenced and supported to continue to build capacity and capability across the sector.

This review touches on capacity, capability and place throughout. The chapter below speaks specifically to

288. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

these challenges including regional and international barriers and opportunities not covered elsewhere.

Capital alone is not the answer

Spin-outs across the UK need more than a compelling business proposition. Securing capital remains the top priority, as many other challenges will tend to resolve themselves once sufficient funding is in place. However, it is clear that simply throwing money at unprepared academic founders without changing culture or equipping them with the skills and networks to succeed will be futile. Looking beyond capital, key additional requirements include access to:

- Specialist services and support including tailored guidance, mentorship and service support such as legal, bank and accounting resources.
- Infrastructure and space including access to affordable high-quality lab and office space suited to sector-specific needs, plus access to deeptech equipment and infrastructure.
- Talent including skilled individuals to lead and scale ventures particularly in technical and commercial roles.

Regional universities can broaden access to capital and ensure promising spin-outs across the UK are not overlooked due to geography by making it easier for investors to engage. This, coupled with a greater risk appetite from investors and increased geographical mobility, is required to unlock the full potential of UK spin-outs. Currently, the majority of generalist investors are reluctant to engage with opportunities beyond a two-hour travel radius which limits access to capital for founders outside major hubs. Changing this behaviour will be challenging and instead universities and their partners should focus on removing friction for investors by proactively curating deal flow by sector and stage, pre-screening opportunities for investment readiness, and showcasing only the highest quality ventures from each region. Once the capital constraints have been addressed, it will likely trigger a rise in activity and expose the next most pressing gaps such as human capital and space.

Accessing human capital

Universities across the entirety of the country are producing innovative inventions and spin-outs, and it clear that there is no lack of research talent.

Spin-outs by their nature often need access to specialist skills. They report facing difficulties hiring skilled professionals due to the specialised nature of roles and limited resources. They also struggle to retain staff as they cannot compete with larger firms offering higher salaries and better benefits. Investors prioritise strong leadership teams when evaluating spin-outs as mismatches in capability or delays in hiring can lead to missed milestones and budget overruns which cost investors' money. For investors, the quality of spin-out management is often a decisive factor in securing funding, hence the commonly heard investor refrain: 'management, management, management'.

The UK's innovation success is built on diverse perspectives and embracing international collaboration. A 2023 study by The Entrepreneurs Network revealed that 39% of the UK's top 100 fastest-growing firms were founded or co-founded by individuals born outside the UK, which contrasts with a foreign-born population of just 15%.[289] Furthermore, many UK spin-out teams include international researchers and need to attract international management professionals. This underscores the critical role diversity and international talent plays in driving the UK's start-up success. However, universities report issues with immigration and visa processes which they state need to be streamlined to allow the UK to continue to attract global talent.

In this context, it is encouraging to see the recent creation of the government's £54 million Global Talent Fund[290] and the Number 10 global talent taskforce[291] which signal top level commitment and recognition of this issue. However, many feel more is needed, with attention being directed towards considering further visa reform. Current student visa rules prohibit self-employment, consultancy, company formation, or holding more than 10% equity, leaving many aspiring student start-up founders frustrated especially as they are often unaware of such restrictions until after enrolment. Breaches can lead to visa cancellation, future application prejudice and even a 10-year travel ban, with universities obliged to report violations.[292] The Russell Group of universities has called for the creation of stable,

290. https://www.tenentrepreneurs.org/immigrantfounders
291. https://www.gov.uk/government/news/leading-lights-of-uk-research-spearhead-search-for-worlds-best-talent
292. https://www.gov.uk/government/news/uk-launches-global-talent-drive-to-attract-world-leading-researchers-and-innovators

affordable and globally competitive visa routes for students, researchers and spin-out leaders.[293]

There are also geographical challenges with domestic talent, where universities outside the Golden Triangle often struggle to attract top talent. Programmes like Northern Triangle Talent, supported by Research England's Connecting Capability Fund helps recruit early-stage start-up leaders and could provide a template for other similar programmes.[294] However, care must be taken to ensure there is sufficient supply of deal flow to support such talent networks or they will dissipate.

Finally, the knock-on effects of spin-out creation can sometimes take time to emerge. For example, in some more mature ecosystems a 'flywheel effect' can be seen where a major spin-out company that has scaled locally can act to boost local economies.

Accessing infrastructure and space

Spin-outs are high growth companies that can require access to lab space, office space and/or specialised equipment.

However, university labs are primarily for academic use. If spin-out founders wish to access their university labs to do company related work, it can come at a high cost, for example, full economic cost plus a margin to compensate for academic availability being reduced. VAT issues relating to non-academic use and restrictions tied to the funders of such equipment further complicate access for spin-outs. This can become an issue for investors who need to be convinced the spin-out can enjoy continued access such facilities and equipment before they will invest. While some universities are now collaborating regionally to share space, the demand currently outstrips supply in the larger clusters and there is an acute shortage of lab space in the London and the South East.

The business models for new incubators can be challenging to make work as they are risky and capital-intensive, often requiring public funding support and subsidy to remain solvent. This challenge arises because spin-outs typically need short-term and flexible leases to access lab space, but property investors need long-term returns. In the past, substantial amounts of funding to build new facilities and infrastructure came from the European Union's European Regional Development Fund[295], although support is also provided via schemes such as Research England's UK Research Partnership Investment Fund (UKRPIF).[296] A 2024 review found that universities supported by UKRPIF reported an almost 10-fold increase in research outputs including spin-outs, at nearly 10 times the baseline rate.[297]

Some areas, such as the Knowledge Quarter [298] in London, are seeing rapid privately funded growth, but for other areas future sources of funding for such infrastructure is less clear, especially for infrastructure which supports early-stage companies. Some commentators have called for the National Wealth Fund to establish a dedicated deeptech infrastructure fund that could support new or retrofitted lab spaces in research-intensive regions across the UK, helping scaling companies, fostering collaboration and boosting regional innovation clusters.[299]

Experiences from other countries have shown that place-based propositions, if well-constructed, can act to attract capital. These very large national start-up incubator facilities can act to 'crowd-in' investors, talent and service providers in a highly concentrated manner. For example, LabCentral[300] in Boston provides a range of distributed spaces with a centralised model and support programmes.

The Station F model[301] in France is also worthy of a closer look. Since its inception, Station F has played an important role in redefining the technological landscape in France. Prior to its establishment, the start-up ecosystem in France was relatively fragmented. By convening leading start-ups alongside prominent innovation stakeholders, Station F is now emerging as a central hub for AI start-ups in Europe. France has since ascended the global innovation rankings and, as it stands today, Station F hosts the largest concentration of artificial intelligence start-ups in Europe. Founded in 2017, the campus accommodates over 1,000

293. https://committees.parliament.uk/writtenevidence/141584/pdf/
294. https://sheffield.ac.uk/commercialisation/news/northern-triangle-talent-project-one-year
295. https://ec.europa.eu/regional_policy/funding/erdf_en
296. https://www.ukri.org/what-we-do/browse-our-areas-of-investment-and-support/uk-research-partnership-investment-fund/
297. https://www.ukri.org/wp-content/uploads/2024/12/ResearchEngland-291124-EvaluationUKRPIF-InterimReport.pdf
298. https://www.knowledgequarter.london/
299. https://committees.parliament.uk/writtenevidence/134089/pdf/
300. https://www.labcentral.org/
301. https://stationf.co/

start-ups, approximately one-third of which originate from outside France. In addition to its entrepreneurial infrastructure, Station F offers co-living accommodations for founders, providing a cost-effective alternative to the high rental prices typically associated with Paris.

Universities have long played a key role in developing innovation spaces on their land, with examples including Imperial's White City campus and Manchester's network of bioincubators. Additionally, property developers have also been stepping in with investment models that can attract institutional capital including Local Government Pension funds. For example, Bruntwood SciTech has created a national fund for science and tech campuses and has also strategically invested in venture funds like the Greater Manchester and Cheshire Life Sciences Fund 2.[302] This fund, backed by local authorities and managed by PXN Group, illustrates how developers are increasingly blending property, incubation and investment inside fund wrappers. The Pioneer Group also exemplifies this integration trend,[303] operating science parks alongside accelerators and providing early-stage venture funding.

It remains to be seen whether these blended models, linking local government, developers and venture capital can scale successfully across the UK. If they do, they could become a valuable complement to existing capital sources.

Anchoring in the UK

Successful innovation ecosystems demonstrate the value of long-term, policy-driven national-level planning and consistent investment in the translation of university science. Global hubs like Boston and Israel thrive on scale and serial entrepreneurship. Although approaches in the US are commonly referenced, there are other models across the world which offer valuable insights including: Denmark's BioInnovation Institute[304] which is a standout example of the power of sustained early investment in life sciences innovation; and in Singapore[305] and the Netherlands[306] where strategic investment in innovation hubs and infrastructure have significantly boosted deeptech development. The UK could learn lessons from this level of focus and coherence.

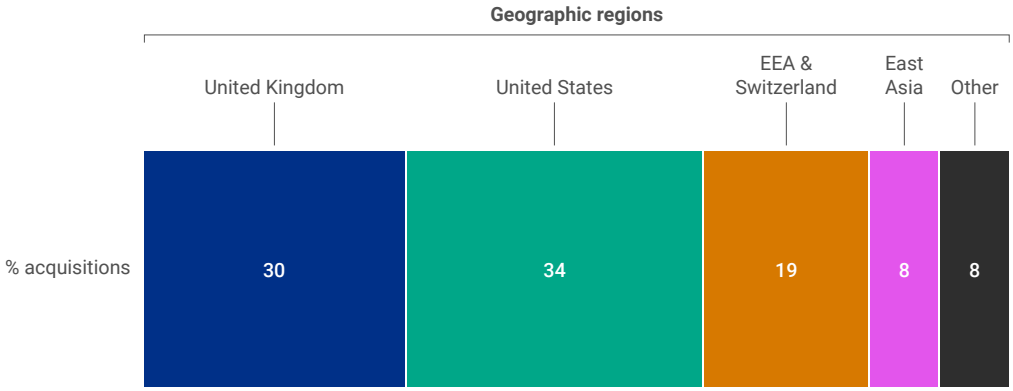
As noted by Ulrichsen in the appendix to this report, a major challenge in retaining value created by spin-outs as they grow and scale is that they can become increasingly geographically mobile. Among other things, they require access to new or significantly expanded sets of capabilities (skills, facilities, infrastructure etc), development partners, key early markets, and, of course, increasing levels of finance. Where these are more competitively accessed or acquired abroad, or where the innovation and business environment is more competitive elsewhere, there can be pressures to expand or relocate outside the UK

UK spin-outs are operating in a highly competitive global environment. Already, 6% of UK life science spin-outs have shifted operations overseas,[307] mainly to the US, in pursuit of funding – there is £8 of investment capital in the US for every £1 in the UK – and more supportive innovation ecosystems. Some UK spin-outs establish US holding companies to attract investment and leadership while maintaining UK operations – the so called 'Delaware flip'. Conversely, 'Britshoring' has seen US firms setting up UK subsidiaries to access top-tier university talent at lower costs, especially in fields like artificial intelligence where the UK produces some of the world's top global talent but at lower salaries.

The shift of some spin-outs to the US via voluntary relocation is driven by well characterised factors such as better founder incentives, higher executive pay, more favourable tax regimes and deeper capital pools. Some spin-outs may not move voluntarily but are instead sold to US acquirers who offer the founders and/or investors an attractive exit valuation. For example, Oxford Ionics, a UK quantum spin-out, was recently acquired by a US competitor for $1.1 billion.[308] Figure 27 shows the headquarters location of the acquirers of UK university spin-outs, with 30% of spin-outs acquired by UK-headquartered companies and 70% being acquired by companies headquartered overseas.

302. https://committees.parliament.uk/writtenevidence/134089/pdf/
303. https://thepioneergroup.com
304. https://bii.dk/
305. https://globalventuring.com/corporate/asia/singapores-national-university-supercharges-ambitions-to-be-global-deep-tech-ventures-hub
306. https://ioplus.nl/en/posts/dutch-tech-companies-raise-nearly-50-more-money-in-2024
307. https://www.bidwells.co.uk/insights-reports-events/Now-is-the-time-to-go-big/
308. https://www.physics.ox.ac.uk/news/university-oxfords-highest-value-quantum-computing-spinout-acquisition

Figure 27 Headquarter location of acquirers of UK university spin-outs (% acquisitions).[309]



Universities have little influence over such mobility or spin-out exit decisions. However, universities can play a pivotal role is in fostering innovation clusters which create the right environment and spaces for companies to grow in the UK by offering access to talent, infrastructure and networks. The data shows that student start-ups are sticky with 58% of graduate entrepreneurs who went on to do entrepreneurial activity staying in the area they studied in.[310] Spin-outs, often driven by their founders, are also naturally sticky and consequently the headquarters of 70% of UK university spin-outs remain in the cluster from which they originated.[311]

A full exploration of innovation clusters and factors affecting spin-out mobility and retention is beyond the scope of this review. However, several factors relevant to spin-outs and investors were raised by those I spoke to including: the personal commitment of founders to their region; the presence of reliable, long-term investors in different regions; preferential or facilitated access to university or national facilities; and early partial liquidity mechanisms such as permitting secondary share sales to other investors which can help founders and/or early seed or angel investors realise some value without needing to exit the entire company too early. This has the added benefit that such founders have the potential to recycle some of these exit proceeds into their region of origin. For example, exit proceeds from Ziylo have catalysed the Science Creates ecosystem to support 150 deeptech start-ups with access to lab space, investment (SCVC), training, events and a network of partners. Science Creates is now working with the University of Bristol on its third £8.5 million incubator, enabled by the Research England Development fund, which will include advanced wet labs and facilities for up to 275 companies and is opening in 2026.[312]

There are two forms of anchoring when considering the long-term presence of spin-outs. These are: regional anchoring whereby a spin-out remains and grows within the region where it was founded; and national anchoring whereby a spin-out may move within the UK or operate across multiple sites but resists the temptation to ultimately leave the UK entirely.

Anchoring a company can be dependent on it having put down deep 'roots' in a region, for example a factory or an R&D facility located close to a university talent stream, which can make it harder to 'uproot' entirely in the event of an exit. Spin-outs are most vulnerable to relocation when they are being acquired early in their lifetimes and/or need substantial funding for rapid scaling. I heard several stories of founders failing to raise local investment and thus feeling forced to relocate within the UK to access capital and/or deeper talent pools. This is corroborated by independent surveys which have shown that founders cite access to funding as second only to business collaboration as the main reason to relocate from a spin-out's original location.[313] Relocation is likely more acute in areas such as software which are more 'transportable' and mobile. Nonetheless it happens in deeptech too: the AI company Exscientia from the University of Dundee expanded to Oxford to raise further capital before being merged with Recursion Pharma in the USA.

309. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
310. https://www.ncub.co.uk/wp-content/uploads/2022/10/Graduate_entrepreneurship_v7.pdf
311. https://www.bidwells.co.uk/insights-reports-events/Now-is-the-time-to-go-big/
312. https://www.sciencecreates.co.uk/incubators/omx
313. https://www.bidwells.co.uk/insights-reports-events/Now-is-the-time-to-go-big/

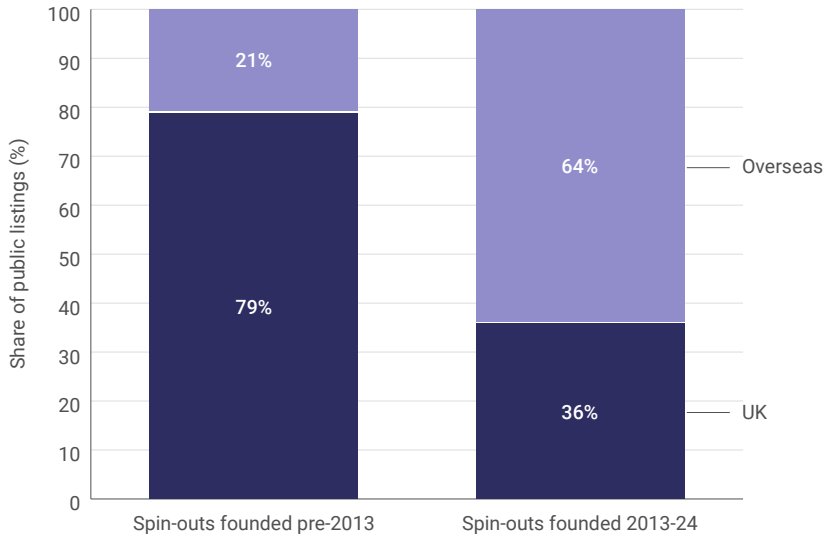
Bootstrapped spin-outs that generate revenue, rather than those relying on venture capital, often maintain stronger founder influence. These businesses typically have key domestic clients that provide consistent repeat purchases within the UK, factors that can contribute to keeping the companies anchored locally. However, it is vital to recognise that many spin-out trajectories are more often driven by the investors need to achieve an exit. Investors have a duty to their limited partners to maximise value and that may require a trade sale to a foreign company. The more that spin-outs can be enabled to 'put down roots' before such exits occur, the higher the chance that the acquiring company will leave a substantial presence in the UK and thus still contribute to the UK's productivity, jobs market and tax revenues, even if its HQ migrates overseas. For example, the University of Cambridge spin-out Astex Pharmaceuticals was acquired by the Japanese company Otsuka in 2013,[314] but it still retains its UK R&D operations here due to its deep ties with the Cambridge and Newcastle universities and its expertise in fragment-based drug discovery.[315]

It is not surprising that investor sentiment generally favours policies that make the UK a more attractive place for companies to remain, rather than imposing penalties such as subsidy clawbacks which can deter investment and create uncertainty. To support retention, investors felt it was important to preserve effective incentives like R&D tax credits and the Patent Box[316]. These tools can encourage foreign investors and acquirers to retain a UK presence to continue benefiting from such schemes.

Additionally, investment from institutions like the British Business Bank or the National Wealth Fund (NWF) can boost confidence among international investors, including sovereign wealth funds. Companies tend to be pulled towards locations that match where most of their funding has come from. The perceived potential for follow-on funding from UK public finance institutions may increase the likelihood of companies staying in the UK, and the NWF has made its financing contingent on retaining a UK head office, jobs or capital expansion in the UK.[317]

Many commentators also highlighted the absence of a high-tech stock market equivalent to NASDAQ as a factor driving UK spin-outs and their investors to relocate to the US. If spin-out firms could list domestically and still access reasonable valuations, strong liquidity and specialist analyst coverage, they would be less likely to seek access to overseas markets with deeper capital pools. Figure 28 shows the location of initial public offering (IPO) of UK university spin-outs.

Figure 28 Location of initial public offering (IPO) of UK university spin-outs (% public listings).[318]



314. https://astx.com/discover-astex/our-history/
315. https://www.cancerresearchhorizons.com/news-and-events/our-news/astex-announces-new-drug-discovery-collaboration-university-newcastle-upon
316. https://www.gov.uk/guidance/corporation-tax-the-patent-box
317. https://publications.parliament.uk/pa/ld5901/ldselect/ldsctech/192/19202.htm
318. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

The importance of infrastructure to anchoring

Building and providing infrastructure or unique resources, especially specialist types associated with areas like deeptech such as fusion, quantum, semiconductors, lasers, and life sciences such as cell and gene therapy and advanced biologics, can act as a magnet for investment. It is crucial that spin-outs and start-ups are given access to such unique national assets and infrastructure. For example, the highly revered UK Biobank has enabled over 900 patent filings globally – a huge success, yet anecdotal feedback to me from an investor suggests only a tiny fraction of these were filed or exploited by UK entities.

Even companies that do relocate overseas can still be attracted to return to the UK to access the UK's world-leading infrastructures and talent. For example, the University of Bristol/Imperial College London spin-out PsiQuantum followed the familiar pattern of relocating to the US in 2016 to access capital and tap into the US's fast-moving culture. However, when it needed access to the UK's specialist and unique cryogenic capabilities, it set up a partnership with the Daresbury Laboratory and has since set-up a manufacturing hub in Oxfordshire.[319]

Spin-out mobility and retention: National or regional cluster strategy?

I heard many differing views on whether the UK is now too fragmented, or it has not yet fully tapped the potential of its regions. Two strategic perspectives have emerged: a unified UK-wide national cluster which would position the UK as a single innovation ecosystem to concentrate capital and build a globally competitive identity; and a regional excellence model to develop regional place-based clusters that act as feeders, channelling high-quality opportunities into national international investment pools.

There was broad consensus that both of the above approaches are required, but differences emerged as to the priority order in which they should be tackled and where the emphasis should be placed. It is true that larger overseas investors generally view the UK as geographically compact, and therefore the location of investment targets within the UK is viewed as less of a concern, although proximity to airports and good transport links to enable investors to attend board meetings is a practical advantage. As a result, what matters most to international and nationally operating sector specialist investors is visibility of opportunities, access to talent and connectivity to unique national resources.

Collaborative supercluster initiatives are taking shape in the UK. These include the Oxford-Cambridge Growth Corridor and the Cambridge-Manchester innovation alliance.[320] Backed by £4.8 million from Research England, the Cambridge-Manchester partnership is testing a new model for collaboration between research-intensive universities. The goal is to jointly attract international investment by leveraging global networks, achieving outcomes that neither city could secure independently. The partnership aims to create shared investor events and showcases which will act to direct investors' capital toward spin-outs and connecting entrepreneurs and industry leaders across both regions. Importantly, this is not just a university-led effort. Regional political leaders along with both city councils are fully engaged.

What must be avoided is that the UK gets 'caught between stools' when it comes to attracting investment to its spin-outs. We are neither a small country that can concentrate all efforts around a single national champion, nor are we a large country with deep and dispersed pools of capital and investors to tap across every region. What is clear is that the growth of the UK's spin-out pipeline must be supported in a nationally coordinated manner. The distribution of spin-outs and investment across the UK does not always neatly map to the research excellence of our universities, exposing underlying issues with access to capital, talent and infrastructure. Better national level co-operation that co-ordinates the showcasing of the best UK spin-outs to domestic and international investors and that encourages place-based regional anchoring whilst facilitating UK-wide mobility to enable growth, may ultimately be required to realise our ambition to be a serious global science power. UKRI should track UK originating spin-out movements within the UK and internationally, differentiating between intellectual property-rich (IP) and non-IP-rich companies to gain understanding. It should also consider its role alongside other national agencies in co-ordinating international showcasing activity, building on the industrial strategy as a bedrock.

319. keynote-the-special-relationship_why-psiquantum-came-home-from-the-us.pdf
320. https://www.ukri.org/news/new-cambridge-manchester-partnership-to-boost-regional-growth/

Cross-regional collaboration and sector specific investment

UK universities have been innovative in forming geographic alliances to consolidate deal flow and attract investors. Examples include SETsquared's London roadshow for investors and the Golden Circle's[321] (a connecting capability fund. Shared TTO project) establishment of a pan-regional angel network to enable deal-sharing and the coordinated provision of investor expertise outside the 'Golden Triangle'. Analysis of the UK Spin-out Register shows that partnerships often form between universities with similar sized research bases. The four major institutions in the greater south-east of the UK dominate in terms of repeated collaborations. However, there are strong examples of both inter-regional partnerships and intra-regional ties, particularly across the north of England.[322]

Whilst such geographic collaborations are important, specialist investors often focus on highly specific domains such as quantum, cybersecurity, therapeutics, fusion, space, defence, climate and medical devices which represent narrower areas than the Industrial Strategy sectors. To attract these specialist investors, universities should also consider exploring cross-sector collaborations to curate and present high-quality, sector-specific spin-out pipelines. These would be vertically integrated to a sector rather than horizontally integrated across a region, and could replicate or build on initiatives such as Apollo Therapeutics, the Ceres agritech initiative, and the medtech SuperConnector and AI SuperConnector, which brought together non-proximal universities across the UK to build investor and industry readiness in a defined sector. Gaia Innovation Sciences[323] is a good example of a sector focused university-affiliated funds (UAF) which has partnerships with 12 geographically dispersed UK universities but with a tight focus on biodiversity loss and climate change. Identifying and expanding models such as this could enhance visibility and deal flow in niche areas and help attract specialist investors outside of major hubs.

Following the sector-specific theme there is a global trend towards concentrating academic excellence around highly specialised domains. These sit alongside and are often in partnership with the existing university model. Clustering top-tier researchers around a defined mission can create powerful hubs of innovation which serve as compelling attractions for private investment as they offer clarity of purpose and high-impact potential. Examples include the Francis Crick Institute in biological sciences in the UK, IMEC in Belgium (nanoelectronics and semiconductors) and the Wetsus Institute focused on sustainable water technology in the Netherlands, all of which act as powerful magnets for business and investor interest. The UK already hosts many such specialised institutes and there is an opportunity to better position them as national champions acting as hotbeds of innovation and conveners of the country's most promising spin-outs. These could act as one-stop shops where investors feel confident that they will encounter the best UK spin-outs, regardless of their regional origins. The Catapult Network could play a pivotal convening role in making this vision a reality.

Ultimately, we must move beyond regional and institutional rivalries to make it easier for investors to discover and support the UK's most innovative companies.

Shared Technology Transfer Offices and investors

The 'Independent review of university spin-out companies' recommended the creation of shared technology transfer offices (TTOs) to consolidate deal flow and expertise across smaller, regionally-based universities.[324] In response to recommendation 4 in the 'Independent review of university spin-out companies', Research England ran a six-month pilot via the Connecting Capability Fund, to see whether shared TTOs could be the answer to supporting universities with smaller research portfolios to combine capabilities in order to spin-out. This pilot was generally seen as successful and awarded £4.74 million across 13 projects, to explore new sustainable models to address sharing functions of TTOs. One project funded through the pilot is Symbiotic Technology Transfer Resource Enabler and Mobilisation to Leverage Increased Net Efficiencies (STREAMLINE)[325] led by Cranfield University in collaboration with University of Hertfordshire, which pooled TTO resources to co-develop disclosure review tools, host shared workshops, training and investor engagement networks, and shared expertise to accelerate commercialisation in two priority areas of agritech and healthtech.

321. www.golden-circle.co.uk
322. https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2025_UCI_Powering_Ideas_to_Innovation_SpinoutsReport_vPublished.pdf
323. https://greenspherecapital.com/nature-based-climate-solutions/
324. Independent review of university spin-out companies - GOV.UK
325. https://www.cranfield.ac.uk/press/news-2024/new-partnership-initiative-set-to-build-spinout-creation

Following the conclusion of the pilot, RE commissioned Knowledge Exchange UK (KEUK), in partnership with Research Consulting, to run an independent evaluation, examining the process and impact outcomes from projects. The projects made significant strides to understanding and developing practices and models for shared TTO functions, delivering strong outcomes and developing infrastructure. This includes creation of guides, templates and frameworks to support activity. While progress towards scalable and sustainable approaches has been made, more time is required for this to be realised and fully tested, particularly in relation to governance-related activities and institutional approvals to enable implementation.

It is important to remember that motivations behind shared TTOs may vary across stakeholders. For universities, these shared offices have the potential to present larger and more aggregated spin-out pipelines, share best practice, spread expertise, and develop common processes and documentation which are attractive to investors if implemented effectively.

However, investors may have been expecting more, with some seemingly viewing shared offices as a potential 'one stop shop' with the potential to simplify engagement by reducing the need to navigate multiple institutions with differing practices. The shared TTOs six-month pilot models do not appear to have involved universities relinquishing sovereignty over their intellectual property (IP) with one exception: the Shared TTO to Accelerate the Growth of Self-fundEd Spin-outs (STAGE)[326] unusually agreed to let the shared TTO complete the IP transactions for them.

This review does not propose that universities give up such IP sovereignty. Rather, it is highlighting the fact that shared TTOs may not yet fully meet investor expectations for streamlined engagement and further evolution may be needed to bridge that gap. Furthermore, many of these shared office pilots focused on forming regional clusters by bringing together geographically close universities. While this approach is natural and offers consolidation benefits, as mentioned above, investors and industry partners often operate with a sector-specific mindset.

There are already examples of sector-specialist TTOs which are specialised due to the focused nature of the research institutions or government agency they support, such as Plant Bioscience Limited or Ploughshare. This focused sector expertise can enable stronger, more targeted relationships with industry and investors than more generalist TTOs.

Future consideration should be given to the potential development of shared TTOs that are organised around specific sectors rather than geography.

Place-based innovation strategies and spin-outs

Some regions are developing sophisticated, multi-layered strategies that coordinate efforts across local stakeholders and are designed to mobilise quickly when opportunities arise such as policy shifts or new funding streams. The Cambridge regional strategy is a notable example of this 'Russian Dolls' type strategy where the university innovation strategy forms part of a regional innovation strategy, which itself is part of a wider multi-city innovation partnership with Manchester. Initiatives like Innovate Cambridge, where local companies pledge a small share of profits such as 1% to reinvest in the city, is demonstrating how locally anchored feedback loops can stimulate innovation and attract sustained investment.[327]

Aligning with the place-based nature of the UK government's Industrial Strategy can be attractive to specialist investors as a place-based cluster can provide fertile hunting ground for new investible propositions and makes investors more likely to travel to such clusters, or even base themselves in that cluster. Examples which we could learn from include medtech in Leeds, marine in Plymouth, agritech and food in Norwich and automotive in Warwick. At the same time, this approach may mean that companies arising in cities, but which are not part of a relevant place-based cluster may need to migrate within the UK to find capital and talent. This is not always what UK regions wish to hear, nor what founders wish to do.

Interestingly, recent analysis shows that despite a slight decline in research income of 0.3%, northern regions of England such as Yorkshire and the Humber, the North West, and the North East have increased their share of spin-outs by 4.9% which is perhaps indicative of growing regional resilience.[328]

326. https://www.arts.ac.uk/about-ual/press-office/stories/university-of-the-arts-london-secures-research-england-development-funding-for-innovative-spinout-pilot-supporting-creative-and-social-ventures
327. https://innovatecambridge.com/strategy/
328. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Capabilities: Investor deeptech literacy

Previous research and reviews have highlighted a persistent technical literacy gap within the UK finance ecosystem, particularly in specialist sectors such as life sciences and deeptech.[329, 330] This gap is most acute among later-stage investors, many of whom lack the scientific expertise needed to assess complex scale-up ventures. This is often because later-stage UK investors typically come from financial services backgrounds, whereas comparative US investors tend to have proportionally more partners with operational experience and a more developed understanding of the human capital aspects of investing. At the early stages it is more variable.[331]

Whilst some argue that it is more important to educate risk-averse later-stage investors about the potential returns available from this asset class, it is clear that to unlock the full potential of university spin-outs, the UK requires a larger and more technically capable pool of specialist investors.

Most of the early-stage seed and specialist sector-focused venture fund investors I spoke with were scientifically literate with many holding PhDs in their sector domain. In contrast, business angels and regional Enterprise Investment Scheme (EIS) fund investors tended to be more generalist. A smaller subset of angels and sector-focused EIS funds, however, possess deep technical expertise from prior careers in specialist domains. These individuals often play a pivotal role in leading rounds and providing generalist co-investors with the confidence to invest alongside them.

Recognising this, UK Business Angels Association (UKBAA) has called for targeted government support to enhance angel investors' ability to identify, assess and fund science and technology ventures. Their proposal includes backing a UKBAA-led collaboration with investment professionals and Science, Technology, Engineering and Mathematics (STEM) institutions to launch a national training programme that encourages science and industry experts to become angel investors.[332]

Looking at the gap in technical literacy further downstream among later-stage investors, the US benefits from a more mature and competitive venture capital market, supported by initiatives such as the Kauffman Fellowship[333], which help technical talented junior investors develop their investment skills. Additionally, large and technically focused stock markets like NASDAQ demand deep scientific expertise from investors who cover public deeptech and life science companies.

To address the UK's gap, organisations such as the Royal Academy of Engineering and the Council for Science and Technology have proposed a range of solutions. These include national venture capital fellowships and extended Tier 1 visas to attract foreign investors.

The Science and Technology Venture Capital Fellowship[334] programme is a promising start, having already trained over 22 recruits. However, a more comprehensive and inclusive intervention will be required to ultimately build a knowledgeable late-stage investor base in the UK. The next logical step would be to more deeply fund and expand the scheme to build a network along the lines of the Kauffman fellowship. Patience is also required as it will take time for the specialist skills developed by early-stage investment managers, such as those emerging in new specialist seed funds backed by the British Business Bank's (BBB) Investor Pathways Capital initiative and its Enterprise Capital Fund, to filter downstream as they become later-stage investors. The BBB efforts to hire more sector-specialist teams internally will also help, as these teams begin making direct investments.

Further initiatives include: the Newton Venture Programme[335], the IQC Venture Insight Fellowships[336], student-led funds such as the Panacea Student Venture Consultant programme[337] and university-affiliated investment clubs such as the London Business School Investment Management Club[338].

329. https://www.bidwells.co.uk/insights-reports-events/Enhancing-science-literacy-beyond-the-lab/
330. https://www.sciencedirect.com/science/article/abs/pii/S0048733306000369
331. https://www.ncub.co.uk/insight/independent-advice-on-university-investor-links-mike-rees-report/
332. https://committees.parliament.uk/writtenevidence/124016/html/
333. https://www.kauffmanfellows.org/
334. https://enterprisehub.raeng.org.uk/programmes/science-and-technology-venture-capital-felllowship/
335. https://newtonprogram.vc/
336. https://www.linkedin.com/posts/iq-capital-partners_venture-insight-fellowship-we-are-delighted-activity-7178750538337959937-AiTc/
337. https://www.sbs.ox.ac.uk/research/centres-and-initiatives/oxford-said-entrepreneurship-centre/panacea-oxford
338. https://clubs.london.edu/imc/home/

These are just a few examples of the initiatives emerging to create additional talent pipelines for future investment professionals.

In addition, over time the natural diffusion of scientifically literate university technology transfer staff into investment firms (I counted over 17 so far) and the expansion of university-affiliated funds (UAF) or similar models will further strengthen the technical literacy of the UK's investor base as well as promoting better understanding between universities and investors.

Capabilities: Investor and spin-out diversity

Diversity in start-up and spin-out founders and personnel is important. Studies have shown that the most diverse companies in terms of gender, ethnic and cultural diversity outperform those with lower diversity.[339]

Research from the Royal Academy of Engineering shows that as of January 2025, 75.5% of UK spin-outs had all-male founding teams, closely reflecting the broader high-growth start-up ecosystem (74.7%). Women remain underrepresented, with only 7.4% of spin-outs founded by all-female teams, compared to 12.7% across high-growth companies.[340]

Other research from Oxford Brookes University highlighted a lack of female leadership in spin-outs and insufficient support for women researchers at all career stages.[341] Key barriers include the time demands of spin-out development and limited career flexibility, particularly for women in academia. Retaining female postdocs and addressing gender imbalances in Science, Technology, Engineering and Mathematics (STEM) are seen as priorities.

To drive change, the 'Independent review of university spin-out companies' recommended funding to support academia-industry collaboration and to buy-out academic time. Advice and support is also available from the British Business Bank under their Pathways to Improve Diversity in Venture Capital,[342] which recommended venture capital (VC) firms join initiatives such as the Diversity VC Standard.[343]

Some institutions are already taking action. Oxford's Increasing Diversity in Enterprising Activities programme[344] aims to raise the proportion of female spin-out founders from 15% in 2015 to 34% by 2025 and is showing progress towards this goal. Innovate UK's Women in Innovation Awards have also helped to drive a major shift in participation where the proportion of successful women-led applications across all Innovate UK competitions has risen from one in seven to one in three.[345] A new £4.5 million round has been announced.[346]

VC and angel investment in the UK also lack in diversity, limiting access to funding for women, ethnic minority founders and other underrepresented groups. Currently, only 11% of female-led teams and 2% of ethnic minority-led businesses receive angel backing, while over 67% of funding goes to all-male teams.[347] The investor base itself is similarly unbalanced, with just 30% of the VC workforce,[348] and 15-18% of angel investors being women and only 11% of angel investors[349] being from ethnic minority backgrounds, with most based in London.

To address this, the British Business Bank has committed additional capital through its Investor Pathways Capital initiative[350] and doubled its investment in the Women Taskforce[351]. It is also working with the British Private Equity and Venture Capital Association and the UK Business Angels Association to promote transparency and best practice and they aim to grow the proportion of women angel investors from 15% to 30% through a newly formed Women Angel Investment Task Force.[352]

The issue is important. Universities could and should do more to monitor diversity in their spin-outs and to create clear targets for change. University technology transfer offices (TTOs) with in-house investment arms may also wish to consider creating a path towards joining initiatives like the Investing in Women Code.[353]

339. https://startupsmagazine.co.uk/article-business-benefit-diverse-teams
340. https://raeng.org.uk/media/qropz5hv/spotlight-on-spinouts-2025-final-18_03_25.pdf
341. https://www.brookes.ac.uk/research/units/obbs/projects/women-and-spinouts
342. https://www.gov.uk/government/publications/independent-review-of-university-spin-out-companies
343. https://diversity.vc/diversity-vc-standard/
344. https://enspire.ox.ac.uk/idea
345. https://www.british-business-bank.co.uk/sites/g/files/sovrnj166/files/2024-02/report-investing-in-ethnic-minority-entrepreneurs.pdf
346. https://www.bvca.co.uk/static/c06ec8bf-5579-467e-b2d48bf021752e2c/BVCA-Venture-Capital-in-the-UK-Report-2024.pdf
347. https://ukbaa.org.uk/wp-content/uploads/2025/05/UKBAA-Angel-Market-Policy-Paper.pdf
348. https://www.british-business-bank.co.uk/finance-options/equity-finance/investor-pathways-capital
349. https://www.british-business-bank.co.uk/news-and-events/news/british-business-bank-backs-diverse-and-emerging-fund-managers-ps500m-package
350. https://www.british-business-bank.co.uk/finance-options/equity-finance/investor-pathways-capital
351. https://www.british-business-bank.co.uk/news-and-events/news/british-business-bank-backs-diverse-and-emerging-fund-managers-ps500m-package
352. https://www.investinwomentaskforce.org/
353. https://www.british-business-bank.co.uk/about/governance/diversity-equity-and-inclusion/investing-in-women-code

Recommendations

1. **Address talent gaps in leadership and expand infrastructure access for spin-outs.**
   a. UKRI should monitor and scale regional initiatives such as Northern Triangle Talent to tackle leadership bottlenecks in spin-outs outside the Greater South East.
   b. The government should act to accelerate planning permission for specialist lab spaces or science parks in areas with shortages.
   c. UKRI should evaluate the potential for voucher or 'golden ticket' programmes to provide early-stage deeptech and life science ventures with access to critical infrastructure in labs, science parks or Science and Technology Facilities Council (STFC) funded facilities.
   d. UKRI via Innovate UK should explore the potential to back more full-service hubs such as Station F in Paris, Science Creates in Bristol that combine sector focus, space, funding and support. These should be linked to regional place-based strengths and better connected to the Catapult Network.
2. **Enable models for sector-based shared technology transfer offices.**
   a. Build on the successful regional shared technology transfer offices (TTO) pilots by expanding into more sector-based models to attract specialist investors and support regional spin-outs. The STAGE (arts and creative industries) shared TTO provides a useful pilot project of how this could be done. Consider sustainable follow-on funding and alignment with the Local Innovation Partnerships Fund.
3. **Improve investor technical literacy.**
   a. Promote collaboration between technology transfer offices and investors through secondment programmes fully funded by UKRI. Note investor traction is unlikely unless funded.
   b. Actors in this space, such as the British Business Bank, should launch a national deeptech investor training programme, comparable to the Kauffman Fellowship, to enhance expertise across funding stages. This could build upon the UK Science and Technology VC Fellowship programme.
   c. Better signposting to the range of other existing and emerging programmes that can help increase investor literacy.
4. **Advance diversity in spin-outs and investment.**
   a. Encourage universities and universtity-affiliated funds (UAFs) to set clear action plans and targets to increase diversity in spin-outs they create and fund.
   b. Encourage founders to preferentially consider investors who can demonstrate a commitment to expanding the diversity of their investment teams and the spin-out portfolios they fund.
   c. Support visa reforms to ensure stable, affordable and globally competitive routes for entrepreneurial students, researchers and spin-out leaders.
5. **Improve the mobility and anchoring of spin-outs in regions and in the UK.**
   a. Align spin-outs with regional place-based strengths to retain relevant companies locally, while supporting wider relocation within the UK where this would increase the chances of that spin-out accessing specialist investment, talent and growth.
   b. Develop UK-wide, sector-specific spin-out pipelines through multi-university initiatives and/or via the Catapult Network.

7. Whole system

7. Whole system

While this report focuses on improving university-investor relations in the context of spin-out companies, it is clear that the recommendations contained within it cannot operate in isolation. Making minor tweaks and adjustments will not solve the systemic issues. Achieving meaningful change requires a coordinated, system-wide strategy that addresses structural barriers across the entirety of the innovation landscape. Above all, the UK's commitment to funding its excellent science base must be maintained – this is the foundation from which we can grow.

This section summarises the feedback I heard that impinged on wider system issues and it signals areas for further exploration, which were beyond the scope of this review.

A clear 10-year vision for spin-outs

If spin-outs are to play a central role in the UK's future growth and productivity strategy, then UKRI must articulate a clear medium- and long-term vision for their development. Without this, spin-out activity risks remaining secondary to research and teaching priorities.

This vision should be aspirational, outcomes-focused and forward-looking. It should:

- Signal strategic importance and incentivise behavioural change.
- Build on existing frameworks such as the Industrial Strategy and Sector plans without adding unnecessary complexity.
- Define success through clear outcomes, timelines, metrics and measures including utilising existing mechanisms such as Research Excellence Framework (REF) and Knowledge Exchange Framework (KEF).
- Leverage place-based strengths, ensuring regional initiatives contribute to a coherent national framework.

Within this context, universities and their associated University-Associated Funds should be encouraged to present a national package of the best investment opportunities. The creation of this package could be coordinated by the British Business Bank to attract sovereign and pension capital into the spin-out asset class.

Underlying this, UKRI should facilitate the creation of linked networks of shared technology transfer offices and sector-based national initiatives, ensuring strategic alignment and curating the UK's most promising emerging spin-outs ready for exposure to significant scale-up investors.

Adapting tech transfer and spin-out models

While the UK's traditional university technology transfer office-driven (TTOs) 'technology push' model has improved significantly, the global innovation landscape is evolving rapidly. To remain competitive, UK universities will likely need to embrace new, additional models that will better reflect the needs of future founders, investors and industry.

Key shifts could include:

- Transitioning TTOs from gatekeepers to enablers, acting more as connectors, guides and talent conveners.
- Adopting a concierge 'wraparound' approach to support industry engagement as well as founders and investors post-formation on behalf of the entire university. The experiences of Unit M in Manchester[354] may provide insights into this type of approach.
- Responding to national priorities and managing the reputational and national security issues that may accompany them. For example, dual-use and defence technologies, AI energy demands etc. The rising importance of technological sovereignty may limit future international collaboration rather than promote it.
- Navigating the changing intellectual property landscape, including the rise of trade secrets as the main 'moat', responding to Chinese fast followers, and AI-driven patent mining that can rapidly design around claims. These changes may challenge traditional academic dissemination and publication norms and encourage later patent filings and 'stealth mode' spin-outs.

In addition, UKRI should consider supporting universities in experimenting with alternative models alongside the 'tech push' approach such as:

- Co-ordinated Research Programmes[355] (CRPs) such as Focused Research Organisations (FROs) – for example Bind Research,[356] Virtual Research Organisations (VROs) and Decentralised Autonomous Organisations (DAOs).
- Challenge-led 'pull' models such as Advanced Research and Invention Agency (ARIA), SPRIN-D, Flagship Pioneering and so on.
- People-led founder first, idea later models such as Entrepreneur First, Carbon 13's Venture Builder and others.
- Industry-partnered, multi-university sector funds such as Apollo Therapeutics, Evotec Bridge, Catapult-linked initiatives and so on.

Some institutions such as Queen Mary University of London's partnership with Mass Challenge are already piloting these approaches by offering a new route to impact for entrepreneurs by matching start-ups to large innovation companies to encourage fast scale up.[357] However, broader experimentation may be needed to determine what works, and what does not.UKRI should promote best practice sharing and ensure that any successful models that emerge are adequately resourced to avoid short-term, reactive interventions and provide long-term sustainability.

Broader innovation ecosystem reforms

To enable spin-outs to scale effectively, systemic reforms beyond the university sector will be required:

- Transport links and affordable accommodation: Investors require easy access to their investments and UK cities and clusters need to be better joined up, with access to schools and accommodation planned strategically at the regional level.
- Immigration reform: Ensure high-tech talent can relocate to the UK swiftly. Continually review the Innovator Visa to maintain its global competitiveness.
- Regulatory reform: Regulatory flexibility in AI and life science areas such as clinical trials will be required to maintain international competitiveness. The creation of the Regulatory Innovation Office in Autumn 2024 is a step in the right direction here.
- Public procurement and market demand: A greater use of tools like Advanced Market Commitments and strategic procurement by agencies such as the NHS

354. https://www.unit-m.co.uk/
355. https://www.renaissancephilanthropy.org/playbooks/coordinated-research-programs
356. https://bindresearch.org/
357. https://www.qmul.ac.uk/media/news/2025/queen-mary-news/pr/queen-mary-university-of-london-partners-with-industry-backed-startup-accelerator-masschallenge.html

and the Ministry of Defence (MOD) to derisk early-stage investment is required. Intellectual property terms in such procurement contracts will need to balance vendor lock-in concerns with the need to retain investor confidence in their investment. Noting that the government has intentions for further reforms to public procurement.

- Address adoption issues: Address adoption barriers in sectors like AI and healthcare. For example, NHS fragmentation often forces medtech start-ups to launch in the US. A streamlined adoption pathway is critical to retaining innovation domestically.

Incentives for scaling firms

This review has focused mainly on early-stage incentives, but later-stage incentives and spatial economic policies to encourage companies to scale and sell products/services here are also vital such as science parks, enterprise zones, investment zones and freeports etc.

- **R&D tax credits:** Maintain the scheme's competitiveness, focusing on high-productivity, R&D-intensive SMEs. This is vital for supporting pre-revenue spin-outs and attracting global capital.
- **The Budget 2025** announced a widening of eligibility for Enterprise Management Incentives to benefit scaling firms in offering tax advantages shared to the talent they need to grow. This was recommended by the UK Tech Competitiveness Study, to support the spin-out-to-scale-up transition.

Capital markets reform

Eighty-eight firms exited the London stock exchange or shifted their main listing to another market in 2024, with over 70 following suit by Q3 in 2025.[358] Reforming UK capital markets is essential to retain deeptech and life sciences firms. Currently, NASDAQ offers superior perceived valuations, liquidity and analyst expertise. The UK will likely need to evolve its stock market infrastructure to remain globally competitive.

Shoring up university finances

Universities are engines of growth and are crucial to the delivery of the Industrial Strategy. However, universities are facing mounting financial pressures with reports that one in six English higher education institutions will have less than 30 days' liquidity in 2025-26.[359] Shoring up university finances to enable them to fulfil their crucial role in the innovation ecosystem and drive economic growth is a high priority.

Electricity costs

To drive the country's start-up and scaling ambitions, including encouraging companies to scale within the UK, will require concerns on the UK's high industrial electricity costs to be addressed.

358. https://moneyweek.com/investments/uk-stock-markets/is-the-london-stock-exchange-in-peril
359. https://www.timeshighereducation.com/news/radical-action-needed-half-providers-still-face-deficits#

Annex A: Definitions of investor types

The below details high-level categories of the investor types referred to in this review adapted from Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.

Universities
Universities involved in spin-out deals, including from their internal funds and university-owned/run seed and venture funds, through dedicated programmes and multi-university collaborations, and through university-owned subsidiary companies focused on providing commercialisation support to their spin-outs.

University-affiliated funds & investment companies
Funds and investment companies with arrangements with specific universities to invest in their spin-outs – the term 'UAF' is used to describe all forms of these platforms in this report.

University-focused funds & investment companies
Funds and investment companies dedicated to investing in university spin-outs, but no/limited arrangements with specific universities.

Angels (individuals & groups)
Individual investors/formal groups of individual investors who provide both finance and business expertise to a company they invest in.

Accelerators & venture builders
Organisations providing services and/or funding to create, launch, scale and support new ventures and early-stage companies. Services provided can include office space, mentoring, network connections and, in some cases a small capital injection.

Venture capital
An investor specialising in financing new businesses or turn-around ventures usually combines risk with the potential for high returns.

Private equity & institutional investors
Organisations typically investing in or lending to more established companies to drive their growth and profitability, realise returns from their investments, and deliver on the investment goals of their clients and stakeholders. This category includes, among others, private equity, asset and investment management companies, hedge funds, merchant and investment banks and mutual funds.

Corporate venture capital
A unit of a corporation specialising in investing in start-ups or acquiring smaller, less-established companies and growing those companies so they can potentially provide value to the main corporation as a part of the company or through a sale.

Government (national, regional)
Government departments and agencies operating at the national and sub-national levels.

Government banks & investment vehicles
Government-backed or run public financial institutes including banks (including development and investment banks) and investment vehicles/funds such as sovereign wealth funds.

Charities, foundations & not-for-profits
Charities, foundations and other forms of non-profit organisations, some of which may have their own investment funds.

Family office
A small private company that manages investments or trusts for one or several families.

Other – Research institutes & Catapults
Research institutes and technology/innovation development organisations (including Catapults).

Other – Ecosystem builders & platforms
Organisations dedicated to providing support to or enabling the development of local entrepreneurial/start-up ecosystems. This includes science parks and local start-up networks and ecosystem builders.

Other – Company nominees
An organisation/individual that holds assets on behalf of a beneficial owner.

Other – Hospitals, hospital trusts & healthcare providers
Hospitals, hospital trusts and healthcare providers.

Other – Investment managers, advisors, brokers, consultants, platforms
Investment managers, advisors, brokers, consultants and platforms.

Other – National academies / Professional associations
National academies and professional associations.

Other – Other/not known
Other types of organisations not elsewhere classified. Includes business development companies, legal and advisory service companies, organisations delivering and managing prizes to drive innovation, regulators and others.

Annex B: Understanding investor types

This reference section is included for information and to build better general awareness. It outlines the various types of investors referenced throughout the report, highlighting the leading contributors to university spin-outs.

A list of definitions of investors is shown in Annex A.

The investor landscape for university spin-outs is increasingly diverse, with capitalisation tables now featuring a broader mix of non-traditional investors beyond angels and venture capitalists. This shift likely reflects both VC capital constraints and rising interest from alternative investor groups, whose motivations range from financial returns to impact-driven goals, including blended models of impact investing and venture philanthropy.

National development bank direct investments

National development banks are government-backed financial institutions established to support economic growth and development. They differ from commercial banks by prioritising development over profit. They play a key role in implementing industrial policy and addressing market failures by providing necessary long-term capital. By offering strategic investments and advisory services, national development banks can play a vital role in fostering sustainable development.

In the UK, the British Business Bank is the largest domestic investor in venture and venture growth opportunities in the UK. It has a mission to drive sustainable growth and strategically backs innovation to ensure innovative businesses can access the right capital to start and scale.[360] The bank has several programmes that aim to support university spin-outs and it has invested in funds that support spin-outs, such as £30 million into Northern Gritstone.[361] The bank works with Innovate UK to help spin-outs access the full benefits of early-stage funding and it reports that 97% of spin-outs that have received funding from the British Business Bank and Innovate UK are still active and raised greater amounts of equity investment in their first eight years compared to those without.[362] Information on the British Business Bank's support for university spin-outs can be found in their Equity tracker, which includes that over the three years 2022-2024, the Bank supported around a quarter (24%) of the 756 UK spin-out deals.[363]

Similarly, the Scottish National Investment Bank supports Scottish businesses and projects,[364] with a focus on place, net zero and innovation while the Development Bank of Wales provides effective business finance for Welsh companies and has invested a total of £958 million into Welsh businesses.[365]

Enterprise Investment Scheme (EIS)-backed seed/Venture Capital Trusts

To encourage investment into early-stage businesses, the government has introduced a series of schemes that provide tax incentives to private investors.

The Enterprise Investment Scheme (EIS) launched in 1994, was designed to stimulate venture capital investment into early-stage businesses by offering income tax relief and capital gains tax deferral to those who purchase new shares in qualifying companies.[366] Building upon this, the Seed Enterprise Investment Scheme (SEIS) was introduced in 2012 to support very early-stage companies at the point of formation.[367]

Alongside EIS and SEIS, the venture capital Trust (VCT) provides another important channel of funding.[368] VCTs are publicly listed companies that pool investor capital to finance small high-growth businesses and bring expertise and guidance to the companies they support. Investors in VCTs benefit from tax relief, whilst eligible businesses can raise up to £5 million in a 12-month period.[369]

360. https://www.british-business-bank.co.uk/about/research-and-publications/backing-innovation-university-spinouts-factsheet
361. https://www.british-business-bank.co.uk/news-and-events/news/british-patient-capital-invests-ps30-million-university-spinout-backer-northern
362. https://www.british-business-bank.co.uk/about/research-and-publications/backing-innovation-led-businesses-2022
363. https://www.british-business-bank.co.uk/about-research-and-publications/small-business-equity-tracker-2025
364. https://www.thebank.scot/
365. https://developmentbank.wales/
366. https://www.gov.uk/guidance/venture-capital-schemes-apply-for-the-enterprise-investment-scheme
367. https://www.gov.uk/guidance/venture-capital-schemes-apply-to-use-the-seed-enterprise-investment-scheme
368. https://www.gov.uk/government/statistics/venture-capital-trusts-statistics-introductory-note/venture-capital-trusts-introduction-to-national-and-official-statistics
369. https://www.gov.uk/guidance/venture-capital-schemes-apply-for-the-enterprise-investment-scheme

These schemes have become important for university spin-outs, which often require significant early-stage capital and there are several specialist fund managers that operate within the landscape. For example, SFC Capital is one of the UK's leading SEIS fund managers and focuses on providing the first round of equity funding to innovative start-ups and spin-outs.[370] Another example is Mercia Asset Management combines both EIS and VCT investment and has become one of the most active investors in UK spin-outs by number of equity deals.[371] With collaborative relationships across 19 regional universities and a focus on companies outside of London, Mercia's Northern VCT funds show a track record of investing in spin-outs. Similarly, Octopus Ventures is one of the UK's largest VCT managers and has also played a pivotal role in investing in and scaling university spin-outs.[372]

Angel investor syndicates

Angel investors are individuals who invest their own money into small businesses in exchange for a minority stake. Angels usually have extensive entrepreneurship experience and can provide mentoring and strategic support alongside their investment. Whilst angel investors can operate alone, they often organise themselves into groups, such as in networks and syndicates.

An angel investor network is a group of investors who meet regularly to share opportunities with members choosing individually whether to invest. Whereas an angel investor syndicate is a group of angel investors that agree to invest collectively in specific projects. Syndicates allow for greater pooling of resources and expertise and in some cases certain angel syndicates have gone on to evolve into full-scale venture funds.

Cambridge Angels is an example of a leading UK angel network.[373] It is an invitation-only group, with most members being former founders who have achieved successful exits. The network provides office hours, giving entrepreneurs the chance to receive free one-on-one feedback with experienced investors. It also operates using a clearly defined investment process to accelerate deal flow and maintain transparency.

Archangels, based in Scotland, is the oldest continuously operating angel syndicate in the world.[374] They have over 120 members and invest more than £10 million per year into early-stage Scottish companies.[375] The syndicate combines the skills, expertise and networks of its members support its portfolio of businesses. The syndicate regularly acts as a lead investor and invests alongside other partners such as Scottish Enterprise or the British Business Bank.

Both Cambridge Angels and Archangels bring specialist and generalist investment skills and are recognised as prominent investors into UK spin-out companies.[376]

Venture capital

Venture capital (VC) investors provide money to early-stage businesses, in return for an equity stake, enabling them to scale and commercialise their innovations. VCs are often prepared to take on high levels of risk and provide financial support to companies that may still be pre-revenue but have disruptive technologies. Many VCs invest in fast-to-market technologies such as software, but some specialise in areas such as capital intensive deeptech companies, where the upfront capital requirements are significant, but the potential rewards are transformative. VC investment is often delivered across multiple rounds, with each round providing a new injection of capital to support the company's growth trajectory. Over the course of the investment period, they will expect the company to reach significant milestones and grow significantly. In return, they often seek board representation and play an active role in shaping the company's strategy.

For university spin-outs, this type of investment is particularly important. Spin-outs are often built on developing cutting-edge technology that requires substantial R&D and long development times before reaching market. VC investment can help provide the scale of risk-tolerant capital necessary at a stage where other sources of investment may be insufficient.

370. https://sfccapital.com/
371. https://www.mercia.co.uk/about-us/university-partnerships/
372. https://octopusinvestments.com/our-products/enterprise-investment-scheme/octopus-ventures-eis-service/
373. https://www.cambridgeangels.com/
374. https://archangelsonline.com/
375. https://archangelsonline.com/about-us/
376. https://raeng.org.uk/media/0replytx/spotlight-on-spinouts-2024-beauhurst-1.pdf

The UK is now the third largest venture capital market in the world after the US and China.[377] In 2024, UK university spin-outs raised around £2.9 billion in VC investment,[378] underlining the importance of VC investment in supporting the commercialisation of academic research.

Venture capital investors (excluding those operating as UAFs) were involved in 71-76% of pre-seed/seed and early-stage deals into UK university spin-outs, with venture capital investments representing around half of all investment secured by spin-outs in 2024.[379]

Specialist venture capital funds

While many VC firms are generalists who invest across a wide range of sectors and stages, some funds adopt a specialist focus. By narrowing their scope, specialist VCs can provide not only capital, but also deep sector expertise, tailored strategic guidance and access to highly relevant networks of contacts and partners.

Examples of specialist VCs in the UK include Amadeus Capital, with a focus on transformative technologies across three themes of intelligence, human and planet.[380] Specialist VC firms like Forbion,[381] Sofinnova,[382] SV Health,[383] and Advent,[384] are examples of specialist life-science funds who invest into areas such as therapeutics, medical devices and/or healthcare technologies.

University-affiliated funds

University-affiliated funds (UAFs) are investment funds that can provide capital and expertise to spin-out companies that originate from the university that the fund is affiliated with. These private investment funds are distinct from any internal university seed funds and are externally managed. They are generally established with university involvement and the institutions may hold a governance role or a stake in the fund or vehicle. UAFs raise capital by seeking external investment, typically from a mixture of venture capital firms, national and regional development banks, insurers, pension funds, state and local authorities and other corporate investors.

These funds can help bridge the critical funding gap that early-stage ventures face and offer strategic support alongside financial backing. By supporting ventures at a formative stage, UAFs can play a key role in increasing spin-out production and accelerating the commercialisation of academic research. UAFs can also help attract co-investors to further boost investment into early-stage spin-outs.

UAFs may focus on a single university, or they can support a defined group of institutions and/or a region or sector. Universities typically have agreements with UAFs to ensure preferential access for their spin-outs and provide the fund with early visibility of opportunities. These rights can include streamlined due diligence pathways, co-development pathways and in some cases first right of refusal to invest. Oxford Science Enterprises (OSE), founded in 2015, is an example of a UAF affiliated to a single university and region.[385] Cambridge Innovation Capital (CIC), is another example of a UAF affiliated with a single university and region.[386] CIC has raised over £600m and invested in 40 spin-outs from the University of Cambridge.[387]

In contrast, multi-university UAFs pool resources across institutions. Northern Gritstone, established in 2021, invests in early-stage science and innovation spin-outs across a consortium of universities in the North of England.[388] It was launched with £2 million from Research England's Connecting Capabilities Fund and has since raised over £300 million. There are also a number of new emerging funds that are currently in the fundraising stage such as Midlands Mindforge and QantX. Midlands Mindforge was founded by eight research-intensive universities in the Midlands to accelerate the commercialisation of breakthrough technologies and is currently seeking to raise £250 million for strategic corporate partners, institutional investors and qualifying individuals.[389]

377 https://www.british-business-bank.co.uk/news-and-events/news/uk-now-third-largest-venture-capital-market-world-biggest-increase-share-global-investment
378. https://www.ifm.eng.cam.ac.uk/uploads/UCI/knowledgehub/documents/2025_UCI_Powering_Ideas_to_Innovation_SpinoutsReport_vPublished.pdf
379. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
380. https://www.amadeuscapital.com/
381. https://forbion.com/
382. https://sofinnovapartners.com/
383. https://svhealthinvestors.com/
384. https://adventls.com/
385. https://www.oxfordscienceenterprises.com/
386. https://www.cic.vc/
387. https://www.cic.vc/
388. https://www.northern-gritstone.com/
389. https://midlandsmindforge.com/

Similarly in 2024, QantX announced a partnership with the SETsquared universities with plans to raise £300 million to support spin-out activity across the consortium.[390]

Finding comparative data on the financial returns to date from such investment platforms is challenging. While recent spin-out exits have shown strong performance, the long development times of deeptech and life science companies has left some institutional investors feeling that the investment model is as yet unproven in terms of clear financial returns. Many UAFs are private rather than public, and it can be hard to compare returns across platforms as some utilise general partner (GP)/limited partner (LP) fund structures and others use open-ended corporate vehicles. A lack of easily accessible information on the relative performance of these funds to date does not help with making a transparent case for institutional investors to invest in them.

Nevertheless, over the long term, the cultural impact of association with such UAFs should not be underestimated. The frequent interaction and increased familiarity with the human aspects of working closely with investors is invaluable in improving long-term investor relationships within universities.

In terms of choosing to partner with a UAF in a deal that gives up preferential rights of some sort there are several issues for universities to consider. Ideally, it would be better for universities to 'play the field' and access a broad range of funding sources and create competition for investors into their companies. However, the field is limited and there is a shortage of options and capital, especially outside the Golden Triangle. As a result, securing at least one captive preferred investment partner who is more likely to build deep relationships and invest, though not guaranteed, may be preferable to relying on a fragmented and thin investor market.

Reported downsides and external investor concerns

- The expected slow deployment of returns means it can be hard to raise money: From raising funds to distributing returns to investors can take a long time, often longer than the typical 10-year LP/GP fund structures that institutional investors are familiar with. It takes time to get the flywheel moving.
- Market perception issues: If the UAF rejects an opportunity, other external investors may view it as 'rejected' and avoid it.
- Limited benchmarking: Independent VCs compare new ideas against global best practices. Some external investors feel UAFs risk being trapped in their own 'echo chamber', evaluating only internal opportunities. This may lead to a perception of a weaker portfolio. This may be less true for UAFs fishing across a bigger region.
- Gatekeeping effect: UAFs may be perceived externally by other investors to act as gatekeepers to external VCs. If you are not part of their co-investment circle, there is a perception of being 'locked out', leading to a 'why bother, they will not let us in' mindset.
- Some investors object to what they see as UAF 'double dipping' on equity: Universities commonly provide their partner UAF with a founding equity stake in each spin-out alongside some sort of preferred partner status or preferential rights (soft or hard). UAFs then acquire additional equity when investing, which other investors may perceive as getting 'two bites of the cherry'.

Mitigating factors

- Having a 'go to' partner for the university can increase the chances of raising capital as it increases external investor confidence (when the UAF invests) and creates the long-term deep relationships at the human capital level required to increase investment probability.
- Evidence to date suggests that deep relationships with well-funded UAF partners results in a significant uptick in university spin-out creation rates and funding success once the partnership begins.
- The evergreen corporate model helps with long-term patient capital thinking and is favoured by pension funds due to fee transparency issues. Equally, some investors prefer more recognisable, familiar structures such as LP/GP funds due to the more predictable closed-end nature of their set-up. More could be done to ensure universities fully understand the pros/cons of working with evergreen open-ended structures versus closed-end LP/GP funds.

390. https://www.setsquared.co.uk/setsquared-partnership-universities-and-qantx-announce-new-300m-investment-vehicle-to-drive-innovation-and-growth-in-the-south-and-west/

- UAFs argue they invest heavily in local ecosystem building, strengthening the overall environment and acting as a magnet for co-investors. Therefore, their value is more than just the cash they bring.
- Such UAFs can help change the culture of universities by making investment more familiar and accessible.

Listed investment funds

Listed investment funds are companies whose shares are traded on a stock exchange. Other investors can buy and sell these shares like any other listed company; therefore the fund's objective is to generate returns for its shareholders by investing in a diversified portfolio of assets.

The London Stock Exchange hosts over 300 listed investment companies offering a wide range of investment strategies and sector focuses.[391] For example, Syncona is a specialist listed investment fund that invests in life sciences businesses and was originally funded by the Wellcome Trust.[392] Another example is IP Group,[393] which operates with a broader focus but prioritises investments in companies that deliver positive societal or technological impact. Both Syncona and IP Group have a strong track record of supporting UK university spin-outs, with the latter being a major investor in Oxford Nanopore Technologies.

Corporate venture capital

Corporate venture capital (CVC) and direct corporate investment can enhance spin-out success by offering sector expertise, technical support, market access and strategic connections. The reason corporates engage with spin-outs appears to be to stay close to emerging science and to embed themselves in innovation ecosystems. Having a corporate investor listed on a spin-out's capitalisation table often serves as a mark of credibility. However, the downside risk is that their departure or failure to follow-on invest can be perceived as a negative signal. I heard from founders that having multiple CVCs on the capitalisation table can help to mitigate these issues. Equally, some CVCs bake in secondary sales as part of their strategy so their departure from the capitalisation table may be explained.

The Royal Academy of Engineering believes that levels of CVC investment in the UK are at lower levels than in 25 comparator countries.[394] In some countries such as Japan, CVCs invest more than 50% of all start-up VC investment[395] and specific initiatives to connect CVCs to start-ups have emerged, such as BusinessxNextxTokyo,[396] a matching programme for corporates, SMEs and start-ups. In the UK, CVCs invested in approximately 21% of all spin-out deals in 2024.[397]

CVCs also vary in approach. Some operate independently of their parent company's strategy, while others invest in areas aligned with core business interests. For example, Samsung Venture Investment has partnered with universities to source advanced technologies, such as during the semiconductor industry's shift to extreme ultraviolet lithography. It backed Oxford Semantic Technologies, an AI-focused University of Oxford spin-out, which was later acquired by Samsung to support AI features in its mobile devices. Similarly, Anglo American collaborated with the University of Birmingham and Cambridge Future Tech to launch PeroCycle, a spin-out developing carbon recycling technology for steelmaking based on perovskite research.[398]

Good CVC partners for spin-outs offer more than capital. For instance, Johnson & Johnson's JJDC works alongside J&J Innovation and JLabs to provide funding, advice, and infrastructure.[399] However, some corporate-backed accelerators report engagement with university spin-outs as being challenging. For example, Telefónica's Wayra, despite investing in over 1,100[400] start-ups, found that none were university spin-offs, citing concerns around IP, decision-making, equity terms and academic founders' availability.

Some CVCs state that they find universities hard to access and can resent having to pay a fee to get access via industry partnership clubs, for example, whereas other investors do not. In addition, CVCs are sector-focused meaning that sector-focused university-linked funds could be attractive future interaction points for them.

391. https://www.londonstockexchange.com/raise-finance/investment-funds
392. https://www.synconaltd.com/
393. https://www.ipgroupplc.com/
394. https://committees.parliament.uk/writtenevidence/141580/pdf/
395. https://www.elibrary.imf.org/view/journals/002/2024/119/article-A004-en.xml
396. https://globalventuring.com/corporate/asia/adecco-japan-to-help-cvcs-partner-with-entrepreneurs/
397. Ulrichsen, T. C. (2026) Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spinout and investor ecosystem. A Technical Report for Research England.
398. https://globalventuring.com/corporate/university/secrets-university-corporate-partnership/
399. https://jnjinnovation.com/venture-investing-jjdc
400. https://www.telefonica.com/en/sustainability-innovation/innovation/wayra/

Though founders tend to naturally focus on large higher profile CVCs like GV,[401] Airbus Ventures,[402] Pfizer Ventures and[403] BMW Garage,[404] many smaller CVCs exist with 36% of CVCs managing funds under $50 million in size.[405] Given the extensive nature of the relationships between UK universities and industry, more could be done to incentivise CVCs to engage with spin-outs and to increase founder and TTO awareness of the existence and motivation of CVCs and corporate investors. The Spin-out Register should be used to track CVC investment in spin-outs going forward to better understand and share best practice here more widely.

Family office investors

The trend for family offices to invest in UK spin-outs is generally upwards (with a slight step back in 2024). However, only 5% of spin-out deals currently involve at least one family office or one charity, so the starting base is low.

Family offices are increasingly directing capital toward start-ups,[406] especially in impact-driven sectors like sustainable agriculture, healthcare, education and microfinance. This aligns well with the UK's expanding pool of social enterprise spin-outs.

This trend also appears to reflect a generational shift, with younger family members often bringing start-up experience and a stronger appetite for innovation. Most family offices stem from entrepreneurial wealth, not inheritance, which further fuels their interest in early-stage ventures.

In addition to the sectors listed above, family offices are particularly well-suited to support deeptech and life sciences, given their patience for long development cycles and interest in transformative science.

Despite the UK being second only to the US in family office investment, these funds often operate quietly through informal networks and obscure entities. Outside of major research universities with strong alumni ties, it seems that awareness and access to these types of investors remains limited. As with CVC investors, the Spin-out Register provides an opportunity to better understand the interactions and identities of family office investors in spin-outs going forward.

Charity investors

Charities fund a significant share of fundamental research in UK universities, especially in life sciences. Increasingly, charities and foundations are expanding into providing translational grants and direct investments in spin-outs aligned with their missions. For example, LifeArc, Cancer Research Horizons, Crisis, Esmée Fairbairn Foundation etc.

While still a small part of overall spin-out investment, charities are under growing pressure to demonstrate impact and build long-term sustainability. Their involvement can add substantial value to new spin-outs, offering credibility, expert networks, technical insight, validation and patient access in health-related ventures or customer access in social ventures.

Notwithstanding their major role in UK science funding, charities feel underrepresented in national innovation strategy discussions. A recent Transferring and Accelerating Research (TAR) network report also highlighted low awareness amongst founders of their capabilities as investors in spin-outs.[407]

401. https://www.gv.com/
402. https://www.airbusventures.vc/
403. https://www.pfizer.com/about/partners/venture-investments
404. https://www.bmwgroup.com/en/innovation/open-innovation/startup-garage.html
405. https://globalventuring.com/corporate/overview/small-corporate-venture-capital-funds/
406. https://www.pwc.com/gx/en/services/family-business/family-office/family-office-deals-study.html
407. https://www.provenconnect.com/good-to-know/academics-clinicians-and-industry/

Philanthropic donations, local authorities and alumni investment into spin-out funds

Philanthropic donations can support universities in several ways including funding research and buildings. These donations are often made by external donors and alumni whose contacts are managed by university development or advancement offices. These teams may guard donor relationships closely which can limit access for TTOs. Some universities such as Cambridge, Oxford, Imperial and Bristol have partnered with firms such as Parkwalk Advisors[408] to create EIS funds targeting alumni investors and have productively bridged these barriers in order to successfully access their alumni networks for investment.

These EIS funds operate by co-investing alongside the university seed funds, leveraging the internal due diligence capabilities of the universities. However, this model requires a strong and accessible alumni base, steady consistent deal flow and sophisticated internal investment teams, making it hard to replicate across all institutions.

There is a spectrum of philanthropic capital, ranging from pure donations to social or mixed-motive investments, where donors seek both impact and financial return. Terms like venture philanthropy can blur definitions, covering everything from charitable donations into seed funds, through to social or direct investment.

UK universities also face several disadvantages in terms of accessing philanthropy compared to their US peers: smaller endowments and limited philanthropic capital for seed funding spin-outs, and a weaker alumni-giving culture. In contrast, many US universities fund early-stage ventures through endowments or alumni donations, filling early-stage gaps where traditional investors will not engage. Furthermore, foundations are also an important source of commitments of capital to funds investing in US university spin-outs, highlighting perhaps a much greater role of philanthropy in the US compared to the UK.

To address these gaps, some UK universities have introduced voluntary schemes such as Imperial College's Entrepreneurs Pledge[409] that invite founders to commit (non-binding) to making future philanthropic gifts after a future exit or liquidity event. Others have been developing tiered funding ecosystems, using internal resources, alumni philanthropy and mixed-motive capital sources such as local government authorities to create local seed funds.

Philanthropic and social investors are increasingly important for spin-outs focused on mission-driven or societal impact technologies, where commercial returns may not justify early-stage risk. Equally, whilst these investors offer flexibility and support, over-reliance on them without rigorous business planning can lead to failure especially where 'well meaning' investors choose to invest out of passion but the lack sector expertise or networks to support the spin-out as it grows.

Philanthropic donations or investors tend to fall into several categories:

- Translational awards (pre-incorporation grants that fund PoC/PoM/Pre-seed phase work)
  - That do not expect a return; or
  - That expect a revenue share
- Donated investment funds (donations that 'top up' investment funds but from which the donors receive no return) (Venture One York and the CRUK Cancer Impact Club for example)
- Full investment for a return (but sourced from alumni) (for example, Parkwalk alumni derived EIS funds with some universities.[410,411,412,413])

In light of the growing financial pressures facing universities, attracting greater levels of philanthropic funding or investment is likely to become increasingly important, particularly in high-impact areas such as entrepreneurship and spin-outs. Going forward, it may be worth considering whether additional measures could be introduced to incentivise such contributions, especially when they align with and support national strategic priorities.

408. https://parkwalkadvisors.com/
409. https://www.imperial.ac.uk/giving/thank-you/entrepreneurs-pledge/
410. https://parkwalkadvisors.com/fund/university-of-oxford-innovation-funds/
411. https://parkwalkadvisors.com/fund/university-of-cambridge-enterprise-funds/
412. https://parkwalkadvisors.com/fund/imperial-college-innovation-fund/
413. https://parkwalkadvisors.com/fund/university-of-bristol-enterprise-fund/

Annex C: Building on the portfolio of previous reviews

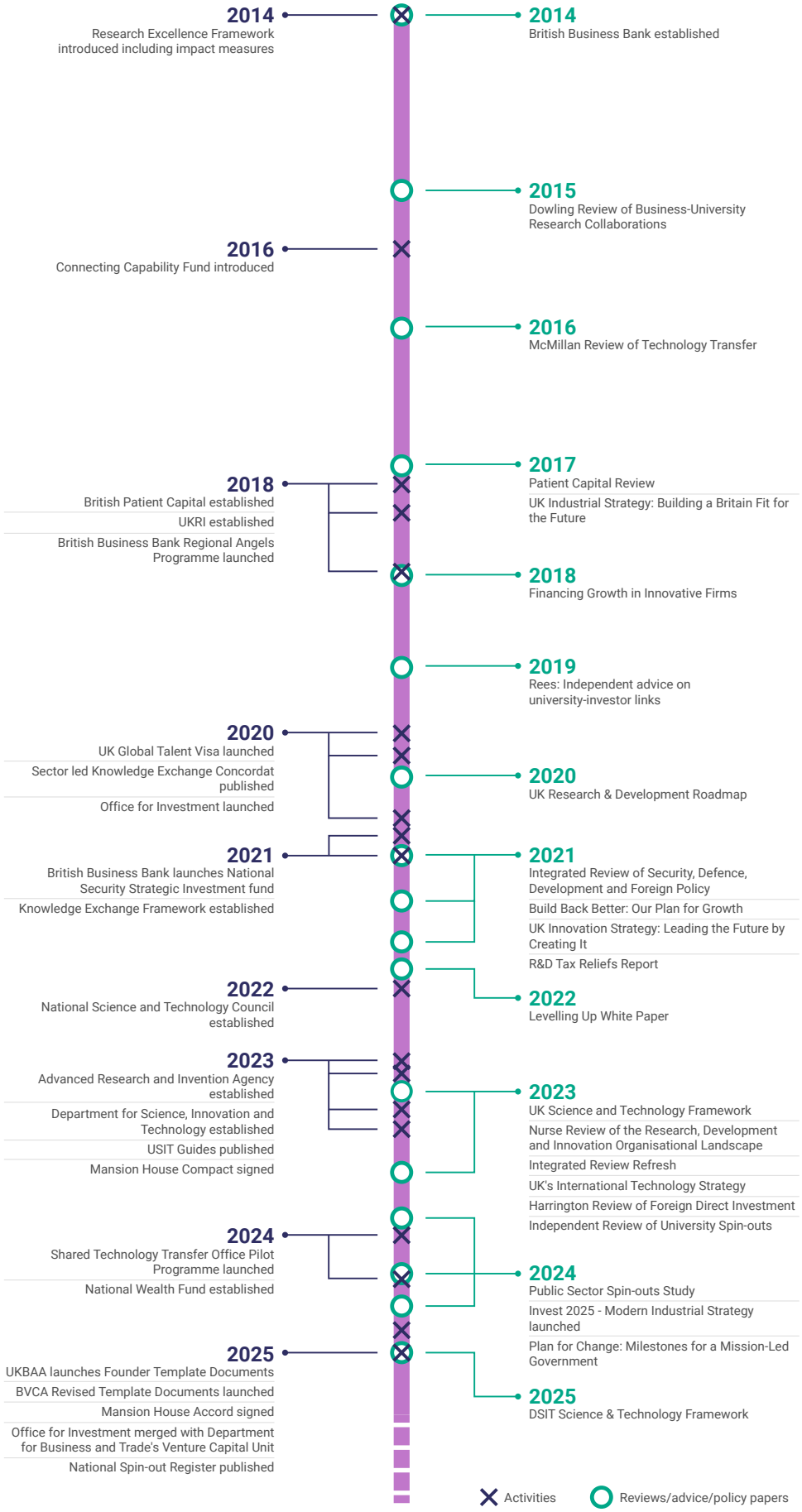
Governments worldwide have been increasing public investment in knowledge-intensive assets to escape the issues of low growth and low productivity seen over the past decade.

University spin-outs are prime examples of such assets and merit targeted attention and investment. Backing ventures in advanced technologies such as AI, robotics, creative sectors and treatments for chronic diseases can drive productivity, reduce costs, improve quality of life and expand the skilled workforce.

Given this, it is not surprising that the UK's innovation ecosystem, particularly the role of universities and spin-outs, has undergone extensive review and policy attention over the last 10 years. Notably, the pace of this scrutiny and intervention is accelerating (see diagram below). While this focus is encouraging, persistent challenges highlighted by these reviews remain unresolved, perhaps due to complexity, cost or the need for systemic solutions.

At the same time, we should pause to recognise the significant strides that have been made in better translating UK academic research into commercial ventures. Looking ahead, a more coordinated national strategy engaging government, academia, investors, developers and local authorities is essential to ensuring the best of British science is successfully commercialised, ideally within the UK.

Figure 29 Reflecting on the last decade: Driving the UK innovation sector forward through activities (left) and reviews/advice/policy papers (right). The figure starts from 2014.



Annex C

Building on previous reviews such as Dowling, McMillan, Patient Capital, Rees and the 'Independent review of university spin-out companies', there has been notable progress in the UK's innovation landscape, particularly around university spin-outs. This improvement has been driven by strategic funding and policy tools introduced by UKRI, the British Business Bank, government bodies and others.

Strategic elevation of knowledge exchange (KE)

There has been a marked shift in how universities approach KE, with greater strategic engagement at the leadership level. The role of KE offices and TTOs in delivering societal impact has become clearer, driven by initiatives such as the REF Impact agenda, the Knowledge Exchange Framework (KEF) and the KE Concordat.

Stabilisation and strengthening of HEIF

The 25-year-old Higher Education Innovation Funding (HEIF) has become a cornerstone of the UK's KE and technology transfer ecosystem. Following consistent recommendations from McMillan, Rees and the 'Independent review of university spin-out companies', HEIF has been stabilised, ringfenced and reinforced, thus raising the baseline for KE activity across the sector and enabling long-term planning and capability building.

Support for mission-specific flexibility

The continued flexibility in how universities deploy HEIF funding, another McMillan recommendation, has been instrumental in supporting the full diversity of institutional missions, from research-intensive to regionally engaged universities.

CCF-RED as a catalyst for innovation

The Connecting Capability Fund has proven to be a highly effective, experimental mechanism for addressing geographic and sectoral gaps. It has fostered inter-university collaboration (as recommended by the Rees Review), enabled pilots of shared TTO models (an 'Independent review of university spin-out companies' recommendation) and supported the development of place-based innovation initiatives, new university-affiliated funds and sector-specific accelerators and networks. Many of these advances would not have been possible without Connecting Capability Fund.

Investor confidence and incentives

Progress has been made in implementing Rees Review recommendations to enhance investor confidence. This includes providing greater clarity and stability around SEIS/EIS and VCT scheme and extending EIS eligibility to knowledge-intensive businesses, helping to increase capital flows into university spin-outs.

Pension fund engagement

Initial steps have been taken to implement recommendations from the various reviews regarding pension fund incentives for investing in private companies. While the impact of this on university spin-outs has not yet been fully felt or realised, the groundwork has been laid.

USIT guides and widespread sector adoption

The publication of the University Spin-out Investment Terms (USIT) guides has been a significant milestone. Over 58 universities have committed to implementing the 'Independent review of university spin-out companies' recommendations, signalling strong sector-wide engagement.

National Spin-out Register

The creation and publication of the first national register of spin-outs has already started to enable more granular analysis and insights to be found. This foundational dataset will support future evidence-based policymaking and targeted interventions.

Annex D: List of organisations/persons consulted as part of this review

As part of the review, an extensive programme of stakeholder engagement was undertaken. This included structured interviews with individuals and organisations, as well as a broader socialising process through roundtables and cross-government engagement activities.

In addition to the consultations, the review is supported by accompanying data analysis commissioned by Research England and authored by Tomas Coates Ulrichsen, entitled 'Investing in Success: A quantitative analysis of the structure, dynamics and links within the UK university spin-out and investor ecosystem', published alongside this report.

Interviews

A series of interviews were conducted with a wide range of stakeholders throughout 2025 to gather evidence, insights and perspectives relevant to the review. These interviews provided detailed qualitative insights that informed the review's analysis and recommendations.

Roundtables and wider socialising of emerging findings

Following the interview phase, a broader programme of socialisation was undertaken in autumn 2025 to test early findings and gather feedback from key stakeholder groups. This included a series of roundtables convened with representatives from universities, investor groups (organised in collaboration with BVCA) and angel investor groups (organised in collaboration with UKBAA).

Further broad cross-government engagement was also undertaken through a variety of existing convening structures.

Individuals interviewed

Dr Ananay Aguilar, TenU

Dr Ayokunmi Ajetunmobi, Pioneer Group

Mhairi Ambler, Falmouth University / Guild HE

Mark Anderson, Anderson Law

John Anderson, Imperial College London

Ana Avaliani, Royal Academy of Engineering

Richard Baker, Durham University

Roderick Beer, UK Business Angels Association

Dr Mina Bekheet, Panacea Innovation

Marion Bernard, Northern Gritstone

Maina Bhaman, Sofinnova Partners

Kate Bingham, SV Health Investors

Estelle Blanks, Newcastle University

Simon Bond, Bath Riverside Innovation District, University of Bath

Dr Simon J. Boulton FMedSci FRS, Francis Crick Institute / Cancer Research UK

Vanela Bushi, H Tree Captial

Dr Richard Butt, Apollo Therapeutics

Dr Manjari Chandran-Ramesh, Amadeus Capital Partners

Laura Citron, London & Partners

Dr Phil Clare, Queen Mary Innovation

Dr Gavin Clark, University of the Arts London

Tomas Coates Ulrichsen, Policy Evidence Unit for University Commercialisation and Innovation (UCI), University of Cambridge

David Coleman, University of Birmingham Enterprise Ltd

Neil Crabb, Frontier IP Group

Adam Cragg, Osney Capital

Sam Cruickshank, UK BioIndustry Association

Russ Cummings, Aqdot Limited/Saddle Skedaddle

Dr Sofya Danilova, University of South Wales

Dr Harry Destecroix, Science Creates Outreach / Scarlet Therapeutics / Nebu~Flow / Portal Biotech / Hone Bio

Anna Dickinson, Formerly: Onward

Dr Anne Dobrée, Parkwalk Advisors

Dr Barbara Domayne-Hayman, Entrepreneur in Residence, Francis Crick Institute

Dr Paul Donachy, Queen's University Belfast

Graham Duce, LifeArc

Andy Duley, University of Leeds

Dr Robert Easton, Oxford University Innovation

Chris Elphick, British Private Equity and Venture Capital Association (BVCA)

Jeannette Evans, Cell and Gene Therapy Catapult

Alex Favier, Midlands Innovation

Sean Fielding, Formerly: University of Exeter

The Honourable Alexander Fink, Fink Family Office / Empirical Ventures

Graeme Fisher, British Business Bank

Laoise Flanagan, Deloitte

Dr Morag Foreman, Wellcome Trust (Discovery Research)

Dr Tom Foulkes, Kings College London

Diana Galpin, University of Southampton / SETsquared Partnership

Dana Gamble, GuildHE

Dr Mairi Gibbs, Oxford University Innovation

Dr Simon Goldman, AlbionVC

Andrew Graham, Consultant

Dr Mark Gray, Middlesex University

Duncan Gray, Development Bank of Wales

Gerard Grech CBE, Founders at the University of Cambridge

Dr James Groves, Enterprise Lab, Imperial College London

Dr Vishal Gulati, Redcode Ventures

Tim Haines, Abingworth

Dr Mark Hammond, Deep Science Ventures

Deborah Harland, SR One / British Business Bank

Dr Tim Hart, University of Warwick

Josh Hawkins, Midlands Innovation

Dr Catherine Headley, University of Manchester Innovation Factory

Thierry Heles, The Next Leap

Prof Thomas Hellmann, Saïd Business School, University of Oxford

Dr Simon Hepworth, interviewed in his role at Imperial College London/now at Research England, UKRI

Dr Alastair Hick, Monash University

Christine Hockley, British Business Bank

Andy Hogben, University of Sheffield

Dr Dayle Hogg, Abingworth

Dr Chris Hollywood, Syncona

Christopher Hopkins, Venture Capital, L&G

Dr Anne Horgan, Cambridge Innovation Capital

Prof Sir Steve Jackson, Cancer Research UK Cambridge Institute

Julian Jantke, Kindling Ventures

Prof Nick Jennings, Loughborough University

Dr Tony Jones, One Nucleus

Mike Joslin, 1842 Fund / Alloy Partners

Bobby Kaura, Pathway Bio

Miles Kirby, DeepTech Labs

Prof Tony Kouzarides, Gurdon Institute, University of Cambridge

Dr Angela Kukula, MedCity / London & Partners

Alastair Laing, CG Asset Management

Dr Anne Lane, UCL Business Ltd.

Sonja Lawrence, Prostate Cancer Research / Proven Connect / The TAR Network

Paul Lee, Deloitte

Prof James Leiper, British Heart Foundation

Kirsten Leute, Osage University Partners

Dr Heather Lewtas, UK Atomic Energy Authority

Fitzkhoon Liang, NUS Enterprise, National University of Singapore

Zickie Lim, Mills & Reeve

Dr Ghenghis Lloyd-Harris, Cancer Research Horizons

Dr Kath Mackay, Bruntwood SciTech

Dr Poonam Malik, Scottish Enterprise

Dr Joe Marshall, National Centre for Universities and Business

Dr Christine Martin, Cambridge Enterprise

Dr Johnathan Matlock, Empirical Ventures

Dr Stephen Mayhew, Francis Crick Institute

Nicola McConville, Mishcon de Reya

Prof Trevor McMillan, Formerly: Keele University

Nicola McMillan, Scottish Enterprise

Ross McNaughton, Taylor Wessing

Nick McNaughton, Oz Reps

Jason Mellad, Formerly: Start Codon

Dr Ben Miles, Empirical Ventures / Spin Up Science / Science Angel Syndicate

Lesley Millar-Nicholson, Massachusetts Institute of Technology

Dr Jonathon Mitchell-Smith, Texture Jet Ltd

Prof Chris Molloy, Medicines Discovery Catapult

Prof Norbert Morawetz, Henley Business Angels

Dr Mike Murphy, Meltwind Advisory

Prof Ramana Nanda, Imperial College London

Prof Andy Neely, University of Cambridge

Dr Diarmuid O'Brien, Research Ireland

Rupert Osborn, Wellspring

Fifi Pang, NUS Enterprise, National University of Singapore

Dr Nigel Pitchford, Formerly: Touchstone Innovations

Joe Price, Evolutor

Debu Purkayastha, 3rd Eye

Graham Ramsbottom, Greensphere Capital

Dr Tony Raven, Formerly: Cambridge Enterprise, University of Cambridge

Tim Rea, Business Growth Fund

Mike Rees, Vice Chair at ING Bank / Member of Research England Council / Chair of Mauritius Africa Fintech Association

Chris Rees, Henley Business Angels

Dr Carolyn Reeve, NCUB

Toby Reid, Pioneer Group

Marty Reid, SETsquared Partnership

Dr Rasha Rezk, University of York / ForCell

Dr Andy Richards, Cambridge Angels

Jamie Rintoul, Nucleate / University College London

Amir Rizwan, London Social Ventures Fund Project, Queen Mary Innovation

Dr Elizabeth Roper, Epidarex Capital

Tatiana Schofield, Royal College of Art

Russell Schofield-Bezer, Member of UKRI Board

Amanda Selvaratnam, Knowledge Exchange UK / University of York

Oliver Sexton, Future Planet Capital

Jim Shirley, FundingHero.co.uk / Author of The Startup Fundraising MBA

Edward Sloan, Mills & Reeve

Dr Lisa Smith, Midlands Mindforge

Pierre Socha, Amadeus Capital Partners

Dr Bobby Soni, Formerly: BioInnovation Institute

Luke Southan, Aston University

Dr Chris Steer, Geoptic Infrastructure Investigations Limited

Christian Stein, Ascension

Alastair Stewart, Venture Capital, L&G

Dr Adam Stoten, Evotec (UK) Ltd.

Sam Sturge, University of Cambridge Investment Management

Dr Emilie Syed, Zinc

Dave Tansley, Deloitte

Dr Andrea Taylor, Edinburgh Innovations

Clare Terlouw, LifeArc

Hitesh Thakrar, Member of Board of Trustees, Cancer Research UK / Council Member and Chair of Innovation and Business Board, Science and Technology Facilities Council, UKRI

Dr Iain Thomas, Medicines Discovery Catapult / Babraham Institute Enterprise / University of Lincoln

Dr Jonathan Tobin, Brandon Capital

Dr Rebecca Todd, Longwall Ventures

Richie Turner, University of South Wales

Dr Helen Turner, Midlands Innovation

Dr Martin Turner, UK BioIndustry Association

Paul Van Dun, KU Leuven Research & Development

Greg Wade, Universities UK

Dr Bryony Wakefield, Kings College London

Glen Waters, HSBC Innovation Banking UK

Tracy Weightman, Intermediate Capital Group (ICG)

Henry Whorwood, Beauhurst

Dr Stuart Wilkinson, Knowledge Exchange UK

Jim Wilkinson, Oxford Science Enterprises

Teri Willey, Pathway to Cures (venture fund for the National Bleeding Disorders Foundation)

Dr Andrew Williamson, Cambridge Innovation Capital

Chris Willis Pickup, Mishcon de Reya

Gavin Winbanks, White Hawk Green

James Wong FRSA, Foresight Group

Dr Rob Woodman, Panakés Partners

Moray Wright, Parkwalk Advisors

Stanley Zee, University of Notre Dame

Organisations and departments consulted

Arts and Humanities Research Council, UKRI

Biotechnology and Biological Sciences Research Council, UKRI

Department for Culture, Media and Sport

Department for Science, Innovation and Technology

Department of Business and Trade

Engineering and Physical Sciences Research Council, UKRI

Government Office for Technology Transfer

Innovate UK ICURe, UKRI

Innovate UK Investor Partnerships, UKRI

Innovate UK, UKRI

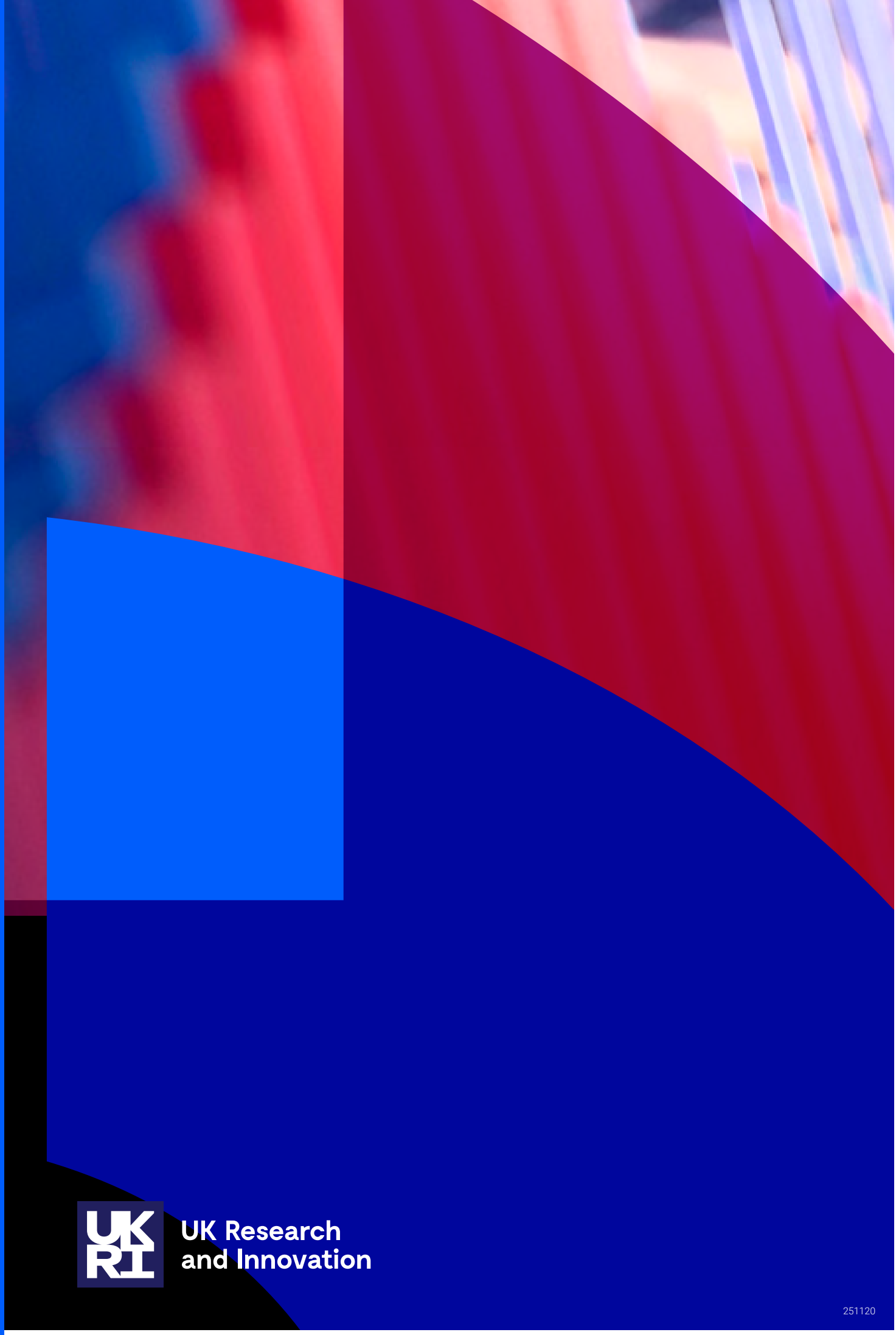
Medical Research Council, UKRI

Office for Investment, Department of Business and Trade

Science and Technology Facilities Council, UKRI

UKRI China

UKRI Commercialisation Capability



UK Research and Innovation

251120