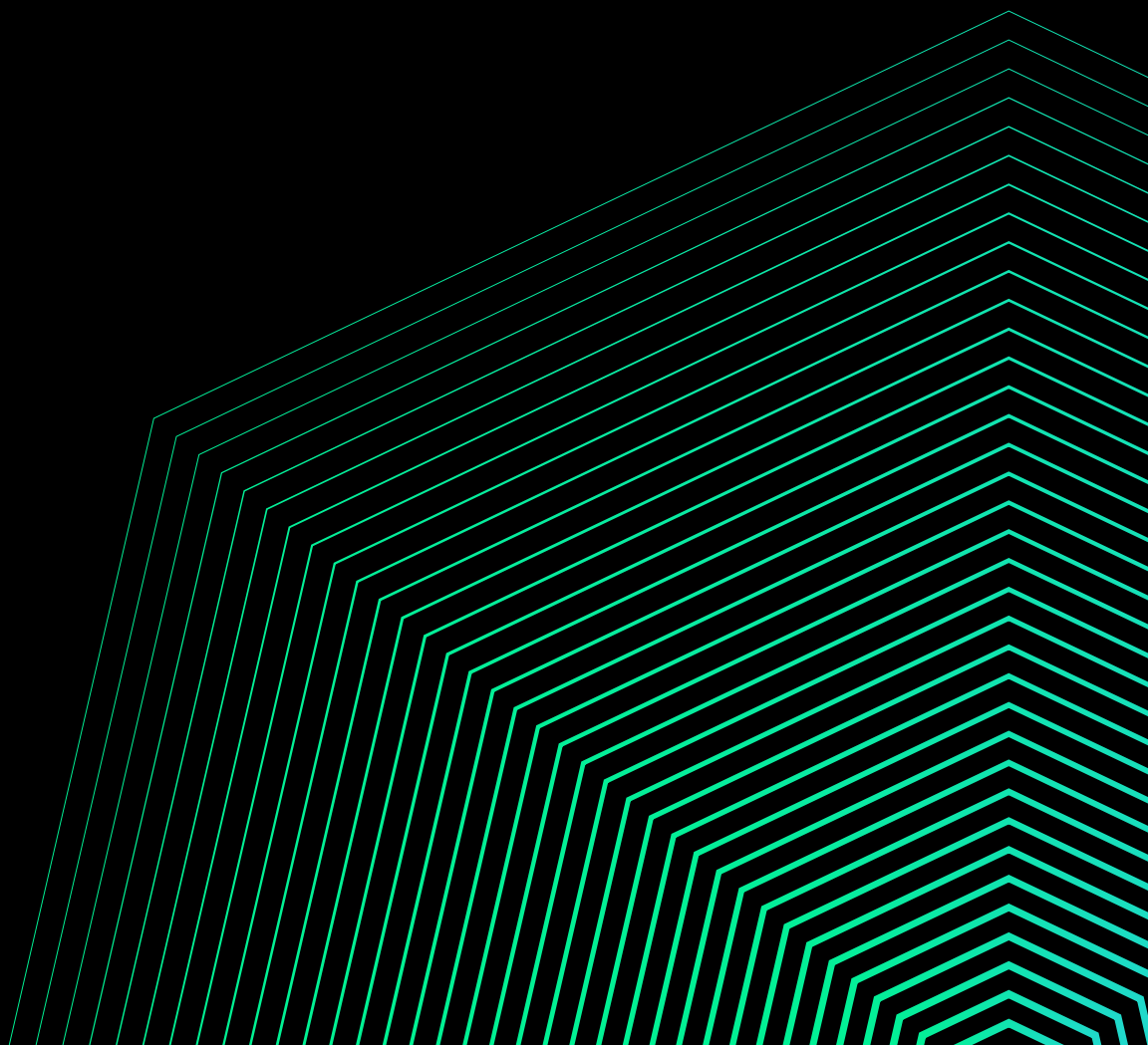
Royal Academy of Engineering | Enterprise Hub

UK spinouts

A status update



> **"The stakes are high. Spinouts contribute a great deal to our economic prosperity and if we can learn and improve on what we do then that will help everyone."**
>
> Spotlight on Spinouts 2021[1]

Since its launch in April 2013, the Royal Academy of Engineering's Enterprise Hub has been supporting talented entrepreneurs and decision-makers in transforming their engineering innovations into disruptive spinouts and startups. The Hub offers specialist support to accelerate UK spinouts across all nations, with a growing regional presence.

From the Hub's inception, we have awarded over £18 million in grant funding. Our Hub members have gone on to raise £3.4 billion in additional funding and create 5,600 jobs.[2]

Alongside supporting the spinouts themselves, our unique perspective into the experiences of academic founders from a range of universities spurred us on to get involved in policy discussions, with the aim of improving the experience for the academic founder and therefore the likelihood of success for the spinout. We take no equity in the spinouts we support and thus our independent position has enabled us to feed into national discussions on IP and commercialisation policy.

Our most visible policy work has been the annual report *Spotlight on Spinouts*, which has provided crucial insights and a comprehensive analysis of the trends in IP and commercialisation in the UK.[3] Its valuable quantitative evidence helps us understand where we must take collective action in an area that has historically lacked data. Our report has been the only publication to date that presents data on the contentious topic of university stakes. These are now at a 10-year low of 16.1%, which our work has contributed to.[4]

Our *Entrepreneur's Handbook* set out a practical guide for aspiring academic entrepreneurs to understand and navigate the spinout process. It contributes to levelling the asymmetry that exists between founders and universities, although further work is needed in this space.

In 2023, we were encouraged to see the government engage on how to improve spinout success in the UK. This resulted in the *Independent review of university spin-out companies*, with recommendations to help improve the creation and growth of university spinouts in the UK.[5]

We were pleased to see that the recommendations aligned with much of what we have long called for and continue to do so. While the review is not a panacea, if implemented well it should lead to positive outcomes. So, to accompany this year's publication of *Spotlight on Spinouts*, we have also set out to track how the review's recommendations are being implemented. Tracking this progress will help us to understand how it will impact the founders we support, as well as how we will continue our independent contribution to the policy landscape.

We want to see:

- Division of equity that incentivises exceptional academic founders to drive their company forward, reflecting support provided by the university. Equitable distribution among key contributors such as senior faculty and spinout leadership is also needed to help ensure commercial success.
- Ensuring academic founders are better informed on the spinout process to ensure they aren't disadvantaged when entering negotiations.
- Support for universities to resource their technology transfer offices for success in knowledge exchange.
- Greater investment and support for deep tech spinouts to bolster the high potential for growth and innovation in the sector. This is needed at all stages from spinning out to scaling up and internationalisation.
- The development of specific guidance on equity splits for hardware and engineering spinouts.

Tracking the progress of the implementation of the Independent review of university spinout companies

Best practice policies on equity distribution, more data and transparency, sharing technology transfer capability, and proof-of-concept funding are all areas identified in the *Independent review of university spinout companies* where significant progress has been made.[6]

It should be noted that the impact of the review's recommendations is yet to be evaluated. Given the timeframe since publication, this is understandable, and the Academy hopes that plans for measuring this impact are in place or under development. We look forward to understanding further in due course.

Annex A sets out the progress of the review's recommendations in its entirety. This assessment has been made by the Academy and reviewed by the relevant delivery bodies.

Best Practice

As of 1 December 2024, over 50 universities have voluntarily adopted the best practice policies in TenU's USIT Guide as recommended by the review and published changes to their policies.[7] This list will be updated periodically and was compiled by the Department for the Economy Northern Ireland, Medr, Research England and the Scottish Funding Council.[8]

Since the review's publication, TenU's USIT for Software Guide was published with the Academy as a consultation partner, reflecting our commitment to advocating for the founder.[9] While the USIT guide aims to cover both life sciences and deep tech spinouts, the Academy would welcome further guidance for hardware and engineering spinouts specifically.

This recommendation encourages stakeholders to jointly build and develop guidance and the Academy has advocated for greater collaboration between parties. As well as this, we have highlighted the importance of speeding up the spinning-out process. We have also long called for better guidance for spinout founders and more transparency on terms to level the 'information asymmetry' between founders and the university. The Academy has always advocated for the voice of the founder, and continues to do so, and the division of equity should incentivise exceptional academic founders to drive the company forward. The amount and quality of support provided by the university should be reflected in the stakes it seeks. The Academy will also consider ways to support the development of guidance for hardware and engineering spinouts.

While the review and USIT guides provide helpful frameworks on equity stakes and accelerating the spinning-out process, the distribution of equity among key contributors – faculty members, postdocs, and students – remains a challenge. Equitable distribution among stakeholders is critical to attract and retain top talent, attract investment, incentivise innovation, and avoid unnecessary delays. Addressing this will help to ensure commercial success.

National Spinout Register

Research England is developing a national spinout register in partnership with the Higher Education Statistics Agency (HESA) and the University Commercialisation and Innovation Policy Evidence Unit at the University of Cambridge.

The register will provide the first publicly curated list of all spinout companies across the UK. According to Research England's visioning report, the register will deliver against the specific need for more data and transparency on spinouts as stated in the review. Additionally, the data will likely result in wider evidence and policy insights that can be used by a range of relevant stakeholders including policy makers and founders.[10] The register is expected to be published in Spring 2025.

We have always taken the position that further tangible change in the spinout landscape can only be achieved by increasing the amount of data available on UK spinouts. Our annual *Spotlight on Spinouts* report has been the Academy's contribution to this so far. We will continue to encourage stakeholders to share data about their spinout journey and successes and failures.

The Academy looks forward to the upcoming publication of the national spinout register and its potential to provide consistency through a unified definition of spinouts, and public data to help inform important policy decisions impacting the UK spinout landscape.

Sharing technology transfer capability

The review recommended creating shared technology transfer offices (TTOs) to help build and scale critical mass in the spinout space for smaller research universities.

Research England has established a pilot programme, calling for diverse and innovative models of sharing technology transfer capability. Through its Connecting Capability Fund – Research England Development Fund (CCF RED), Research England has allocated over £4,700,000 to 13 collaborations, involving 49 higher education providers, with projects set to end in April 2025. See Annex B for details.

The pilot collaborations will explore both sector-specific (including digital, artificial intelligence, and health) and regional approaches to technology transfer and are spread across all regions.[11]

The Academy looks forward to how these will work in practice and supports the potential for regional partnerships. We also aim to support the regional approaches these projects look to embed and the learnings shared. In particular, we look forward to supporting outcomes from pilot collaborations from the Academy's Enterprise Hub regions, for example in the North East.[12]

Proof-of-concept funding

Following the review's recommendation for an increase in proof-of-concept funding to develop confidence in concepts, the government has announced that they will provide at least £40 million in proof-of-concept funding over the next five years. In support of the UK's Growth Mission, the fund will help researchers to bring their innovative ideas to market.[13]

As part of this, UK Research and Innovation (UKRI) have announced a £9 million proof-of-concept fund that will work across all disciplines and provide critical early-stage support to projects that will start by September 2025.[14]

The Academy believes that a well-executed strategy for technology and innovation translation funding is crucial for successful research commercialisation in the UK, offering multiple strategic advantages in the innovation pipeline. Proof-of-concept funding is most needed where local ecosystems are suboptimal, distance to major investment hubs is significant, commercialisation resources are limited, and institutions have no existing proof-of-concept mechanisms.

We hope that this initiative helps to address the regional imbalance of funding. However, it should be noted that UK spinouts face more substantial funding gaps outside of this, for example, investment in terms of the number of deals made fell in 2024 compared to 2023.[15]

Annex A

Recommendation as outlined in the Independent review of university spinout companies

Recommendation 1:

Accelerate towards innovation-friendly university policies that all parties, including investors, should adhere to where they are underpinned by guidance co-developed between investors, founders, and universities.

- All parties should agree spinout deals on market terms, avoiding unnecessary negotiations. Equity splits identified via TenU's University Spin-out Investment Terms (USIT) Guide can be used as a starting point for life sciences spinouts (10 to 25% university equity).
- Universities, investors, and founders to jointly develop guidance for (i) software spinouts, (ii) hardware and engineering spin-outs. For less IP-intensive sectors, common in software-only spin-outs, typical deal terms should be much lower, with university equity of 10% or less.
- Universities, investors and founders to jointly build on the USIT guidance to develop a template for spin-out term sheets.
- Universities should have clearly stated expectations on time to complete the stages of the spin-out process by both the university and founders. University approvals needed for a standard spin-out should be delegated to trusted individuals and not taken by committees that meet infrequently.
- Founders should be encouraged to adopt amongst themselves proportionate equity distribution that both recognises originating IP and continued intellectual support, but also the need to reward and incentivise those individuals who will commit considerable effort in taking the company forward.

Current progress

In September 2024, UKRI published a circular letter formalising expectations on higher education providers (HEPs) regarding best practices from the spinout review.[16]

As of 1 December 2024, over 50 universities across the UK have voluntarily adopted the best practice policies in TenU's USIT Guide as recommended by the review and published changes to their policies. This list will be updated periodically. The initial expectation of this initiative was for Research England to monitor universities in England, however, there has been significant buy-in from HEPs across the nations. This recognition of the importance of the review has expanded this to a UK-wide approach.

Since the review's publication, TenU's USIT for Software Guide was published with the Academy as a consultation partner, reflecting our commitment to advocating for the founder. While the USIT guide aims to cover both life sciences and deep tech spinouts, the Academy would welcome further guidance for hardware and engineering spinouts specifically.

Annex A

Recommendation as outlined in the Independent review of university spinout companies

Recommendation 2:

More data and transparency on spin-outs through a national register of spin-outs, and universities publishing more information about their typical deal terms. The Higher Education Statistics Authority's ongoing review of the Higher Education Business & Community Interaction (HE-BCI) dataset must present solutions to improve the reliability of data on spinouts.

Current progress

Research England is developing a national spinout register in partnership with HESA and the University Commercialisation and Innovation (UCI) Policy Evidence Unit at the University of Cambridge.

The register will provide the first publicly curated list of all spinout companies across the UK. According to Research England's visioning report, the register will deliver against the specific need for more data and transparency on spinouts as stated in the review. Additionally, the data will likely result in wider evidence and policy insights that can be used by a range of relevant stakeholders.

It is expected that register will be published in Spring 2025.

Recommendation 3:

Higher Education Innovation Funding (HEIF) should be used to reduce the need for universities to cover the costs of technology transfer offices (TTOs) from spin-out income. Given that HEIF equivalents are lower in the devolved administrations, the devolved governments may want to consider the findings of this review and provide additional support for their universities.

Current progress

As outlined in the government's response to the review, Research England will review and evaluate HEIF to ensure that it is delivering against the government's objectives, most notably ambitions for economic growth.

Recommendation 4:

Create shared TTOs to help build scale and critical mass in the spin-out space for smaller research universities. These could be operated through collaboration with established university TTOs and could be implemented at a regional or sector-wide level. We note that the latter may be particularly of interest to spin-outs from the social sciences, humanities, and the arts.

Current progress

Research England has established a pilot programme which called for diverse and innovative models of sharing technology transfer capability. Through its CCF RED, Research England has allocated over £4.7 million to 13 collaborations, involving 49 higher education providers.

The pilot collaborations will be exploring both sector-specific (including digital, artificial intelligence, and health) and regional approaches to technology transfer and are allocated across all regions.

Annex A

Recommendation as outlined in the Independent review of university spinout companies

Recommendation 5:

Government should increase funding for proof-of-concept funds to develop confidence in the concept prior to spinning out. These should integrate with the timing and offering of commercialisation support and venture-building programmes. Investors should lend their expertise to assessing funding bids for proof-of-concept and translational funds.

Current progress

The government has announced that they will provide at least £40 million in proof-of-concept funding over the next five years. In support of the UK's Growth Mission, the fund will help researchers to bring their innovative ideas to market.

As part of this, UKRI have announced a £9 million proof-of-concept fund that will work across all disciplines and provide critical early-stage report to projects.

Recommendation 6:

In developing the 'engagement & impact' and 'people & culture' elements of Research Excellence Framework (REF) 2028, the four Higher Education Funding Bodies should ensure that the guidance and criteria strongly emphasise the importance of research commercialisation, spin-outs, and social ventures as a form of research impact. We encourage spin-outs to assist universities in drafting impact studies for REF.

Current progress

Limited progress has been made against this recommendation as guidance for REF 2029 (previously REF 2028) is currently being developed. Guidance on the Engagement and Impact element of REF 2029 is expected to be published during 2025.[17]

Annex A

Recommendation as outlined in the Independent review of university spinout companies

Recommendation 7:

Founders need access to support from individuals and organisations with experience of operating successful high-tech start-ups, regardless of the region founders are based in or sector they operate in. The existing landscape of support services needs both consolidation and targeted expansion to ensure that founders have access to:

- Advice, support, or representation in negotiations with universities and investors.
- Training on entrepreneurship and commercialisation.
- Support for business-building activities: provide support to identify the commercial proposition of spinouts, build a business case, access customers, help connect investors with spinouts, and help identify experienced and diverse people to join as early employees, advisors, and board members.
- Access to part-time or on-call professional support in law, finance, or operations in early stages before permanent hires are needed.
- Access to shared equipment and facilities for rent.

Current progress

In response to the review, the government outlined an action to map the existing landscape of support for deep tech startup founders, however we are unaware of any progress made towards this.[18]

The Academy's Enterprise Fellowships continues to offer this level of support to academics spinning out companies through its 12-month accelerator programme.[19]

Annex A

Recommendation as outlined in the Independent review of university spinout companies

Recommendation 8:

UK Research and Innovation (UKRI) should ensure that all PhD students they fund have a voluntary option of attending high-quality entrepreneurship training and increase the opportunities for them to undertake internships in local spinouts, venture capital firms or TTOs.

Current progress

The Academy is unaware of any public evidence for progress made against this recommendation.

Recommendation 9:

Recognising the important role that university-affiliated funds have played in helping spin-outs from some regions access finance, universities considering working with new affiliated investment funds should ensure they are still able to attract a wider set of investors and encourage competition when agreeing such deals.

Current progress

New university-affiliated funds that invest in university spinouts have launched in 2024.

- Parkwalk launched the University of Cambridge Enterprise Fund (UCEF) X in September 2024, dedicated to investing in science and technology companies.[20]

- In October 2024, SETsquared, a group of six academic institutions in the UK's southwest, partnered with venture capital firm QantX to create an investment company that will aim to raise £300 million to invest in spinouts from partner universities of Bath, Bristol, Cardiff, Exeter, Southampton and Surrey.

- Five universities in the UK's northeast invested £12.5 million in a £22.5 million fund that will invest in spinouts from Durham University, Newcastle University, Northumbria University, the University of Sunderland and Teesside University.[21]

However, we are currently unaware of evaluation to understand how this impacts the universities' ability to attract a wide set of investors and encourage competition. It should also be noted that the current fundraising climate for venture capital remains challenging.[22]

Annex A

Recommendation as outlined in the Independent review of university spinout companies	Current progress
Recommendation 10: We welcome ongoing reforms to support scale-up capital, such as changes to pensions regulation, and encourage the government to accelerate these efforts. Government should continue its reforms to ensure that UK capital markets are able to provide the financing to incentivise companies to stay in the UK.	The government response to the review detailed a commitment of £250 million to two successful bidders under the Long-term Investment for Technology and Science (LIFTS) initiative, however we are unaware of any progress made against this.[23] The Science and Technology Venture Capital Fellowship (STVCF), delivered by the Academy and Imperial College London, is working to address this recommendation through this programme designed to enhance investor capability. It helps investors to identify and deploy capital into high-potential, scalable, life science and deep tech ventures. The Academy is unaware of any public evidence for progress made against this recommendation.[24]
Recommendation 11: Government should improve the provision of funds to enable movement between academia and industry, including through: • Funds that 'buy out' academic time to focus on commercial partnerships and potential ventures; or adapting funds for industry collaboration to be more accessible to spinout founders. • An 'academic returner' fellowship for researchers wishing to return to academia from the private sector.	The Academy is unaware of any public evidence for progress made against this recommendation.

Annex B

Research England has established a pilot programme which called for diverse and innovative models of sharing tech transfer capability. Through its Connecting Capability Fund – Research England Development Fund (CCF RED), Research England has allocated over £4.7 million to 13 collaborations, involving 49 higher education providers, with projects set to end in April 2025.[25]

Project Title	Partner Higher Education Provider(s)	Other Partner(s)
SpinOutWest	University of Bath (lead HEP), University of Bristol, Bath Spa University, University of Gloucestershire, University of the West of England	SETsquared, Royal United Hospital, QantX, Angel Investors Bristol, WECA
Shared TTO to Accelerate the Growth of Self-fundEd Spinouts (STAGE)	University of the Arts, London (lead HEP), Lancaster University, the University of Warwick, the University of the West of England, the University of Birmingham, Oxford Brookes University	Mark Mann Limited, SHAPE Innovation Ltd.
Manchester-Salford Commercialisation Consortium (MSCC)	University of Manchester (lead HEP), Manchester Metropolitan University, Royal Northern College of Music, University of Salford	University of Manchester Innovation Factory
Bridging the Gap: A Shared Technology Transfer Office Vision for Wessex	University of Portsmouth (lead HEP), University of Chichester, Southampton Solent University, AECC University College, Arts University Bournemouth	Oxentia, Skillfluence, Anderson Law, Openshaw & Co., Abel + Imray, Mazars, Future Planet Capital
Symbiotic Technology Transfer Resource Enabler and Mobilisation to Leverage Increased Net Efficiencies (STREAMLINE)	Cranfield University (lead HEP), University of Hertfordshire	Orion Innovations; Wellspring; Oxentia; VennGroup Recruitment (Venn); Innovate UK Growth (East of England; via Exemplas Ltd)
NR 4ward	University of East Anglia (lead HEP)	PBL Technology Limited, Health Tech Enterprise, Anglia Innovation Partnership, John Innes Centre, Earlham Institute, Quadram Institute, The Sainsbury Laboratory, Norfolk and Norwich University Hospital

Annex B

Project Title	Partner Higher Education Provider(s)	Other Partner(s)
Sustainable Innovation in Global Health Technology (SIGHT)	Liverpool School of Tropical Medicine (lead HEP), London School of Hygiene and Tropical Medicine, Brighton & Sussex Medical School	LYVA Labs, Oxentia, iiCON
DigiSpin WM: Powering the future of Advanced Manufacturing with Digital Innovation	Coventry University (lead HEP), Birmingham City University, University of Wolverhampton	
The Golden Circle	University of Sussex (lead HEP), University of Essex, University of East Anglia, University of Kent, University of Reading, University of Brighton, Royal Holloway and Bedford New College (RHUL)	Wellspring EMEA Ltd (Wellspring), Oxentia Ltd, Angel networks, including Henley Business Angels (lead), Sussex, Kent and Essex Business Angels networks
Creating the evidence base for shared TTO needs and opportunities in supporting SHAPE spinouts	London School of Economics & Political Science (lead HEP), Lancaster University, Royal College of Art, University of Bristol, University of Leicester	Oxentia
VirtualTTO: an end-to-end solution for scalable and effective spin-out support utilising AI and TTO best practice	University of West London (lead HEP), Brunel University London	MDRx LLP, Mishcon de Reya, Sega Europe Ltd
Shared Technology Transfer Office in Advanced Engineering & Manufacturing for the Midlands (STTOAEMM)	University of Warwick (lead HEP), Birmingham City University, Harper Adams University, University of Wolverhampton, University College Birmingham, Keele University	Oxentia Ltd
Pathways towards a shared TTO capability for the North East	Teesside University (lead HEP), Durham University, Newcastle University, Northumbria University, University of Sunderland	Research Consulting Limited

Notes and References

1 Spotlight on spinouts, Royal Academy of Engineering, 2021.

2 Our alumni have raised £3.4 billion in additional funding and created 5,600 jobs, including £2.5 billion in funding and 2,600 new jobs since joining the Enterprise Hub.

3 Spotlight on Spinouts, Royal Academy of Engineering, 2024.

4 Spotlight on Spinouts, Royal Academy of Engineering, 2025.

5 Independent Review of University Spinout Companies, DSIT and HMT, 2023.

6 Independent Review of University Spinout Companies, DSIT and HMT, 2023.

7 The USIT Guide: Leading Universities and Investors Launch Set of Recommendations for the Innovation Sector, TenU, 2024.

8 Spin-outs review implementation: best practice adoption list, UKRI, 2024.

9 TenU USIT Guide for Software, TenU 2024, and Spin-outs progress addresses the economic growth agenda, UKRI, 2024.
The development of this guide was already in the process prior to the Review's publication.

10 Improving Spin-out Data with the Spin-out Register: Design Principles and Opportunities, University Commercialisation and Innovation Policy Evidence Unit, University of Cambridge and Research England, 2024.

11 Spin-outs progress addresses the economic growth agenda, UKRI, 2024.

12 The Academy has recently launched its Enterprise Hub North East.

13 Government backs UK R&D with record £20.4 billion investment at Autumn Budget, DSIT, 2024

14 New UKRI proof-of-concept funding set to bolster innovation, UKRI, 2025.

15 Spotlight on Spinouts, Royal Academy of Engineering, 2025.

16 HEIF addendum: spin-outs best practice and adoption, UKRI, 2024.

17 PCE pilot exercise guidance, REF 2029, 2025.

18 Government Response: Independent Review of University Spin-outs, DSIT and HMT, 2023.

19 Enterprise Fellowships, Royal Academy of Engineering, 2025.

20 Spotlight on Spinouts, Royal Academy of Engineering, 2025.

21 2024 marks flurry of university spinout fund launches, Global University Venturing, 2024.

22 Venture capital in the UK, British Private Equity and Venture Capital Association, 2024.

23 Government Response: Independent Review of University Spin-outs, DSIT and HMT, 2023.

24 Science and Technology Venture Capital Fellowship, Royal Academy of Engineering Enterprise Hub

25 Shared technology transfer office functions pilot projects, Research England, 2024.

Royal Academy of Engineering

The Royal Academy of Engineering is harnessing the power of engineering to build a sustainable society and an inclusive economy that works for everyone.

In collaboration with our Fellows and partners, we're growing talent and developing skills for the future, driving innovation and building global partnerships, and influencing policy and engaging the public.

Together we're working to tackle the greatest challenges of our age.

ACKNOWLEDGMENTS

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WHAT WE DO

Talent and diversity
We're growing talent by training, supporting, mentoring and funding the most talented and creative researchers, innovators and leaders from across the engineering profession.

We're developing skills for the future by identifying the challenges of an ever-changing world and developing the skills and approaches we need to build a resilient and diverse engineering profession.

Innovation
We're driving innovation by investing in some of the country's most creative and exciting engineering ideas and businesses.

We're building global partnerships that bring the world's best engineers from industry, entrepreneurship and academia together to collaborate on creative innovations that address the greatest global challenges of our age.

Policy and engagement
We're influencing policy through the National Engineering Policy Centre – providing independent expert support to policymakers on issues of importance.

We're engaging the public by opening their eyes to the wonders of engineering and inspiring young people to become the next generation of engineers.

For more information about the Policy Fellowships programme, please visit **https://raeng.org.uk/policyfellowships** or contact **policyfellowships@raeng.org.uk.**

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