Spotlight on Spinouts

UK academic spinout trends

May 2023

Beauhurst

Royal Academy of Engineering | Enterprise Hub

Contents

Foreword

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We are thrilled to present *Spotlight on Spinouts 2023*, the third edition of an annual report that showcases the state of the UK's spinout economy. Sponsored by the Royal Academy of Engineering and prepared by Beauhurst, this report offers a comprehensive analysis of the spinout landscape across the country.

At the Academy's Enterprise Hub, we support talented entrepreneurs and decision-makers in transforming their engineering and scientific innovations into disruptive spinouts, startups, and scaleups. Our goal is to identify IP-rich innovations from all areas of engineering and technology that can address the world's most complex environmental, economic, and social challenges. Our entrepreneurs benefit from the Academy's unique, prestigious national and global network, while the Hub provides smart and flexible training, access to unique mentoring by industry leaders, a dedicated presence in the UK's regions, and long-lasting ongoing benefit and support.

This year marks the Hub's 10th anniversary, during which we have supported over 350 researchers, recent graduates, and SME leaders to start up and scale up businesses. These Hub members have raised over £1b in additional funding and created more than 6,000 jobs, demonstrating the impact of our support. Through the Hub, we have gained unique insight into the current realities of spinning out companies from UK universities. Our experience is rooted in practice and, since we take no stake in any of the companies we support, we maintain an independent voice. This enables us to contribute to national discussions on the commercialisation of university-owned IP, including producing discussion papers, hosting roundtables, and providing evidence for government inquiries. Last year, we launched The Entrepreneur's Handbook, a practical guide to help aspiring academic entrepreneurs understand and navigate the challenges of spinning out.

> **This year, we have focused our attention on two additional elements of spinout activity: universities which have experienced the greatest growth in their spinout populations over the last two years and in-depth analysis of the gender of founders and directors over time.**

In this report, building on the past two years, we have collected a wealth of data on spinouts in the UK – from university of origin and geographic distribution, to

investment trends, survival rates and exits, founder demographics, equity stakes and more. This year, we have focused our attention on two additional elements of spinout activity: universities which have experienced the greatest growth in their spinout populations over the last two years and in-depth analysis of the gender of founders and directors over time.

> **University spinouts play a crucial role in our economy and it is essential that we recognise both their successes as well as the trends within the sector.**

Spotlight on Spinouts 2023 is an essential read in the context of the UK government's ambitions to become a 'science superpower' and the creation of the new Department for Science, Innovation and Technology. The government has recognised the key role that spinouts play in the economy, with the publication of the Science and Technology Framework committing to strengthening the spinout pipeline and the review of the UK spinout landscape seeking to identify best practice in turning university research into commercial success. The data presented in our annual report is a valuable part of the evidence needed to address these priorities.

This report contains valuable insights that will interest universities, spinouts, and policymakers, including:

- The mean stake taken by universities has broadly decreased between 2013-2022 from 24.8% to 17.8%, representing the lowest average stake taken by universities in the 10-year period.
- The value of funding rounds secured by spinouts rose five-fold from £402m to £2.13b between 2013 and 2022, with the total value over this period at £12.6b.
- Similar to the rest of the venture capital market, there has been a slight decline in value and number of deals involving spinouts since 2021.
- The average size of equity financing rounds has increased over the past decade 1.87x with the mean deal size across this period at £3.91m.
- There has been a substantial increase in all female founding teams — 0% in 2016 to 12.8% in 2021; however, there is still no data available on ethnicity, which continues to be a key barrier to affecting change.
- Life sciences continues to dominate the list of sectors by number of spinouts, while CleanTech is also prevalent, highlighting how spinouts are at the forefront of technological advancements helping to tackle global problems. AI continues to top the rankings of emerging sectors, with genomics appearing as a new addition.

University spinouts play a crucial role in our economy and it is essential that we recognise both their successes as well as the trends within the sector. We hope that the annual analysis provided in this report can lead to progressive change and improvement across the UK spinout landscape. We would like to thank the stakeholders who helped with the analysis, in particular the steering group for their contributions, and the university technology transfer offices who collaborated with Beauhurst to provide up-to-date data. We encourage those with thoughts or insights to get in touch with us at the Academy.

Executive summary

Henry Whorwood
Head of Research and Consultancy at Beauhurst

In the UK, academic institutions are at the forefront of creating cutting-edge research and intellectual property (IP), and spinouts are one of the main ways of commercialising that IP. The UK government has recognised the importance of spinouts to the UK — as contributors to the economy and as a strategic source of new technologies. In March, the government launched a review into university spinouts to determine the most effective means of commercialising research.

> **The UK government has recognised the importance of spinouts to the UK — as contributors to the economy and as a strategic source of new technologies.**

As of January 2023, there are 1,166 active spinouts from UK academic institutions, accounting for 2.52% of the nation's high-growth company ecosystem. These spinouts have demonstrated an impressive ability to raise investment, securing 9.11% of all equity finance raised by private UK companies in 2022.

As industry attention on spinouts increases — asking questions about whether there are enough of them and whether they're set up for success — it's worth remembering the UK has a significant number of promising ventures relative to our population. Among the 1,166 active spinouts, 56.5% are in the seed stage, indicating strong growth potential for innovation within the UK and providing a robust foundation for achieving greater heights in science and technology.

1,718
total number of spinouts tracked since 2011 in the UK, with 1,166 active

£2.13b
equity investment received by UK spinouts in 2022

56.5%
proportion of active UK spinouts at the seed stage as of January 2023

17.8%
lowest average stake taken by universities over the past decade

Chapter 1

Demographics

Top academic institutions

Top academic institutions by total number of spinouts tracked since 2011 (January 2023)
(1-14, continued on next page)

University of Oxford	205
University of Cambridge	145
Imperial College London	108
University College London	90
University of Manchester	84
University of Bristol	67
Royal College of Art	67
University of Edinburgh	60
Queen's University Belfast	52
Swansea University	48
University of Strathclyde	47
University of Warwick	45
University of Southampton	41
University of Sheffield	41

51.8%
of spinouts originated from the top 10 academic institutions

The University of Oxford continues to top the leaderboard of universities based on the number of spinouts created. Over the past year, Oxford increased its tally from 193 to 205 spinouts. The University of Cambridge retains second place, with its total number of spinouts created rising from 137 to 145. Meanwhile, the University of Leeds saw the greatest increase in its total number of spinouts at 28%, growing its total from 26 to 36. This year's ranking also features some new universities such as Aston University, appearing for the first time with 10 spinouts.

The ranking of top-origin universities is dynamic as UK universities and company founders are continually creating new spinout companies to commercialise IP. Beauhurst sources spinout data from university technology transfer offices and from public sources throughout the year.

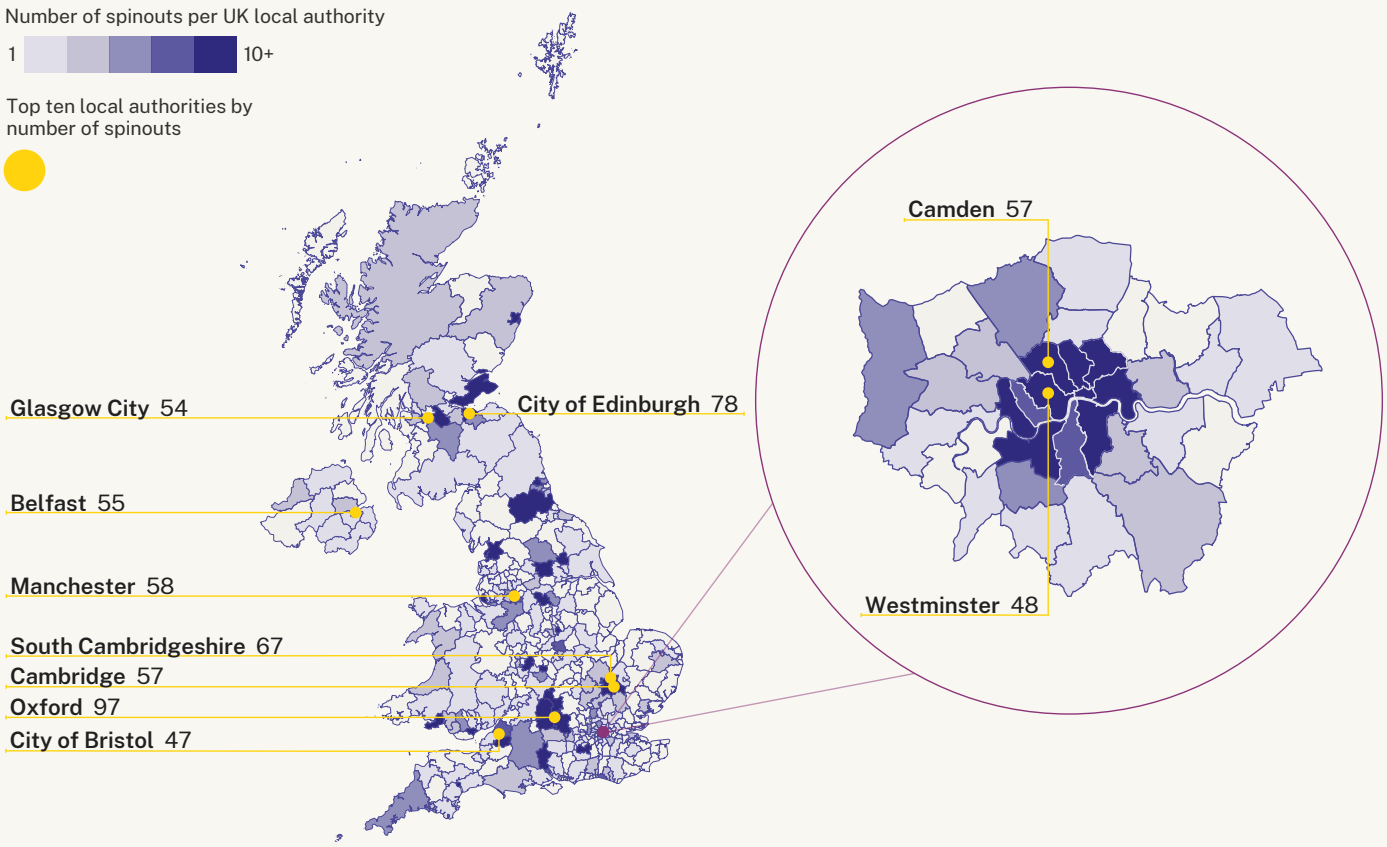
Top academic institutions

Top academic institutions by total number of spinouts tracked since 2011 (January 2023)
(15-42, continued from previous page)

University of Birmingham	39	Loughborough University	16
University of Nottingham	37	University of York	14
University of Leeds	36	Science and Technology Facilities Council	14
University of Glasgow	35	Queen Mary	14
Newcastle University	34	Lancaster University	14
University of Exeter	26	University of St Andrews	13
University of Ulster	24	University of Liverpool	12
Heriot-Watt University	24	Cardiff University	12
University of Aberdeen	23	City University	10
King's College London	21	Aston University	10
University of Surrey	19	University of Sussex	9
Durham University	17	University of East Anglia	9
University of Dundee	16	Cranfield University	9
University of Bath	16	Coventry University	9

Spinout clusters

Map of top local authorities by number of spinouts (January 2023)

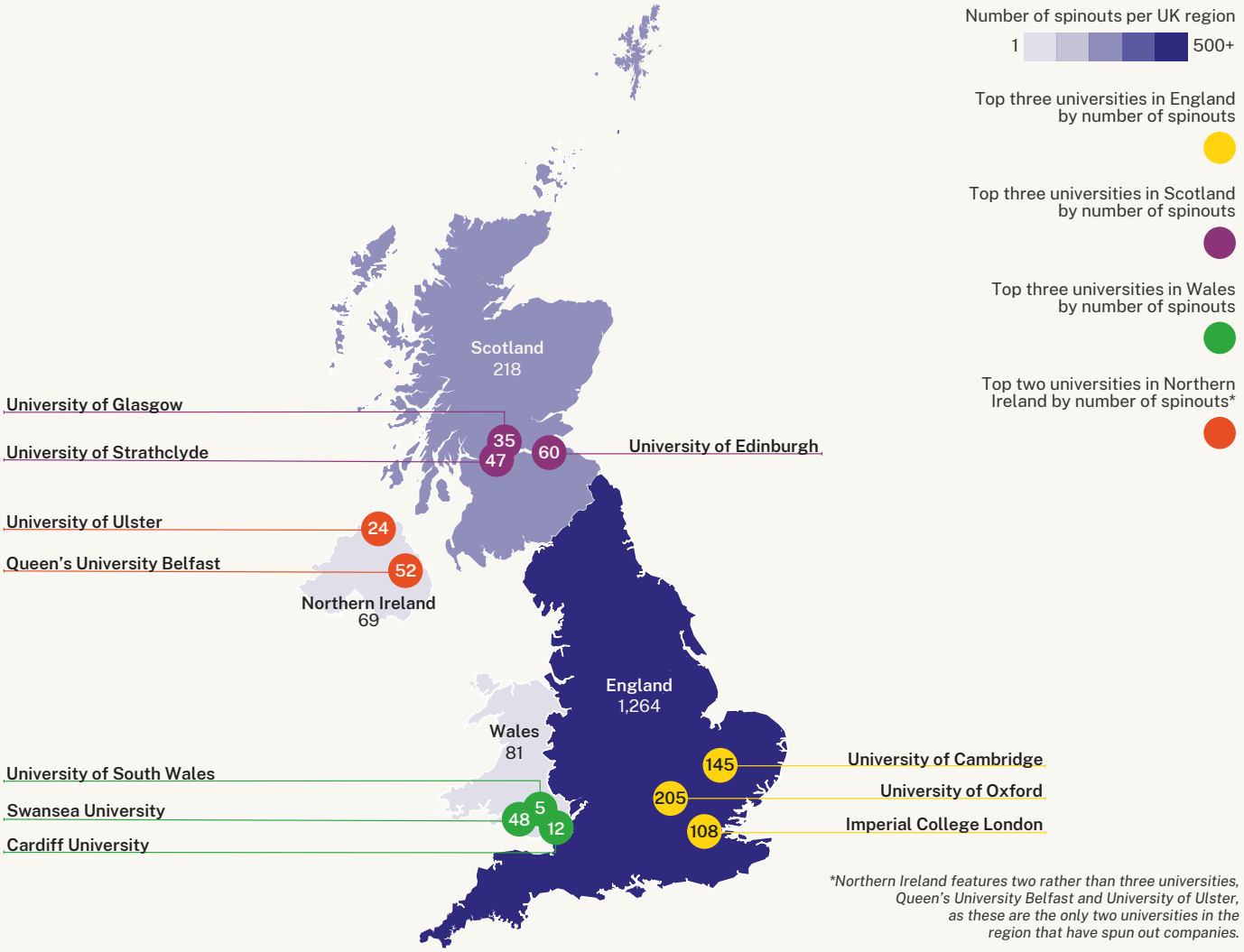


Since last year's edition of this report, Manchester (58) and the City of Bristol (47) have exhibited the greatest growth in terms of the proportions of their spinout populations, rising from 52 and 42 respectively. For Manchester in particular, this growth can be attributed to the University of Manchester's rapid increase in the amount of research it has helped to commercialise in recent years (see page 11).

Many spinout companies also choose to headquarter themselves in the City of Edinburgh (78). The majority of these companies spun out from the local universities, including the University of Edinburgh and Heriot-Watt University, however this number also includes many companies which were spun out of other universities in the UK. The external origin institutions tend to also be Scottish universities, such as the University of Strathclyde and University of St Andrews. These companies may choose to operate from the Scottish capital thanks to its strong research institutions, funding ties, and access to top talent, particularly in the life sciences.

Regional distribution

Number of spinouts by UK region (January 2023)



Northern Ireland features two rather than three universities, Queen's University Belfast and University of Ulster, as these are the only two universities in the region that have spun out companies.

Oxford is home to the most spinouts (97), seven more than the 90 recorded in last year's report. This can be attributed to the University of Oxford's position as the top origin university, having spun out 205 companies since 2011. Many businesses choose to situate their headquarters in close proximity to their origin university due to the availability of technical facilities and a highly-skilled talent pool. A similar trend can be observed with the concentration of spinouts in Cambridge and London, with Cambridge (57), South Cambridgeshire (67) and Camden (57) among the top local authorities by spinout population. These clusters of spinouts are linked to the presence of high-quality academic institutions in these areas — which includes the University of Cambridge (145) and Imperial College London (108). Together, these two universities have spun out an additional 10 companies in the past year, further contributing to the spinout populations in these areas.

Dominant sectors

Top sectors by number of spinouts (January 2023)

Pharmaceuticals	309
Research tools/reagents	279
Analytics, insight, tools	237
CleanTech	150
Clinical diagnostics	147
Software-as-a-service (SaaS)	129
Medical devices	127
Materials technology	106
Mobile apps	68
Nanotechnology	67
Security services (physical and virtual)	59
Medical instrumentation	58
Educational services	50
Healthcare products	49
Internet platform	48
Desktop software	44
Chemicals	41
Semiconductors	34
Electrical components	33
Machinery	32

The life sciences sector continues to lead the way, with pharmaceuticals (309) and research tools/reagents (279) topping the sectoral ranking for spinouts. Academic institutions are pivotal to the sector, which utilises extensive research and state-of-the-art facilities to further scientific innovation. Clinical diagnostics (147), medical devices (127) and materials technology (106) are among the top sectors for similar reasons.

This year, the ranking includes the following subsectors under the heading of CleanTech: clean energy generation, energy reduction technology and other clean technology.
The equivalent figure for last year was 128, representing a 17.2% increase in the number of spinouts operating in the sector. As the world pushes for net zero greenhouse gas emissions, innovation within CleanTech becomes ever more important and it is no surprise to see spinouts innovating in the sector. This highlights how spinouts are at the forefront of technological advancements within the UK, tackling the most pressing global problems. For example, Carbon8 Systems, spun out from the University of Greenwich, develops technology that captures waste carbon dioxide and can be integrated with industrial processes to do so.

Dominant sectors

Top emerging sectors by number of spinouts (January 2023)

Artificial Intelligence	156
Genomics	88
Precision medicine	77
eHealth	54
Big data	47
Digital security	42
Wearables	38
Internet of Things	38
Regenerative medicine	33
EdTech	27
3D printing	26
Virtual reality	25
Graphene	24
Quantum	20
Synthetic biology	18
Augmented reality	17
Robotics	16
AssistiveTech	15
Image and voice recognition	14
Cloud computing	14

Emerging sectors are areas of technological innovation and application that lie outside of existing sector classifications. These categories seek to capture business activity at the cutting edge of technology and new business models, creating exciting and disruptive opportunities for investors, entrepreneurs and businesses looking to stay ahead of the curve.

Artificial Intelligence (156) tops the emerging sector ranking as founders continue to find use cases for the new technology across a range of sectors: from drug discovery to agricultural forecasting. It is likely the sector will continue to flourish, as it has done over the past year, particularly with the new wave of generative AI companies coming into the spotlight following the rapid adoption of OpenAI's ChatGPT.

As a new addition to the rankings, genomics (88) also ranks highly amongst the emerging sectors for spinout companies. Falling within the life sciences, it is well-suited to the academic spinout model as the area benefits significantly from the early-stage research produced by leading institutions. The sector includes bit.bio, a spinout from the University of Cambridge, which develops new therapies and research tools using genetically reprogrammed stem cells.

Spotlight on universities

This year the report adopts an alternative approach to selecting universities for spotlighting. Instead of concentrating on universities with the greatest number of spinouts, the featured universities exhibited the fastest growth in their spinout populations over the past two years. This methodology highlights universities that have rapidly expanded their spinout populations compared to their historical figures. This approach provides an opportunity to showcase universities based on their recent track record of commercialising IP via spinouts, which would not be emphasised if universities were chosen based on their total number of observed spinouts since 2011. The population figures presented here pertain to the number of spinouts that have met Beauhurst's tracking criteria since 2011 (refer to page 44) and have been compared to equivalent figures for 2021. Beauhurst's dataset captures fluctuations in spinout populations as it is constantly updated to reflect the latest available information from technology transfer offices, companies, and investors.

University of Manchester

Number of spinouts in January 2023: 84

There have been a total of 84 companies spun out from the University of Manchester, including six exits: three have been acquired and three have had Initial Public Offerings (IPOs). This includes Orchard Therapeutics, a developer of gene therapies for rare diseases, floating on the NASDAQ in October 2018. Of the 84 companies, 39 have received equity investment since 2011 via 105 deals, raising a total of £478m.

King's College London

Number of spinouts in January 2023: 21

King's Innovation Institutes have supported 21 businesses in commercialising their research. Two of these companies, Centron Diagnostics and Imanova, were acquired in July 2014 and September 2017 respectively. Spinouts from the university have raised a combined total of £534m in equity investment.

University of Sussex

Number of spinouts in January 2023: 9

Nine companies have spun out of the University of Sussex, with six of these receiving equity investment worth a combined total of £58.4m. Enterprise Therapeutics, a drug discovery company focusing on the treatment of respiratory illnesses, received the majority of this investment, having raised £51.0m via five fundraising rounds.

University of Nottingham

Number of spinouts in January 2023: 37

There have been 37 companies spun out of the University of Nottingham, which supports new companies via its subsidiary Nottingham Technology Ventures. Of these businesses, 22 (59.4%) have received equity investment for a total of £64.1m via 73 fundraising rounds. Two of the university's spinouts, WalkUp and Monica Healthcare, were acquired, while Oncimmune was floated in 2016.

Spotlight on universities

University of Leeds

Number of spinouts in January 2023: 36

Since 2011, Beauhurst has tracked 36 companies that have spun out from the University of Leeds. These businesses have raised a total of £71.9m in equity investment from 45 deals. This includes an £8.00m deal by C-Capture, which develops a solvent system that captures carbon dioxide from the gas streams of coal-fired power stations and other power generation sites.

University of East Anglia

Number of spinouts in January 2023: 9

The University of East Anglia has helped produce nine spinout companies, with six of these having raised equity investment with a combined total of £57.6m via 37 deals. Three of the university's spinouts have exited, including Cambridge-based Spectral Edge — which was developing image processing technology that focused on colour clarity — before it was acquired by Apple in 2019 for an undisclosed sum.

University of Exeter

Number of spinouts in January 2023: 26

A total of 26 businesses have commercialised research from the University of Exeter. The university's IP and Commercialisation Team has worked closely with SETSquared Exeter to support a wide range of companies, across sectors such as CleanTech and AI. Among these companies is Simpleware, which was acquired in May 2016 by US-based Synopsys.

Loughborough University

Number of spinouts in January 2023: 16

Loughborough University has hosted 16 spinout companies, with 11 of these having secured a total of £80.8m in equity investment across 30 fundraising rounds. This includes a £38.0m round in March 2014 by Intelligent Energy, which developed low-carbon fuel cell systems for use in the automotive, consumer electronics, and stationary power industries.

Aston University

Number of spinouts in January 2023: 10

Spinouts from Aston University are innovating in pharmaceuticals, energy reduction technology and medical devices. Five of the companies have raised a total of £26.5m in equity investment via 18 deals. The university's nine actively trading spinouts include Birmingham-based Grid Edge develops software that uses AI to interact with a building's electrical and mechanical systems in order to reduce its energy consumption.

University of Bath

Number of spinouts in January 2023: 16

Beauhurst has tracked 16 companies spun out of the University of Bath since 2011. Of these businesses, 11 have raised a total of £99.9m in equity investment across 21 rounds. The most recent of these was by Ensilitech, the university's latest spinout, which raised £866k in December 2022. The company develops ensilication technology to protect biomolecules from thermal damage during unrefrigerated transportation.

Chapter 2

Funding sources

Equity investment

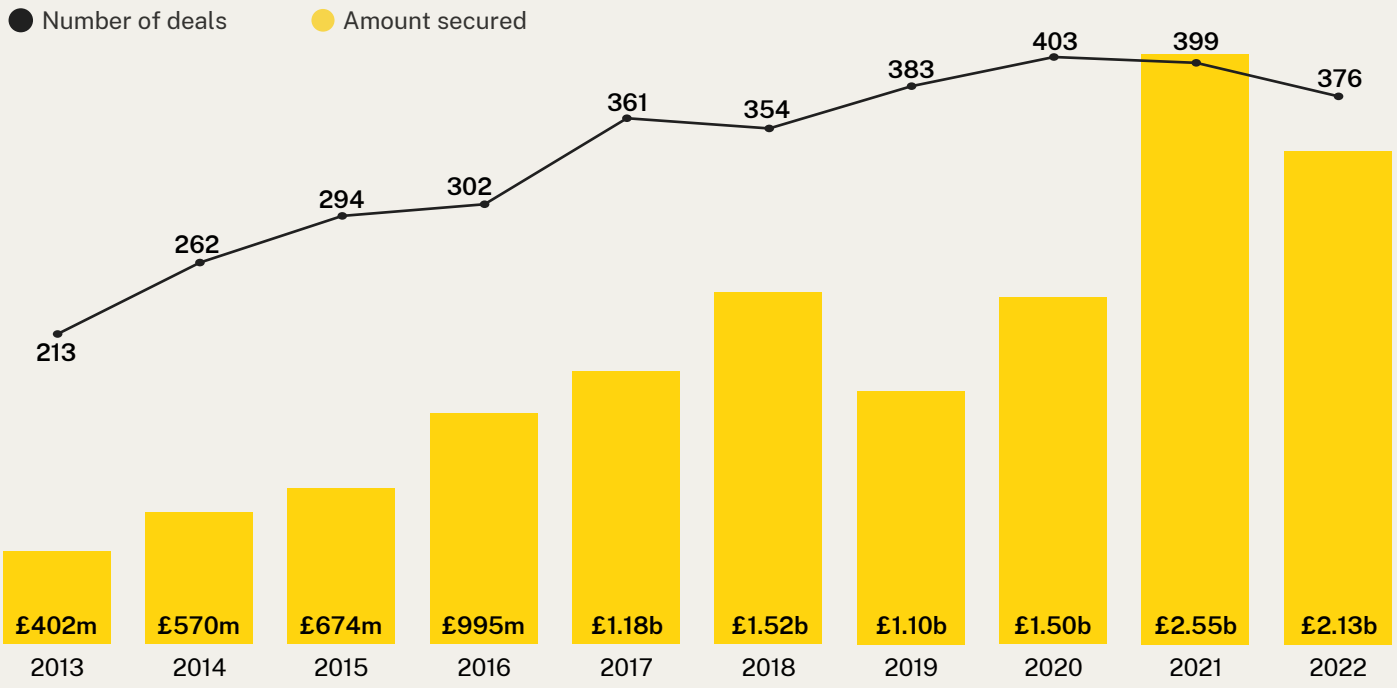
Over the past decade, academic spinouts have seen a substantial rise in equity investment, with deal values increasing five-fold from £402m to £2.13b and the number of deals growing from 213 to 376. Despite uncertain macroeconomic conditions and potential overextension by investors in 2021, spinouts continued to attract significant investment in 2022, demonstrating sustained interest in commercialising university IP and innovative technology.

Beauhurst's equity investment data is a dynamic dataset, updating over time as new deals emerge and spinout companies are discovered. Consequently, total investment figures for previous years may experience slight fluctuations. Annual investment and deal totals in this year's *Spotlight on Spinouts* report differ slightly from those in previous year's reports, reflecting the ever-evolving nature of the dataset.

3,347
total number of equity deals
(2013-2022)

£12.6b
total value of equity deals
(2013-2022)

Equity investment secured by spinouts (2013-2022)



Top investees of 2022

In this section, we highlight the top investees of the past year, showcasing the companies that raised the most equity funding and are poised for growth and impact in their respective sectors. Notably, three of the five companies highlighted — Osler Diagnostics, MiroBio, and OMass Therapeutics — are based in Oxford. This reflects the city's strong position as a hub for academic research and entrepreneurship, as well as its supportive ecosystem for startups and spinouts.

TauRx Pharmaceuticals

Total equity raised:	£209m
Incorporation date:	01/01/2002
Sector:	Pharmaceuticals

Founded in 2002, TauRx Pharmaceuticals aims to tackle degenerative brain disorders, such as Alzheimer's, through its novel tau aggregation inhibitors and the development of its diagnostic tools. Based in Aberdeen, the company secured £101m in a single round of equity funding in 2022.

MiroBio

Total equity raised:	£133m
Incorporation date:	08/10/2018
Sector:	Pharmaceuticals

Leaning on its pipeline of inhibitory receptor agonists and accompanying platform, MiroBio develops pharmaceuticals aimed at treating autoimmune diseases. Co-founders Richard Cornall and Simon Davis founded the company in 2018, raising £80.0m in June 2022 from investors such as Advent Life Sciences. In September, the Oxford-based company was acquired by Gilead Sciences for £356m.

Nexeon

Total equity raised:	£224m
Incorporation date:	22/02/2006
Sector:	Electrical components

Battery materials company Nexeon develops silicon anodes for lithium-ion batteries, supporting the development of lighter, more powerful batteries with longer lifetimes. Founded in 2006, the Oxfordshire-based company raised £134m across two fundraising rounds in 2022.

Osler Diagnostics

Total equity raised:	£144m
Incorporation date:	11/02/2016
Sector:	Medical devices

Having spun out of the University of Oxford in 2017, Osler Diagnostics has developed a portable lab with the aim of making lab-quality diagnostics more accessible. The company has raised £144m across five fundraising rounds, with £73.8m of this coming from a single deal in November 2022.

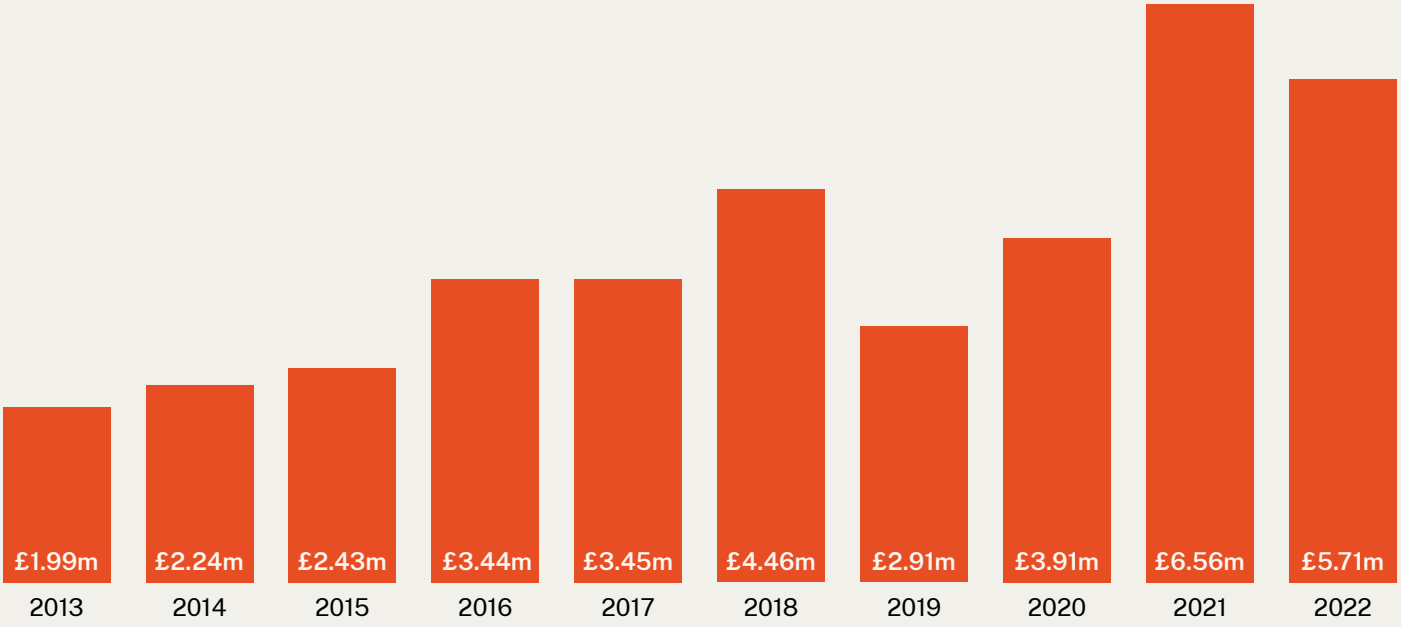
OMass Therapeutics

Total equity raised:	£123m
Incorporation date:	26/02/2016
Sector:	Pharmaceuticals

By drawing on its proprietary mass spectrometry technology, Oxford-based OMass Therapeutics studies membrane proteins and intracellular complexes to further drug discovery for immunological and orphan diseases. The University of Oxford spinout raised £80.2m in equity investment in 2022 from investors including Google Ventures and Oxford Science Enterprises.

Average investment size

Average size of equity deals secured by spinouts (2013-2022)



£3.91m
average investment round size (2013-2022)

187%
increase in average investment into spinouts (2013-2022)

Over the past decade, the mean size of equity deals for spinouts has grown, with a 187% increase between 2013 and 2022 and an average deal size of £3.91m. However, large individual deals, like TauRx Pharmaceuticals' £101m fundraising in November 2022, can skew the data, resulting in discrepancies between mean and median figures, with the latter being £1.26m in 2022.

Beauhurst's equity investment data is a dynamic dataset that evolves as new deals surface and spinout companies are identified. As a result, annual average equity investment deal sizes may vary over time. The figures in this year's *Spotlight on Spinouts* report may differ slightly from previous years, highlighting the continuous changes in the dataset.

Top investors

Top investors by number of equity deals into spinouts (2013-2022)

Parkwalk (combined funds)	267
Scottish Enterprise	255
Parkwalk Opportunties EIS Fund	126
IP Group	107
Oxford Science Enterprises	106
Mercia Fund Managers	89
University of Cambridge Enterprise Funds	88
University of Cambridge Seed Funds	74
Archangels	60
Technology Venture Investments	53
Syndicate Room	52
Touchstone Innovations	50
Cambridge Angels	50
Future Fund	45
Oxford Technology	43
Amadeus Capital Partners	40
University of Oxford Innovation Fund (UOIF)	39
Epidarex Capital	38
UK Innovation & Science Seed Fund (UKI2S)	35
The University of Strathclyde	34
24Haymarket	34

The figure for Parkwalk (combined funds) includes all deals by Parkwalk funds, including those featuring elsewhere on this ranking.
Parkwalk and Touchstone are now subsidaries of IP Group.

Scottish Enterprise continues to lead the way as the top investor into spinouts since 2013, participating in 255 deals. This total includes activity from the different entities Scottish Enterprise invests through such as the Scottish Co-Investment Fund and Scottish Venture Fund. The entities are focused on driving innovation and economic development within Scotland and are funded by the Scottish Government. While Scottish Enterprise tops the ranking by count of deals, it does not rank as highly by value of deal participations, emphasising the early nature of deals Scottish Enterprise participates in. Parkwalk Opportunities EIS Fund (126), IP Group (107) and Oxford Science Enterprises (106) also feature among the most active investors into spinouts by number of deals.

Angel networks, such as Archangels (60) and Cambridge Angels (50), also feature in the ranking. These deal numbers highlight the important role angel investors play in supporting spinouts in the UK, as it can be difficult for early-stage businesses to access sufficient sources of funding. Not only is angel investing an important source of early funds for companies, but founders also benefit from the support and commercial expertise these investors can offer.

Top investors

Top investors by value of equity deal participations into spinouts (2013-2022)

Oxford Science Enterprises	£1.45b
IP Group	£1.16b
Syncona Partners	£1.04b
Woodford Investment Management	£754m
Parkwalk Opportunities EIS Fund	£691m
Amadeus Capital Partners	£643m
Molten Ventures	£611m
M&G Investments	£506m
Touchstone Innovations	£498m
Novo Holdings	£495m
Baillie Gifford	£495m
Temasek	£478m
Cambridge Innovation Capital (CIC)	£458m
University of Oxford	£431m
UCL Technology Fund	£423m
GV (Google Ventures)	£397m
Cowen Healthcare Investments	£391m
RA Capital Management	£385m
Advent Life Sciences	£377m
Wellington Management	£358m

The above figures refer to the size of the whole deal the fund participated in, rather than the individual contribution of the fund to the deal, as this information is usually not disclosed.
Parkwalk and Touchstone are now subsidaries of IP Group.
Woodford Investment Management is now defunct.

Since 2013, Oxford Science Enterprises has featured as a top investor by value of deal participations into spinouts, participating in fundraisings worth a total of £1.45b. This represents a 62.7% increase over the past year and can be attributed to the fund's participation in several large deals, including an £80.0m fundraising round by immunotherapies developer MiroBio in June 2022. The firm was founded in 2015 and invests in spinouts across the deeptech, healthtech and life sciences sectors via its partnership with the University of Oxford.

Foreign investors, such as Novo Holdings (£495m), Temasek (£478m) and GV (£397m), also feature among the top investors by value of deal participations into spinouts. This speaks to the UK's strength in innovation, which drives global attention to its brightest companies. Naturally, spinouts are at the forefront of this innovation, and the foreign attention they are receiving can be seen as a positive signal for the quality of research being commercialised by academic institutions in the UK.

Early investors

Institutional investors

Oxford Science Enterprises

Number of seed-stage deal participations: 63
Value of seed-stage deal participations: £376m

Oxford Science Enterprises (63) has participated in the most seed-stage deals in the spinout ecosystem, with the value of these deals worth a combined total of £376m. These deals make up close to half of all deals the fund participates in, which are focused on life sciences, deeptech, and healthtech companies in the Oxford cluster.

University of Cambridge Enterprise Fund

Number of seed-stage deal participations: 49
Value of seed-stage deal participations: £82.8m

The University of Cambridge Enterprise Fund focuses on companies commercialising research out of the University. Since the University is among the top producers of spinout companies, the fund has participated in the second-most (49) seed-stage deals into spinouts, worth a combined total of £82.8m.

Mercia Fund Managers

Number of seed-stage deal participations: 42
Value of seed-stage deal participations: £22.5m

The fund has a focus on companies outside of London and the South East, and those from selected universities. In March 2022, the fund participated in an £800k round for edtech company Graide, which develops software aimed at making the process of providing feedback more efficient for teachers who are grading work.

Angel investors

Angel networks play a crucial role in supporting startups in their early stages, and this is similarly true for academic spinout companies. Because angels invest their own money, they can take more risks and often act as a first source of capital for companies looking to get started. Angel networks help individual angels source deals and syndicate risk by investing with other angels. Angel networks have participated in 352 fundraising rounds for spinouts from 2013 to 2022, representing 10.5% of all spinout deals completed during the period and 15.5% of all deals completed by angel networks.

Angel investors making independent investments are also key in supporting companies commercialising research out of universities. There are more than 1,000 angel investors in the UK that have at least three shareholdings in spinout companies, showcasing a broad cohort of people taking an interest in supporting these innovative companies. Many angels are well-connected within the startup community and have a strong understanding of how to grow a business, meaning they can be an important resource for founders to draw on, particularly during the early stages.

Innovate UK grant funding

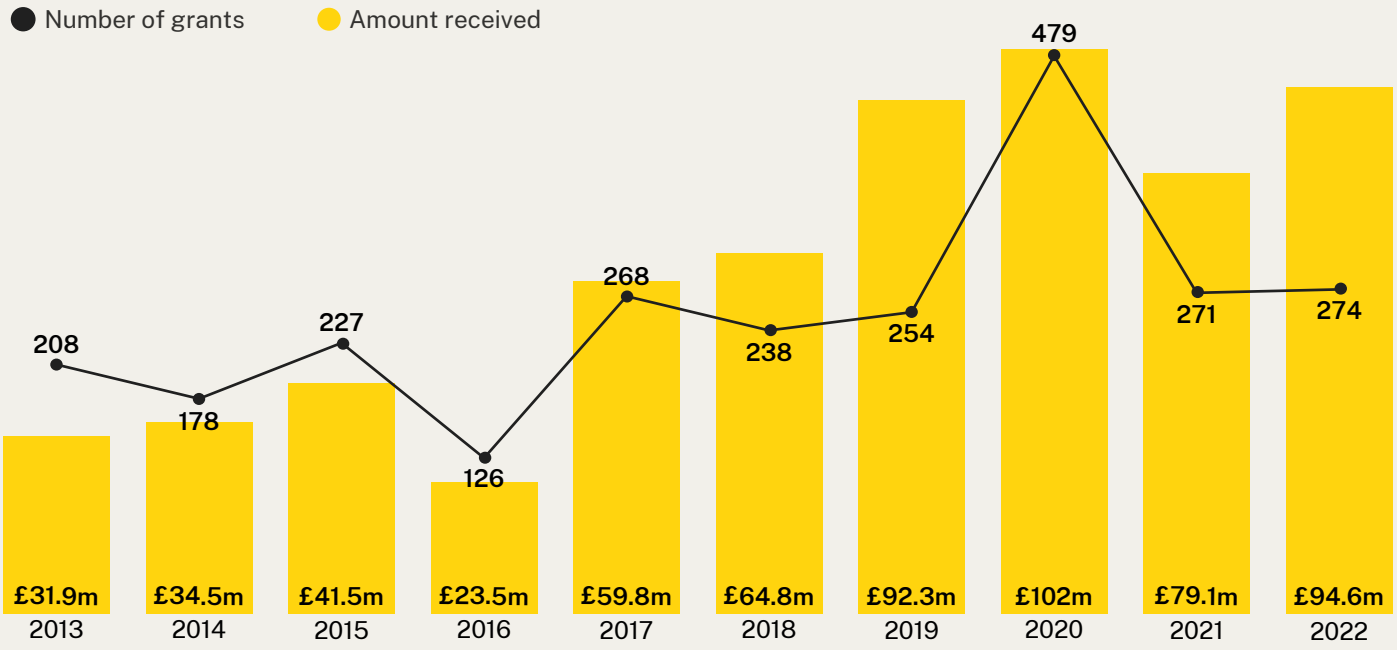
From 2013-2022, grant funding for spinouts tripled from £31.9m to £94.6m, with the number of grants increasing from 208 to 274 during the same period. Both the total value and number of grants peaked in 2020 when £102m was awarded via 479 grants, driven by the government's pandemic support efforts.

Beauhurst's grant dataset for spinouts is dynamic, constantly updating as new awards are discovered, and new spinout companies are identified. The annual grant values and deal numbers in this year's *Spotlight on Spinouts* report differ slightly from those in earlier editions. Previous versions of this year's report contained Innovate UK grant data that was accessed in January 2023. This revised version includes data accessed in May 2023, which impacts the trend in the total annual grant funding secured by spinouts. The revised data shows that the annual Innovate UK grant funding secured by spinouts increased between 2021 and 2022.

2,523
total number of IUK grants (2013-2022)

£624m
total value of IUK grants (2013-2022)

Innovate UK grants received by spinouts (2013-2022)



Chapter 3

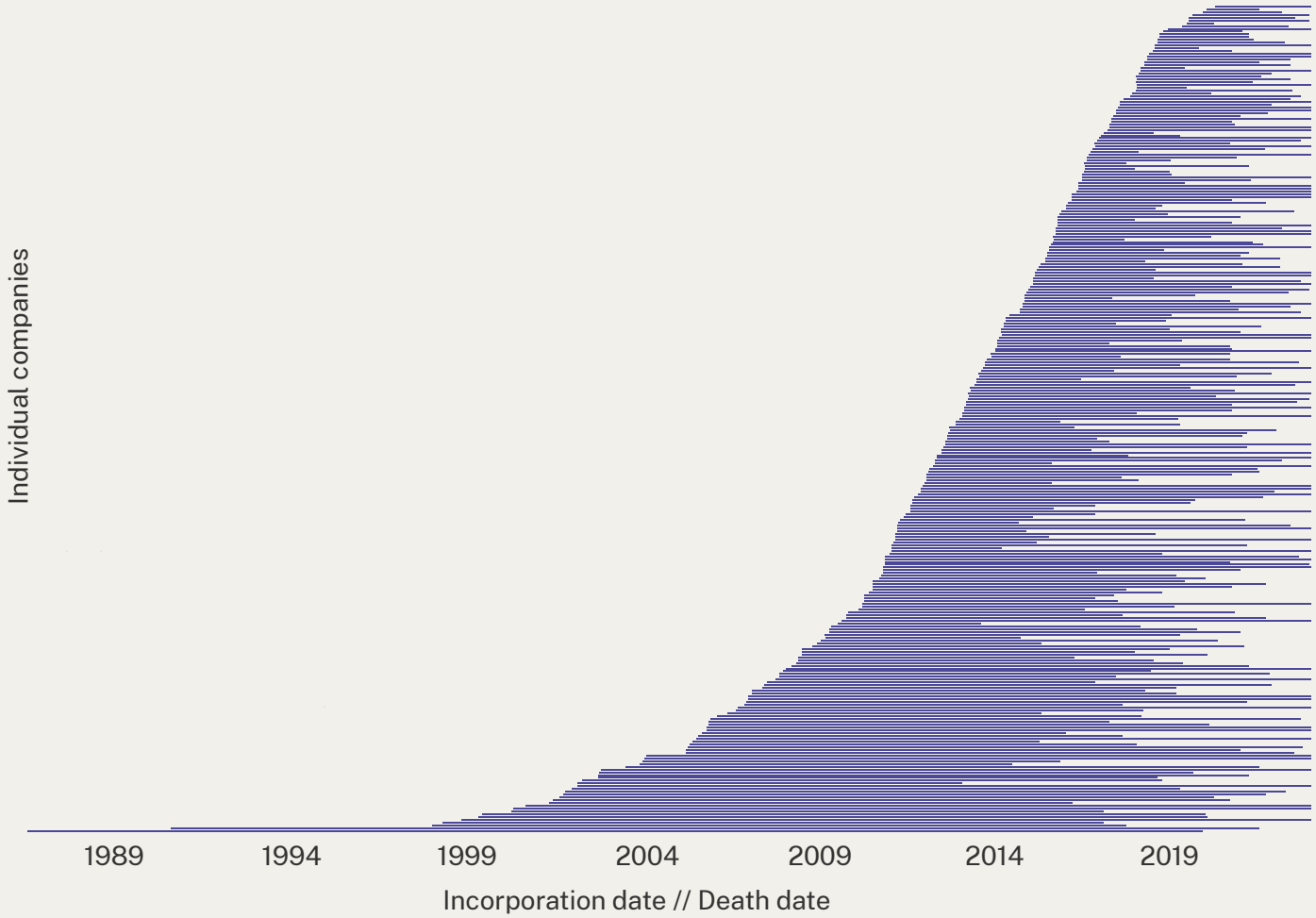
Survival, growth and exits

Survival rates

Of the 1,718 academic spinouts in the UK, 297 (17.3%) have ceased operations. The startup ecosystem can be a difficult, competitive environment to thrive in, but spinouts tend to fare reasonably well with a mean age of death of almost eight years. An example of a spinout that operated for many years before folding is Ai2, which developed peptides to help prevent infections with the use of medical devices. Incorporated in 2005, the University of Manchester spinout secured £2.2m in equity funding and £250k in grant funding throughout its lifespan before dissolving in 2022. Spinouts have many of the same challenges as a startup but also contend with an additional layer of technological risk. The IP at the core of a spinout can be both an asset and a liability; it can be untested in different domains and may require different R&D to make it commercially viable.

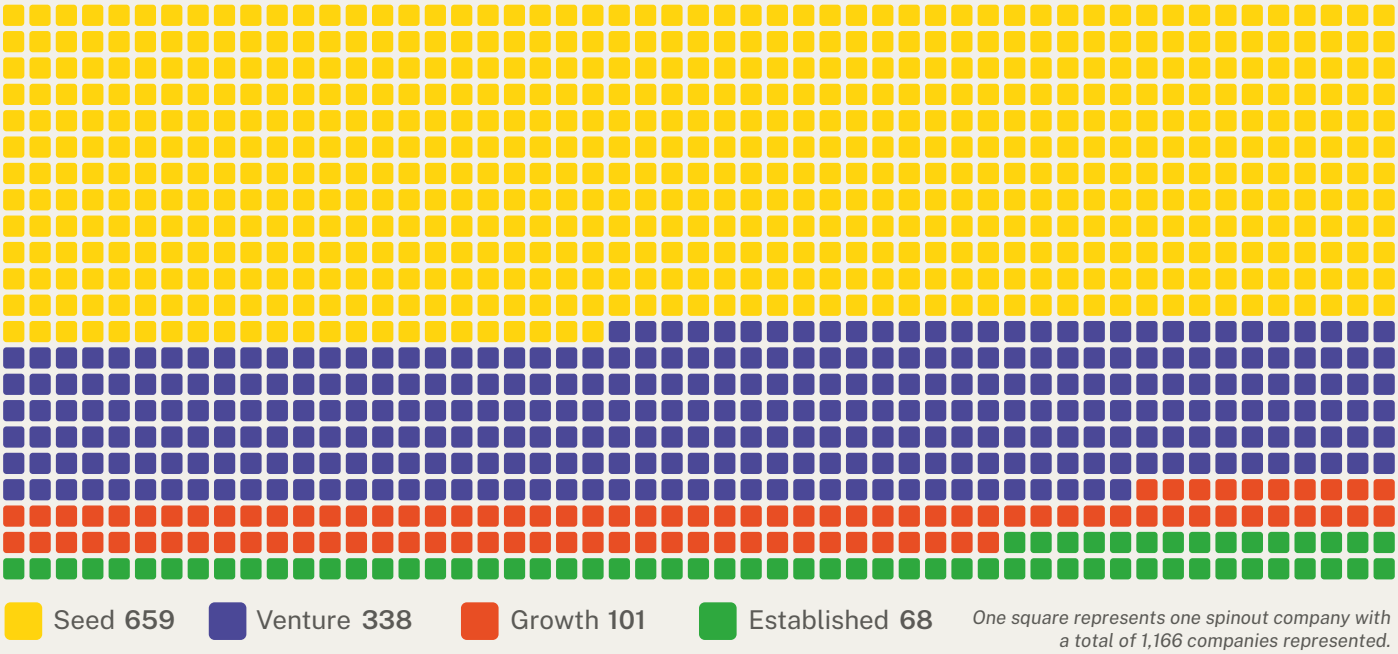
7.93 years
average age of UK spinouts at death (2013-2022)

Lifespan of now-dead spinouts (January 2023)



Growth stages

Stage of evolution of active spinouts (snapshot January 2023)



As of January 2023, there are 1,166 active spinouts in the UK. Of these companies, 659 (56.5%) are still at seed stage, a similar proportion to the 59.5% that were at seed stage in January 2022. This is a promising sign that there is a replenishment of innovative companies operating at this early stage that may go on to be future growth champions. Building on this, a number of companies have developed into growth (101) or established (68) stage companies. This includes Pheon Therapeutics, a developer of antibody-drug conjugates to treat cancers. The King's College London spinout was incorporated in 2015 and has since received £55.5m in equity investment.

1,166
active UK spinouts (January 2023)

56.5%
active UK spinouts at the seed stage (January 2023)

Fastest-growing spinouts

The academic spinouts highlighted on this page have exhibited the largest Compound Annual Growth Rates (CAGRs) in their turnover or headcount as reported in their financial accounts for the past three years. Alloyed and Fixed Phage exhibited the greatest turnover growth, having grown their revenue by a CAGR of 293% and 53% respectively. Meanwhile, VitriTech Glass and LiNa Energy demonstrated the greatest increase in CAGR by headcount, having increased by 129% and 115% respectively. All four of these companies have demonstrated the ability to grow rapidly, having significantly expanded their operations over the past three years.

Alloyed

CAGR (turnover): 293%
Turnover (FYE 2022): £4.45m
Headcount (FYE 2022): 30
Sector: Materials technology

Spun out from the University of Oxford, Alloyed designs, develops and manufactures alloy components for a range of use cases, including electrical and medical components. Founded in 2017, the Oxfordshire-based company has raised £45.2m across four fundraising rounds and received £1.57m in grant funding.

Fixed Phage

CAGR (turnover): 53%
Turnover (FYE 2022): £554k
Headcount (FYE 2022): 16
Sector: Pharmaceuticals

Glasgow-based Fixed Phage has developed technology to stabilise bacteriophages (a type of virus), which can be used across multiple sectors to combat bacterial problems. Since incorporating in 2010, the University of Strathclyde spinout has raised £9.27m in equity investment across 19 deals.

VitriTech Glass

CAGR (headcount): 129%
Turnover (FYE 2022): N/A
Headcount (FYE 2022): 12
Sector: Research tools/reagents

Launched in 2010, VitriTech Glass manufactures speciality glass products for the oil and gas, tunnelling, medical and marine markets. Since spinning out of the University of Leeds, the South Yorkshire company has acquired Yorkshire-based Glass Technology Services in 2017 and has secured £277k in grant funding.

LiNa Energy

CAGR (headcount): 115%
Turnover (FYE 2022): N/A
Headcount (FYE 2022): 20
Sector: Energy reduction technology

LiNa Energy, a Lancaster University spinout, develops solid-state sodium batteries for energy storage systems and the heavy-duty transport sector. Incorporated in 2017, the Lancaster-based company has since secured £10.0m in equity investment via six fundraising rounds and £3.36m in grant funding.

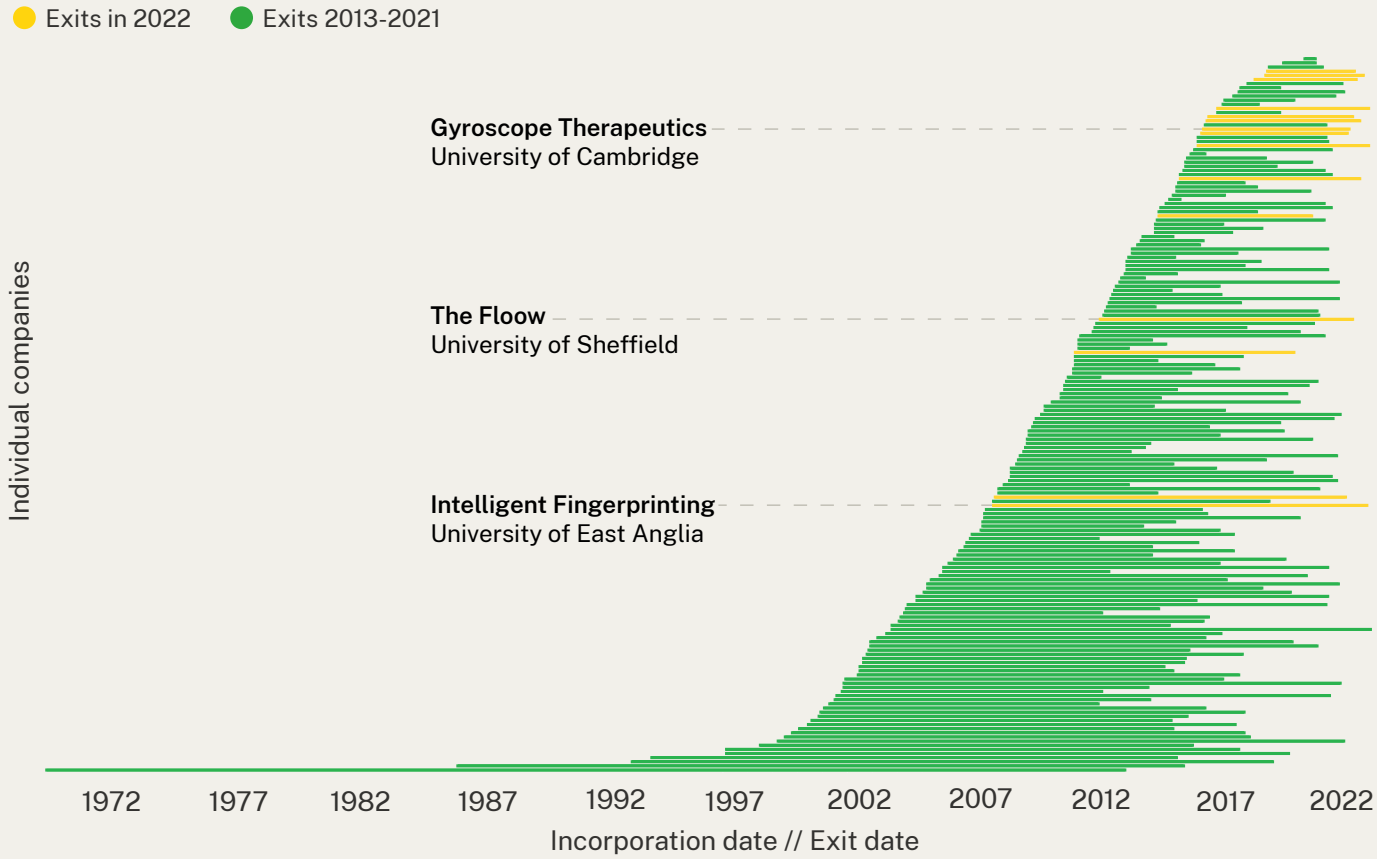
Exit volumes

From 2013 to 2022, 177 spinouts achieved exits in the form of an acquisition or IPO. Acquisitions took place more frequently making up 81.9% of all exits achieved by spinouts, while just 18.1% were companies floating on the public market. Of these exits, 13 took place in 2022, down from 26 exit events in 2021, and all of these were in the form of acquisitions. This is understandable, given it is likely that some companies targeting IPOs were waiting for more favourable market conditions and increased investor appetite for growth stocks. Those that did exit in 2022 include London-based Gyroscope Therapeutics, a gene therapy developer, which was acquired by Swiss pharmaceuticals company Novartis.

32
exits by spinouts via IPO
(2013-2022)

145
exits by spinouts via acquisition
(2013-2022)

Exits by spinouts via IPO or acquisition (2013-2022)



Top exits

Top IPOs undergone by spinouts by market capitalisation (2013-2022)

Oxford Nanopore Technologies	£3.38b
Exscientia	£2.37b
Orchard Therapeutics	£950m
Adaptimmune	£772m
Intelligent Energy	£639m
Circassia	£581m
Achilles Therapeutics	£529m
Autolus	£498m
Freeline Therapeutics	£476m
NuCana	£346m
MeiraGTx	£304m
Kainos	£164m
Oxford BioDynamics	£136m
Xeros	£80m
Abzena	£78m
Diurnal	£75m
Oncimmune	£66m
Mirriad	£63m
Redx Pharma	£55m
C4X Discovery	£31m

Top acquisitions of spinouts by company value or consideration paid (2013-2022)

Ziylo	£623m
Gyroscope Therapeutics	£587m
MiroBio	£356m
NaturalMotion	£320m
Inivata	£280m
Heptares	£259m
Oxitec	£103m
Quethera	£85.0m
Atopix	£63.7m
Process Systems Enterprise	£58.0m
Cobalt Light Systems	£40.0m
VocalIQ	£38.7m
Permasense	£30.6m
Cambridge CMOS Sensors	£30.3m
Haemostatix	£28.0m
Flusso	£28.0m
The Floow	£23.5m
Bloomsbury AI	£22.8m
Cizzle Biotech	£21.0m
Puridify	£12.6m

Exits in 2022 Exits 2013-2021

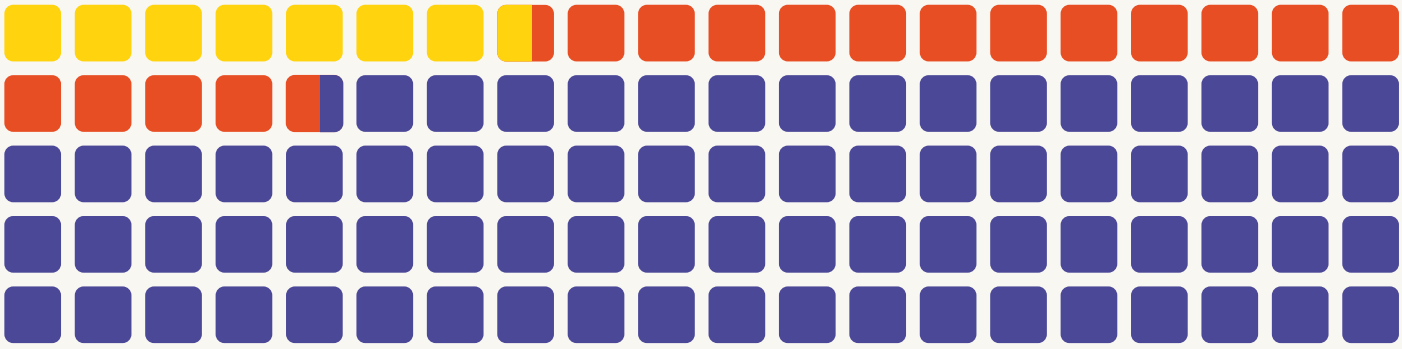
Chapter 4

Leadership

Gender of founders and directors

The figures on this page reflect the gender diversity of founder and directorship teams. This year's findings on gender diversity supersede our previous report, which contained errors. The analysis provided in this report represents the most accurate and up-to-date information on this topic. The analysis excludes companies where one or more founder or director genders are unknown (16.7% of spinouts by the gender of founders and 10.7% for directors).

Spinouts by gender of founders (snapshot January 2023)

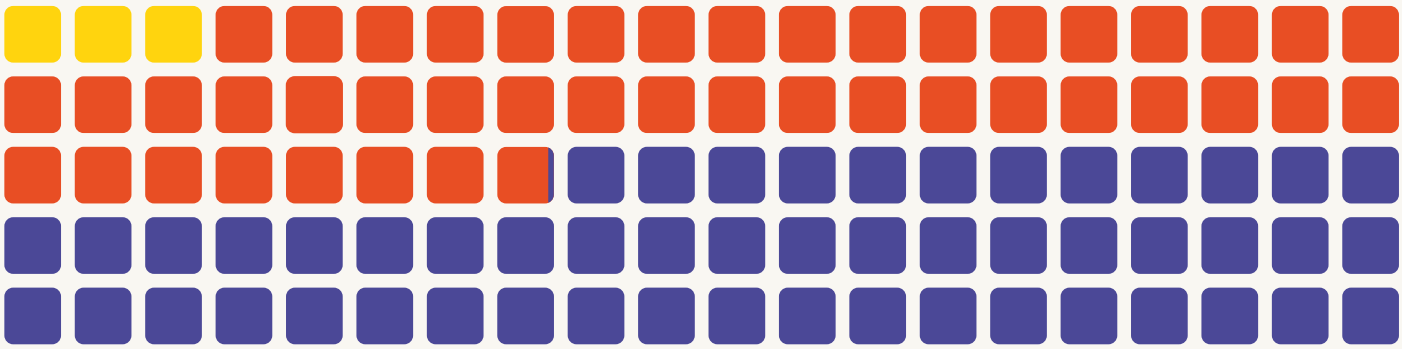


All female 7.6%

Mixed gender 17.0%

All male 75.4%

Spinouts by gender of directors (snapshot January 2023)



All female 3.0%

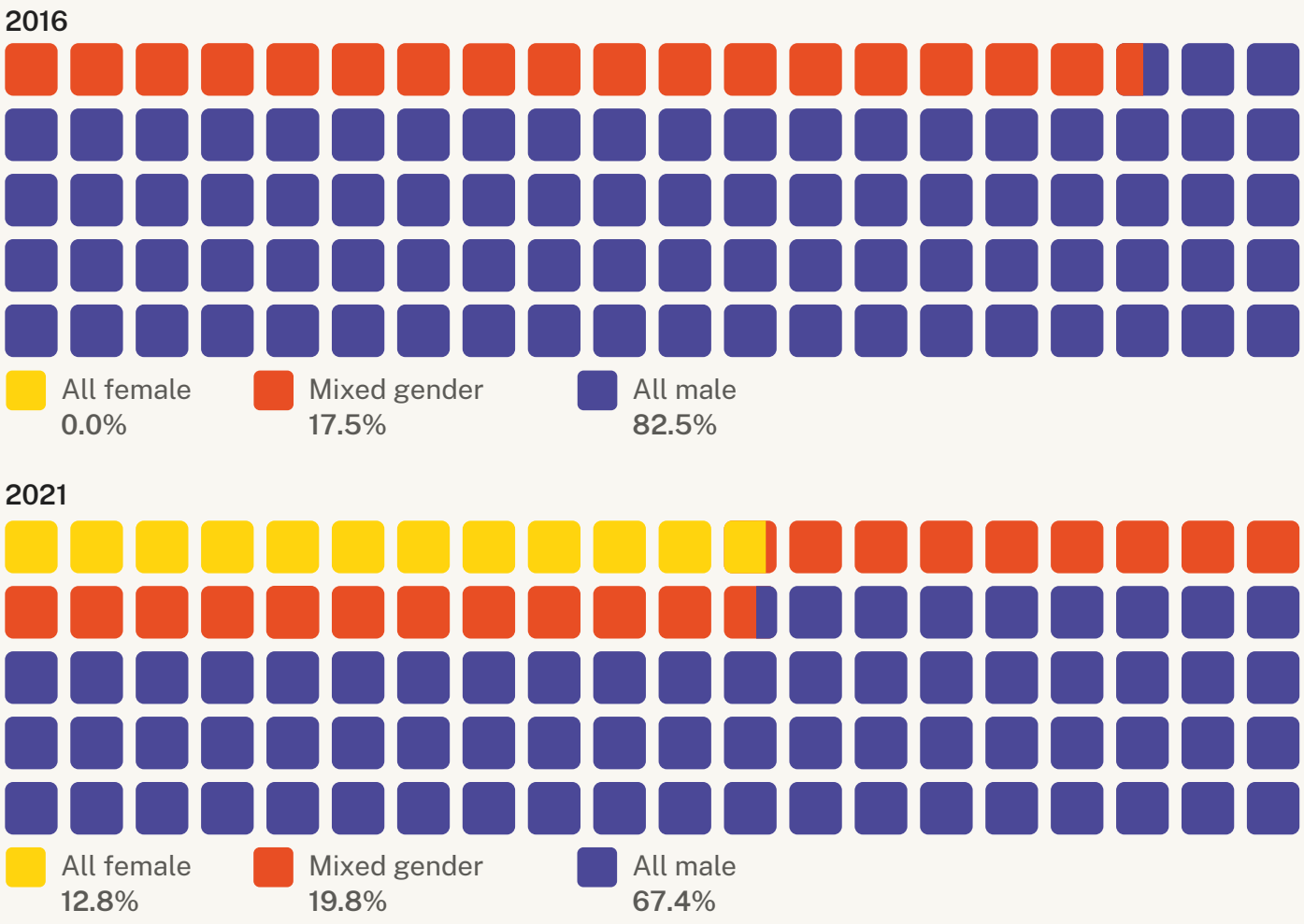
Mixed gender 44.9%

All male 52.1%

Gender of founders over time

The following charts compare the changes in gender diversity of active spinout founders from companies incorporated in 2016 and 2021. Most notably, a substantial increase in the proportion of all female founding teams can be seen from 0% in 2016 to 12.8% of spinouts in 2021. This indicates an overall increase in the number of female founders in the space with the proportion of mixed gender founding teams also increasing from 17.5% to 19.8%. The data suggests that while there is room for improvement, the gender diversity of founding teams is heading in the right direction. This analysis reflects the companies for which founder gender diversity data is complete; spinouts where one or more founder genders were unknown were excluded from the analysis (40.3% of spinouts in 2016; 15.7% in 2021).

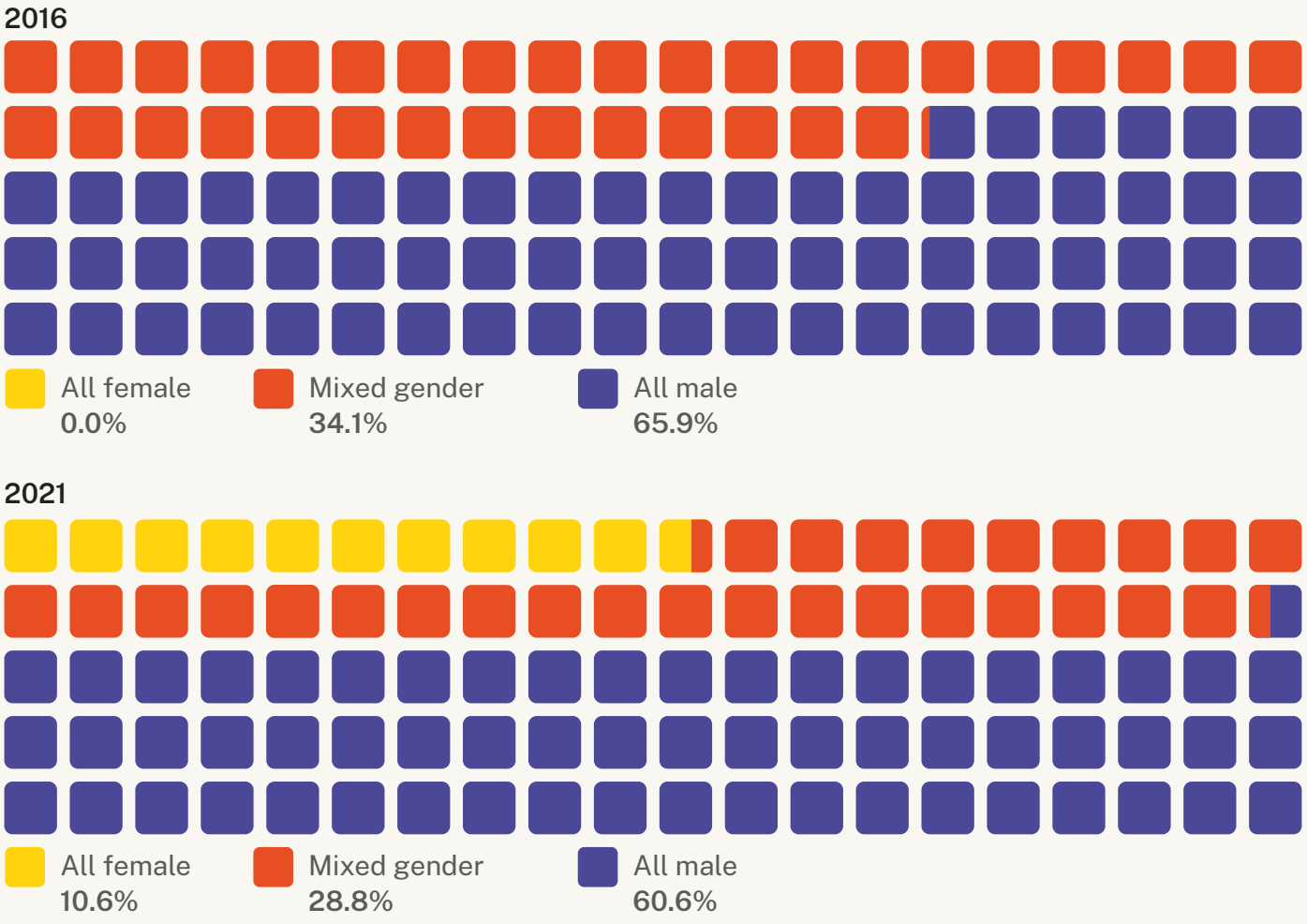
Spinouts by gender of founders (2016 and 2021)



Gender of directors over time

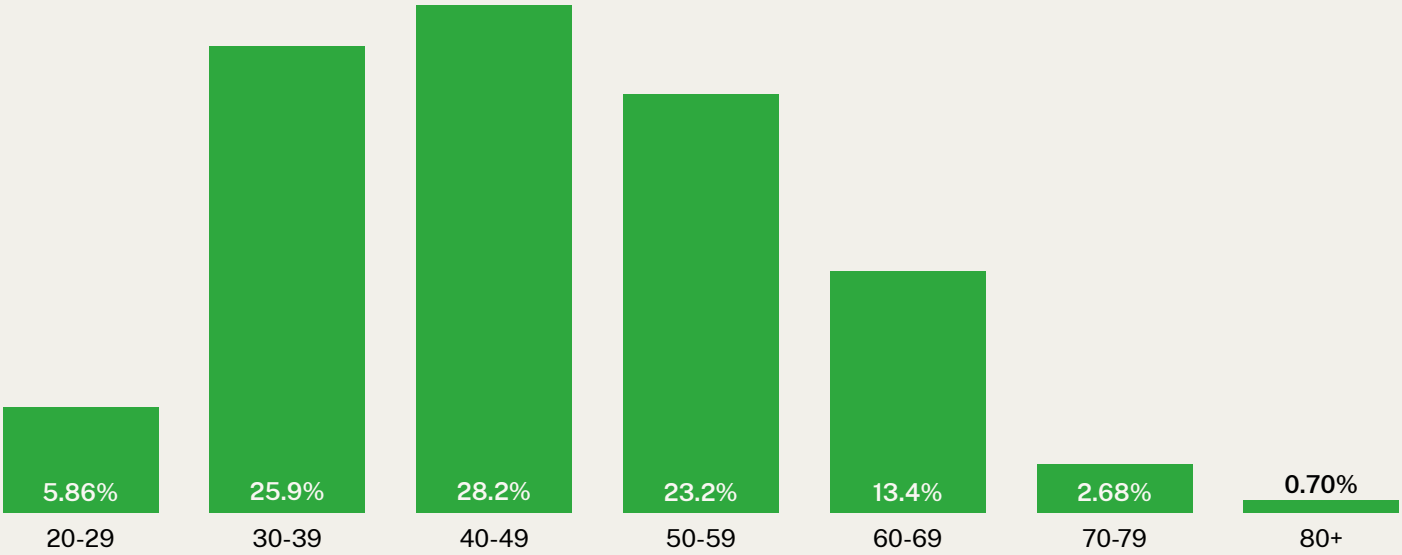
These figures compare the changes in gender diversity of active directors of spinouts incorporated in 2016 and 2021. Similar to the findings on the gender diversity of founders, directorship teams have seen an increase in the proportion of female representation. Directorship teams made up of all female directors have increased from 0% for companies incorporated in 2016 to 10.6% for those incorporated in 2021. This increase in all female teams comes alongside a decrease in the proportion of both mixed gender and all male directorships teams. While this does represent an improvement in the diversity of the boards of these companies, it also suggests that change at a directorship level is occurring at a slower rate in comparison to founding teams. This analysis reflects the companies for which director gender diversity data is complete; spinouts with one or more directors of unknown gender were excluded from the analysis (36.6% of spinouts in 2016; 35.3% in 2021).

Spinouts by gender of directors (2016 and 2021)



Age of founders

Age of founders of spinouts (snapshot January 2023)



47.3
mean age of active spinout founders

46.0
median age of active spinout founder

This analysis shows the current ages of active founders of academic spinouts and is comparable to that of all high-growth companies. Founders in the 40-49 age bracket are the most common in both groups, accounting for 28.2% of spinouts and 28.3% of high-growth companies. However, academic spinouts tend to have a higher proportion of younger founders compared to the broader high-growth ecosystem in the UK, with 25.9% of spinouts founders in the 30-39 age bracket compared to 22.57% for the overall population.

There is a noticeable concentration of spinout founders within the 20-29 age range, with 5.86% of founders falling into this category, compared to 4.58% of high-growth founders. This may reflect the increased opportunities for young entrepreneurs to develop and commercialise innovative ideas within the academic context where access to resources and support are readily available.

This year's report looks at the ages of founders. Last year's edition displayed ages of spinout directors instead of founders as described.

Nationalities of directors

Top 20 nationalities by number of directors of spinouts–excluding UK (snapshot January 2023)

United States	283
Ireland	113
Germany	98
China	66
Italy	59
Australia	57
France	55
Netherlands	45
Spain	38
Canada	37
Greece	36
India	33
Belgium	23
Denmark	15
Poland	14
Switzerland	13
Sweden	13
Japan	13
Norway	12
South Korea	12

1,204
directors of UK spinouts with foreign nationality (January 2023)

3,253
directors of UK spinouts with UK nationality (January 2023)

For the directors of spinouts in the UK, it is most common for those with a foreign nationality to come from the United States (283), representing 23.5% of all spinout directors with a non-UK nationality. This is likely tied to the inherent language and cultural similarities between the US and the UK, which make the UK an attractive place for US citizens to study and work.

A large number of the international community come from European countries such as Ireland (113), Germany (98), and Italy (59). Naturally, this can be linked to the proximity of these countries to the UK, but they will also have been encouraged to start businesses here, having likely been involved in research at some of the world-leading universities the UK is home to and been supported by its strong infrastructure to do business.

Chapter 5

Equity stakes and IP policy

Equity stakes methodology

The dataset analysed for the equity stakes section of the report comprised 1,718 spinout companies tracked by Beauhurst since 2011. Of these 1,718 companies, 377 were removed as the company was incorporated prior to 01/01/2010, and 548 were removed because no university entity held an equity stake. A further 55 businesses were omitted because the university held a stake >50%, leaving 738 analysable spinout companies. Some key methodological considerations are outlined under the headings that follow.

Institutional holdings versus captive funds

When an academic institution and its technology transfer office own shares in a company, their shareholdings have been counted in aggregate as being the academic institution's equity stake. The stakes held by captive funds, such as Cambridge Innovation Capital (CIC), have been excluded because those stakes are received in exchange for external investment.

Reliance on confirmation statements

UK companies are required to file a confirmation statement once a year with Companies House. The confirmation statement provides a snapshot of a company's shareholders at the time of filing but does not necessarily account for changes to shareholdings that occur between filings. For example, a company could spinout, split equity between founders and the academic institution, and raise dilutive external investment in the space of a year. While in practice this may only apply to a maximum of 27% of spinouts, these cases would make the founder and institutional stakes smaller in the first confirmation statement than the stakes had actually been at the point when the company spun out.

Spinouts without university shareholders

An academic institution does not necessarily have to have an equity stake in a company for the company to be considered a spinout (please see page 44 for a definition of a spinout). An academic institution may choose to licence IP to a company without taking equity. Out of the cohort of spinouts tracked since the beginning of 2011, there are 548 that do not appear to have had an academic institution as a shareholder, and have been excluded from the analysis.

Exclusion of majority institutionally owned companies

In the case of 55 (3.20%) companies out of the 1,718 businesses analysed in our sample of spinouts, the academic institution holds more than 50% of the equity. For newer spinouts, this may be due to the time lag between a company spinning out and filing a subsequent confirmation statement where the institutional stake has been reduced to below 50%. Because these companies are nominally subsidiaries of the institution, they have been excluded from this analysis. This figure is different from last year, when 3.50% of companies were excluded for this reason.

No provision for option pools

The equity stakes in this analysis do not account for option pools that may exist at the spinout. The stakes we have used represent the present truth of the company's capitalisation table, but if an options pool exists, it is likely that the technology transfer office and founders will be anticipating this dilution.

Founders equity split calculation

The founders' equity splits were calculated from the entire founding team's figures instead of analysing individual founder statistics. This is because founder teams can differ in size, causing their stakes to vary considerably. As such, assessing these stakes individually would not present the whole picture.

University and founder stakes

Average university equity stakes for 738 companies tracked since 01/01/2011 and incorporated since 01/01/2010

22.8%
mean stake taken in the year of spinning out

20.2%
median stake taken in the year of spinning out

14.5%
standard deviation in mean stake taken in the year of spinning out

Average founder equity stakes for 738 companies tracked since 01/01/2011 and incorporated since 01/01/2010

54.7%
mean stake taken in the year of spinning out

54.5%
median stake taken in the year of spinning out

23.3%
standard deviation in mean stake taken in the year of spinning out

This analysis breaks down the mean and median founder and university stakes in the year a company spun out. This year's findings are nearly identical to the same analysis in last year's edition of the report, despite the addition of data for 155 new companies that have filed shareholder confirmations in the last twelve months or have been newly identified as spinouts.

The data has symmetrical distribution, which accounts for the similarity between the mean and median stakes for both founders and universities. Given that the analysis relies on filings at Companies House, it means there is a lag between potential changes in approaches to equity distribution for spinouts and its reflection in the figures. However, the similarity of the figures between the two years suggests that the UK-wide approach to equity distribution for spinouts remained the same during 2020 and 2021.

Equity stakes of universities

Spinout equity stakes taken by academic institutions tracked since 01/01/2011 and incorporated since 01/01/2010

Academic Institution	Mean	Median	Standard deviation	Eligible spinouts	Total spinouts
University of Oxford	21.6%	20.2%	13.7%	102	205
University of Cambridge	11.8%	10.0%	9.71%	58	145
Imperial College London	21.3%	11.2%	17.3%	53	108
University College London	15.3%	10.6%	12.4%	34	90
University of Manchester	30.9%	30.0%	10.4%	36	84
University of Bristol	20.7%	20.0%	15.5%	27	67
University of Edinburgh	14.0%	15.0%	7.09%	19	60
Queen's University Belfast	31.9%	33.3%	11.8%	25	52
Swansea University	17.1%	17.5%	6.59%	20	48
University of Strathclyde	13.4%	17.4%	8.11%	14	47
University of Warwick	26.8%	26.7%	15.0%	26	45
University of Sheffield	23.2%	21.3%	11.6%	12	41
University of Southampton	20.9%	19.9%	6.66%	8	41
University of Birmingham	29.4%	33.9%	14.6%	16	39
University of Nottingham	24.4%	22.5%	18.9%	14	37
University of Leeds	42.3%	46.4%	8.71%	18	36
University of Glasgow	32.1%	30.7%	11.2%	19	35
Newcastle University	31.4%	32.8%	11.5%	18	34
University of Exeter	15.5%	17.4%	7.61%	13	26
University of Ulster	28.9%	25.0%	11.3%	13	24
Heriot-Watt University	22.6%	24.0%	3.91%	7	24
University of Aberdeen	27.6%	26.0%	12.4%	9	23

Although the Royal Academy of Arts placed seventh on this ranking, it has been excluded from this analysis as there is a lack of data available for its spinouts.

Average university stakes

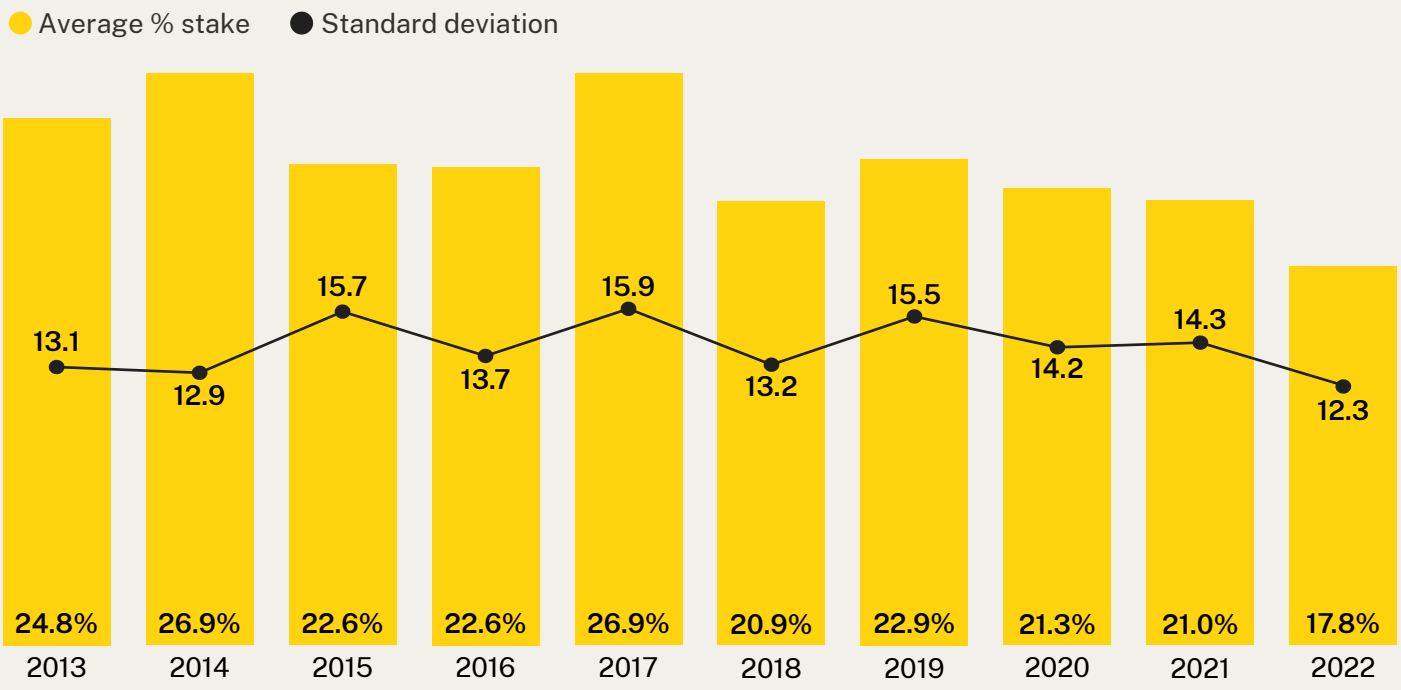
Between 2013 and 2022, the mean stake taken by universities during spinout formation has decreased from 24.8% to 17.8%, marking the lowest average in a decade due to multiple factors. The rise in spinout incorporations lessens the impact of large equity stakes on the average, and growing public attention on equity distribution between founders and universities in relation to long-term UK competitiveness may be altering universities' equity allocation attitudes.

Beauhurst's spinout shareholder dataset is dynamic, frequently updating as new spinouts and shareholder data from Companies House become available. Consequently, average equity stake figures for previous years may exhibit minor fluctuations. The average stakes in this year's *Spotlight on Spinouts* report differ slightly from earlier editions, highlighting the dataset's constantly evolving nature.

28.2%
decrease in the average equity stake taken by universities (2013-2022)

23.9%
average stake taken by universities in spinouts (2013-2022)

Average stake taken by universities in spinouts (2013-2022)



University IP policies

The following presents a summary of the IP policies of select universities highlighted throughout this report. It spotlights the varying approaches taken by these institutions.

For example, University College London offers two options, taking a 5% or 10% equity stake depending on how much support the founders require throughout the commercialisation process.

Meanwhile, the Royal College of Art negotiates the equity share on a case-by-case basis, considering the project's development stage and the founder's contributions.

Others take a more general approach, adopting standard equity share practices for all their spinouts — including the University of Manchester and the University of Nottingham. These figures were obtained from the universities' websites, published IP policies and, in some cases, from direct outreach to the university.

University of Oxford

Oxford University Innovation is the technology transfer and innovation arm of the University of Oxford, responsible for negotiating equity with researchers in new spinout projects. Starting in September 2021, the university began implementing a new equity-sharing policy — a change made to streamline the negotiation process and make spinout formation more straightforward and transparent [1]. Under the policy, and in most cases, the founding researchers will receive 80% of the equity share in the spinout company, with the University receiving the remaining 20%. However, in a few given cases, the researchers will receive 90% of the company's equity and the University will receive 10% [2].

University of Cambridge

The University of Cambridge initiated its seed funding program as part of Cambridge Enterprise in 1995 and has since been involved in over 140 spinout deals [3]. The entity outlines equity distribution between the founding researchers and external management to be negotiated on an individual basis with Cambridge Enterprise. Various elements, such as the type of technology being licensed and the number of founders, play a role in determining the final agreement [4].

Imperial College London

Imperial College London supports the commercialisation of the institution's technology transfer through its Enterprise team. Prior to this, technology transfer was handled by Imperial Innovations, which was established in 1986 and became listed on the London Stock Exchange's Alternative Investment Market in 2006 [5]. Since 2017, the University has provided its researchers

University IP policies

with two alternatives for dividing equity in spinout companies through its Founder's Choice program [6]. Researchers can opt for a founder-focused approach, which would provide them with 90-95% of the initial equity in the company. On the other hand, researchers can choose the "jointly-driven route" where equity negotiations start from the basis of the academic institution having a 50% share of equity [7].

University College London

University College London's technology transfer office, UCL Business (UCLB), was established in 2006 to support the commercialisation and formation of spinouts. UCLB has introduced a new IP scheme, named Portico Ventures, with the aim of creating a straightforward framework focused on founders for licensing non-patentable IP [8]. The programme provides a founder-centric option where the University retains a 5% stake once the company has received £1m in equity investment. Founders requiring more support will cede a 10% fully diluted equity stake to the University in exchange for UCLB's assistance [9].

University of Manchester

The University of Manchester (UOM) offers commercialisation support through The Innovation Factory. The equity stakes held by the university and the founders depend on a number of factors, including the method used to commercialise the IP, and the amount of proof-of-concept funding received. However, the default equity division would cede the University 35% of shares, with founders retaining 50% [10].

University of Bristol

The University of Bristol offers a comprehensive spinout formation policy outlining the expected equity shares based on the University's and researcher's contributions [11]. This process is overseen by the University's commercialisation arm. The policy concurs that, in cases where no development has taken place and no University support is necessary, the University will hold a 15% stake, while the rest will go to the founders. On the other hand, if there have been development activities and additional support is needed, the University will hold a 45% share of the company, with the researchers retaining the remaining 55%.

Royal College of Art

The Royal College of Art's portfolio of spinouts is overseen by its centre for entrepreneurship, Innovate RCA [12]. Where a company is formed to bring the institution's IP to the market, the equity share granted to the founders is determined through individual negotiations on a case-by-case basis [13]. The decision is based on multiple considerations, including the current stage of the project and the inventor's contribution.

University of Edinburgh

The University of Edinburgh's commercialisation arm, Edinburgh Innovations, provides support to academic spinouts across the institution. Further support opportunities may also be provided through the University's in-house venture fund, Old College Capital (OCC) [14]. The University expects to hold an equity position equal to that of the founders, however, the final equity stakes will be determined based on

University IP policies

various factors such as the IP, involvement of individual researchers, and investment in the project prior to the formation of the company [15].

Queen's University Belfast

Queen's University Belfast manages its portfolio of spinouts through its commercialisation office — QUBIS [16]. QUBIS initiates equity negotiations with an initial concept of equal distribution between the University and the spinout's founders. However, this is subject to further revision based on factors such as the team's previous and projected contributions, as well as the existence of any valuable know-how or patented IP [17]. This approach aims to establish a framework that acknowledges and rewards value-generating efforts.

Swansea University

Swansea University has been actively spinning out companies since the beginning of 2011 and has been able to successfully spin out a total of 48 companies to date [18]. These spinouts have been able to raise a significant amount of capital, amounting to £27.4m via 46 different funding rounds [19]. As a standard practice, the University claims to take a 5-20% stake in these spinout companies [20].

University of Strathclyde

The University of Strathclyde's technology transfer office, Strathclyde Inspire, has been facilitating the commercialisation of research since 2002. Strathclyde Inspire's commercialisation program outlines that the University will hold a 20% equity stake after seed round funding, regardless of the seed round valuation [21]. This stake encompasses, among other things, both support provided by the University before its creation, or cash awarded at the time of spinning out.

University of Warwick

Warwick Innovations commercialises innovations produced at the University of Warwick [22]. The entity oversees the research and innovation output of the institution and determines the distribution of ownership in spinout companies. When making this decision, factors such as the creative effort of the founders and the investment in terms of time, expertise and resources are taken into consideration for the commercialisation of the IP [23].

University of Southampton

Since 2000, the University of Southampton has spun out multiple companies and has since taken an equity position in 35 of them [24]. The Research and Innovation Services (RIS) manage the University's commercial endeavours and determine the equity distribution to the founders of spinouts. The compensation method and extent are decided individually and are expected to be fair and balanced based on specific circumstances [25].

University of Sheffield

The IP and Impact team in Research Services at the University of Sheffield manage spinout company creation, with equity distribution based on founder contributions to the IP, patent costs, industry expectations, and the founding IP's value [26a]. Generally, the University of Sheffield holds a 15%-20% share [26b]. Sheffield is a founding university of Northern Gritstone, an investment company that aims to boost the commercialisation of university spinouts in northern England [27].

University IP policies

University of Birmingham

University of Birmingham Enterprise, formerly known as Alta Innovations, serves as the commercial division of the University of Birmingham [28]. The entity works with students and staff to establish spinout companies when it is deemed the most viable commercialisation option. The University's IP policy mandates that students and faculty declare and transfer ownership rights for their inventions and innovations to the University [29].

University of Nottingham

The University of Nottingham oversees its portfolio of spinout companies through its subsidiary, Nottingham Technology Ventures. Upon the formation of a commercially successful spinout, the initial equity distribution awards the founders with 50.1% ownership of the business, while the University retains a 49.9% share [30]. These shares can be altered in certain circumstances, such as when the founders are granted additional equity options for their role in the company's growth.

University of Leeds

The Research and Innovation (RIS) arm at the University of Leeds is responsible for evaluating and managing IP. Since 1995, it has enabled the institution to spin out over 110 companies, converting academic research into commercial success for many businesses. The University outlines two methods for determining the initial equity division in spinout companies before external funding. If the spinout is based on IP, the founders will receive less than a 40% stake. If the spinout company provides services, founders will receive a stake between 40% and 60% [31].

University of Glasgow

The University of Glasgow actively oversees and supports spinout ventures through its commercialisation arm — Research Strategy and Innovation Office (RSIO). The university has recently updated its equity policy, taking a more flexible approach to equity division. The university never takes more than a 30% founding stake. The University of Glasgow also protects the right of founders to negotiate to reduce the university's equity stake [32].

Newcastle University

The Business Development and Enterprise unit (BDE) at Newcastle University supports the decision-making and management of IP licensing within the institution and has aided multiple spinout companies in commercialising their research [33]. The University's IP policy states that the University will typically hold a 40% equity stake in any spinout at formation, with the founders being awarded the remaining 60%.

University of Exeter

The University of Exeter has been involved in over 25 deals involving academic spinouts [34]. As a standard, the University will not hold more than 24.9% of the equity in a spinout company after seed funding is secured, with the remaining equity being distributed among the founders and investors [35]. The policy notes that the expected equity percentage may be adjusted to guarantee equitable compensation in relation to the contribution to the development of the IP.

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Appendix

Full methodology

Beauhurst tracks all spinouts deemed to have spun out on or after 1 January 2011. Spinning out from an academic institution is one of our eight triggers (outlined on the right) that we believe suggests a company has high-growth potential. More detail on Beauhurst's tracking triggers is available via our website. Companies that spun out of an academic institution prior to 1 January 2011 may still be included in this report if they achieved one of the other seven triggers after 1 January 2011 and then were subsequently determined to be a spinout.

Equity investment

To be included in our analysis, any investment must be:

- Secured by an academic spinout (defined below)
- Some form of equity investment
- Secured by a non-listed UK company
- Issued between 1 January 2013 and 31 December 2022

Beauhurst's equity investment dataset is constantly updated with historical deal activity, causing slight fluctuations and minor discrepancies between annual investment and deal totals in the *Spotlight on Spinouts* reports.

Academic spinouts

We define an academic spinout as a company that meets condition 1 and at least one condition out of 2-4:

1. The company was set up to exploit IP developed by a recognised UK university or research institution (this is broadly in line with the Higher Education Statistics Agency's (HESA) definition of a spin-off)
2. The institution owns IP that it has licensed to the company
3. The institution owns shares in the company
4. The institution has the right (via an options or warrants contract) to purchase shares in the company at a later date

Innovation grants and equity stakes

Beauhurst's spinout shareholder and grant datasets continually update with new data from Companies House and newly discovered spinouts or awards. Consequently, average equity stakes, total grant figures, and grant numbers for previous years exhibit minor fluctuations.

High-growth tracking triggers


Equity investment


Scaleups


Accelerator attendances


MBOs/MBIs


Academic spinouts


High-growth lists


Major grant recipients


Venture debt

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Beauhurst is a searchable database of the UK's high-growth companies.

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Our data is also used by journalists and researchers who seek to understand the high-growth economy, and powering studies by major organisations — including the British Business Bank, HM Treasury and Innovate UK — to help them develop effective policy.

For more information and a free demonstration, visit beauhurst.com

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