Genomics nation 2022

Highlighting future opportunities for the UK genomics sector

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BIA UK BioIndustry Association

CATAPULT Medicines Discovery

wellcome sanger institute

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Forewords

Steve Bates OBE
Chief Executive Officer,
UK BioIndustry Association

This report lifts the lid on one of the most exciting sectors in the UK's innovation economy in 2022: genomics. I want to thank our partners the Wellcome Sanger Institute and Medicine Discovery Catapult for collaborating on this report and all the genomics companies that give us the privilege to represent them.

As someone lucky enough to represent the sector to policymakers I'm often asked: what is the UK's genomics industry? What do these companies actually do? How much are they worth? Why are you so excited about it? What do they need to grow? What's the difference between epigenetics and pharmacogenomics? This report is our endeavor to answer these questions in an accessible format.

Genomics has long ceased to be simply a matter of academic interest. The NHS rare disease diagnosis odyssey has been transformed by this discipline, whilst the understanding of COVID-19 variants has delivered it to scale, public prominence, and its vital importance for public health.

Now the application and industrialisation of this technology is transforming both healthcare and the pharmaceutical industry, accelerating our understanding of diseases and how to tackle them.

That is why these innovative companies are so important to the wealth of our nation in the years ahead. With the right investment, skilled people and partnership working with the NHS family, UK genomics small and medium sized enterprises (SMEs) are ideally placed to be leading players in the most rapidly growing areas of biotech and life sciences.

In the last year we have witnessed some key developments for the UK genomics sector. Oxford Nanopore Technologies became London's biggest biotech listing back in September 2021. Genomics England has launched three landmark programmes on diverse data, newborn sequencing and cancer. The Government published its Genome UK shared commitments earlier this year. These cross-nation commitments outlined ambitions to work closely with industry, encouraging partnerships and fostering an attractive environment for genomics SMEs. Now, GSK has put functional genomics at the heart of their R&D strategy for their new biopharma entity, after the demerging of their consumer healthcare business Haleon.

A new addition to this year's report is our spotlight on the skills needs of this sector. Finding staff with the appropriate skills, particularly in computational and data science as well as artificial intelligence and machine learning is a growing challenge for these companies. Investing in the right talent pipelines will further nourish this fertile home of genomics, allowing companies to grow and thrive while boosting employment. Highlighting the opportunities to educators and students is vital and more engagement is needed to emphasise the well paid highly skilled jobs the genomics sector has to offer individuals pursuing a career in science.

The UK's innovative genomics industry is thriving and will benefit both patients and the UK taxpayer as this innovative sector continues to grow. We have a rich ecosystem of spin-outs, scale-ups and SMEs which are continuing to develop and scale innovations that will improve our health and wellbeing not just in the UK but across the globe.

Professor Chris Molloy
Chief Executive Officer,
Medicines Discovery Catapult

As genomics is the foundation of life, it should be the foundation of life sciences R&D. On this firm basis robust programmes with greater chances of success can be built, and build we must.

The UK leads the world in industrialising genomics research, and its use in healthcare. Its biobanks have also helped establish that linkage of a new drug target to a genomic feature, in real patients, doubles the success of medicines R&D. These are good headlines but hide the reality of the task ahead of us. Pioneering is not establishing. A high-tech industrial building is needed on this foundation to deliver functional genomics and proteomics, where most medicines matter.

Any build requires complex interactions between multiple trades, materials, and infrastructure. Our functional genomics build is no different. For it to succeed we need to deploy vibrant mixtures of skills, multidisciplinary collaborations, trusted patient engagement and a shared purpose. This is achievable with joint effort from public and private sectors — each playing to their strengths — and in vibrant, healthy 'co-opetition.'

The application of genomics starts with consented patients, willing to give of themselves through their biosamples and data to help others. It is absolutely dependant upon patient and clinician trust, this is perhaps the greatest challenge. SMEs and pharma must work with the UK's excellent Medical Research Charities and through deliberative citizen engagement as step one of many to make sure the UK's health system can deliver its promise of being the world's best environment for genomics-led discovery and development.

Skills and tools in data science will be critical to the success of this build — functional genomics is all about the data. However, these must be coupled to the application of new analytical technologies such as high throughout proteomics, digital biomarkers, and high content imaging to layer on valuable evidence for what occurs in the real world of active biology. Then new techniques in clinical experimentation and its regulation are needed to prove that what begins in a patient, proves true in a patient. These must all be industry-class and dependable if they are to be credible.

Multidisciplinary collaboration is essential. Functional genomics is a natural 'team science' activity which brings together clinical science, 'wet' and 'dry' lab technology, regulators, and the industry-class management of multiple public and private sector players.

These multi-partner, public/private collaborations are where Catapults excel because they are the natural, neutral, trusted hubs for innovation to be nurtured. There is plenty of evidence to demonstrate this, particularly through the pandemic, in high-capacity PCR testing, vaccines and ventilators.

The UK rightly continues to pioneer through academic endeavour in this sector, with expansion of polygenic risk scoring and Biobanks, alongside long-term cohort projects such as Our Future Health.

Now — behind this leading edge — it is starting to secure a post-genomic future for R&D by harnessing its biotech, healthcare, and academic communities. By establishing singular purpose and combining public with private sector assets it has the potential to build a wonder of the modern world on this foundation.

Adrian Ibrahim
Head of Technology Transfer and Business Development, Wellcome Sanger Institute

The UK has a distinguished heritage as a genomics pioneer. From Watson and Crick's original work at Cambridge, to John Sulston's vision to map the human genome, to Genomics England's pioneering work in population health, and UK Biobank's unique and internationally acclaimed datasets, it has been a prime mover in genomics.

Indeed, the UK has sustained its impact over the years, contributing critical leaps within the field that originated here, via the work of Shankar Balasubramanian and colleagues that made routine, accurate, low-cost sequencing of human genomes a reality.

For almost twenty years, the UK has led the world in the development of genomics technologies and methodologies. Today, we can say that genomic research has come of age with the DNA-based studies and insights beginning to profoundly change healthcare delivery across the world. At the Wellcome Sanger Institute, we are contributing to the genomics revolution, which requires a deep focus on forging new partnerships and building innovative pipelines to deliver the benefits of genomic research for all.

Through a combination of public and private investment, the UK has grown an impressive cohort of genomics SMEs. Europe's largest genomics cluster is based at the Wellcome Genome Campus and many other innovative companies are distributed across the UK.

Our academic peers in major research hubs such as California and Boston continue to lead the way when it comes to commercialising research, but as this report shows, we are beginning to see successful scaling of UK genomics companies, supported by growing investor appetite. This report also highlights that more needs to be done in this space, addressing the sector-specific skills shortage through further investment into talent development and support with securing skilled workers from overseas.

In the near future, we will need to address the challenges posed by ever-increasing amounts of genomic data. If we are to realise its full potential integration, interoperability, legislation and protection will all need to be actively addressed. A multi-omic approach to healthcare bears huge promise, as we know that complex diseases are caused by a combination of genetic and environmental factors, and so the integration of clinical and multi-omic studies will be key to breaking new ground. Innovations across sequencing, computing hardware, disease modelling, artificial intelligence, machine learning and genome manipulation will create ever more opportunities to grow the UK's position as a genomics powerhouse.

Having world-renowned academic institutions, a strong focus on entrepreneurship, exemplary genomics data infrastructure, increasing access to risk capital, and an exceptional National Health Service make the UK unique and an ideal destination for innovation and investment.

Key findings

The UK genomics sector:

121 high growth companies

with over **3,500** employees

£1.8bn venture investment raised since 2017

£35.7m public R&D grants since 2017

Top investors:
University of Cambridge seed and enterprise funds

Top spin out universities:
Cambridge and Oxford

Genomics skills challenges:

Computational and data science skills most difficult to recruit for

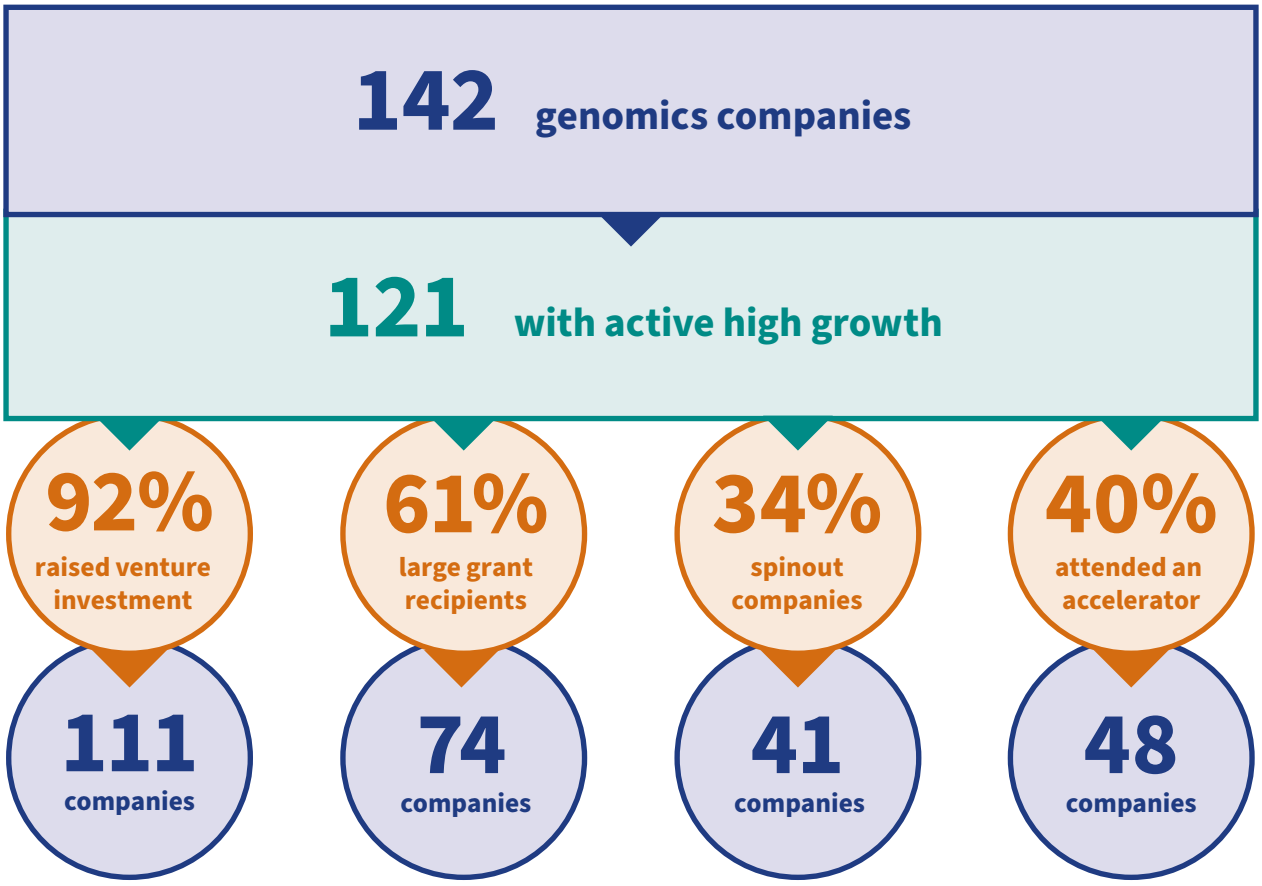
Lack of cross-sector experience and knowledge identified

Difficulties in recruiting European talent highlighted

The UK's genomics sector

The UK is home to a vital ecosystem of genomics companies. Not only do these companies attract private investment and create a wealth of highly skilled jobs, they are also developing cutting-edge innovations that will transform our health and wellbeing.

The BIA, Medicines Discovery Catapult (MDC) and the Wellcome Sanger Institute have identified 142 genomics companies through two key criteria: they are headquartered in the UK and feature genomics as a core aspect of their business. As genomics is used throughout the life science sector, we refined our exclusion criteria this year, resulting in a smaller cohort. After identifying the 142 companies, we commissioned Beauhurst, a searchable database of the UK's high-growth companies, to analyse the dataset (see page 23 for more information). Of the 142 companies, Beauhurst identified 121 companies with active high-growth characterisitics (this excludes seven companies that are no longer operating, three that were not tracked and 11 that exited). The data presented in this section showcases this high-growth cohort during its lifetime.

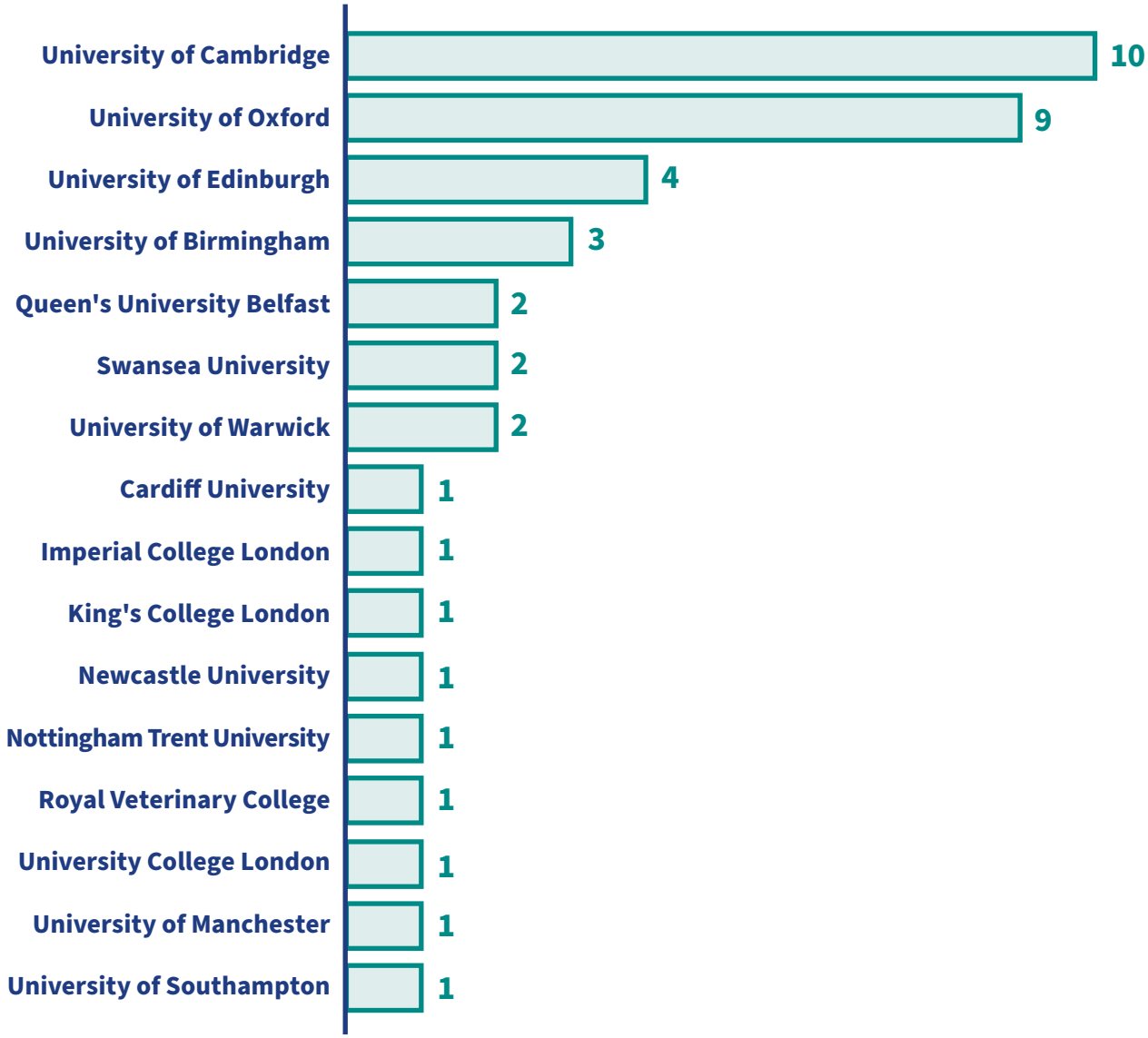


The 121 active high-growth genomics companies that populate the ecosystem have evidenced a unique capacity for innovation. Within this cohort of businesses, a remarkable number have originated from academic institutions. As of June 2022, 34% of the high-growth cohort are spinouts. In comparison, spinout companies across all sectors accounted for just 2.7% in this same timeframe. The Universities of Cambridge and Oxford are the top universities for spinning out genomics companies with the Universities of Edinburgh and Birmingham following behind them.

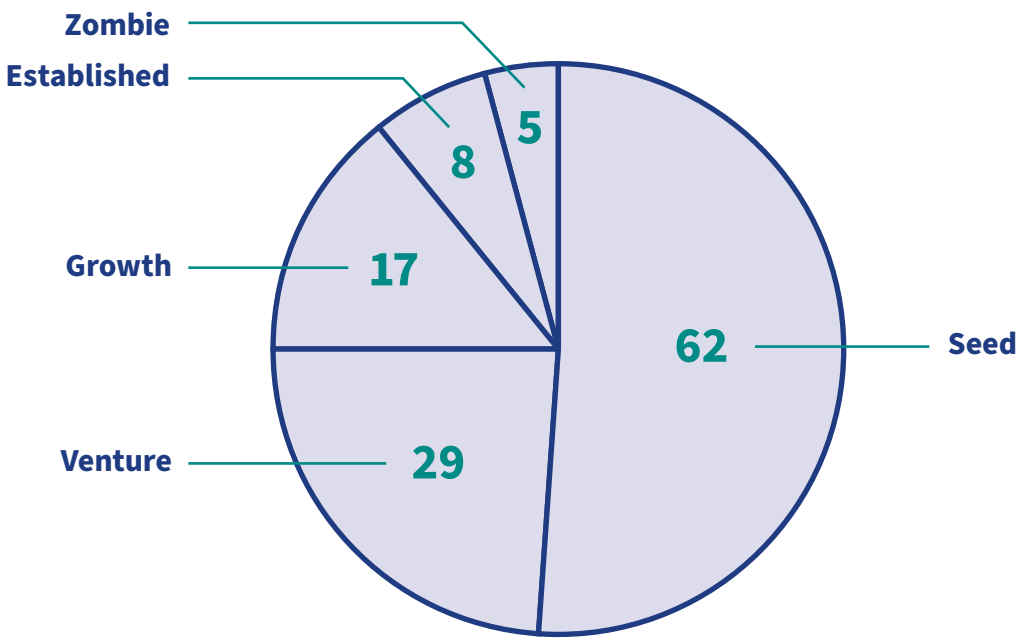
In support of the developing research in this area, 61% of the cohort have benefited from public funding. This is significant, as across the broader high-growth ecosystem (all sectors) just 9.4% of companies have been awarded grants.

As per last year's cohort, these businesses are most likely to be experiencing very early-stage growth. In this group of companies there are 62, representing 51% of all active high-growth businesses, that are understood to be at seed-stage. For the wider high-growth ecosystem, the seed stage population is just 25.5%.

Academic spinouts



Stage of evolution*



Seed

A seed-stage company is a young startup, with low employee count, valuation, and total venture investment raised. The most common sources of funding for this stage of company are grant-awarding bodies, crowdfunding platforms, and angel investors.

Venture

Venture-stage companies have developed their business models and technology over multiple years, typically securing investment and a valuation in the millions. Venture rounds typically involve private equity and venture capital funds, although may tap into crowdfunding too.

Zombie

A zombie company is Beauhurst's name for businesses that have been neglected for a long time or are in a troubled financial state. Whilst the company is not closed, it doesn't appear to be operating.

Growth

When a company has been operating for more than five years, and has grown to multiple offices, they're more likely to have reached the Growth stage of evolution. A growth-stage company will also have regulatory approval and is likely bringing in significant revenue and investment, with a valuation in the millions. It will be continuing to expand its product range and international activities.

Established

An established-stage company has been trading for 15+ years, or 5–15 years with a three-year consecutive profit of £5m+ or turnover of £20m+. Funding at this stage is often deployed by corporates, private venture firms, banks and specialist debt funds, or major international investors.

* Using Beauhurst's classifications, as outlined above.

Venture investment

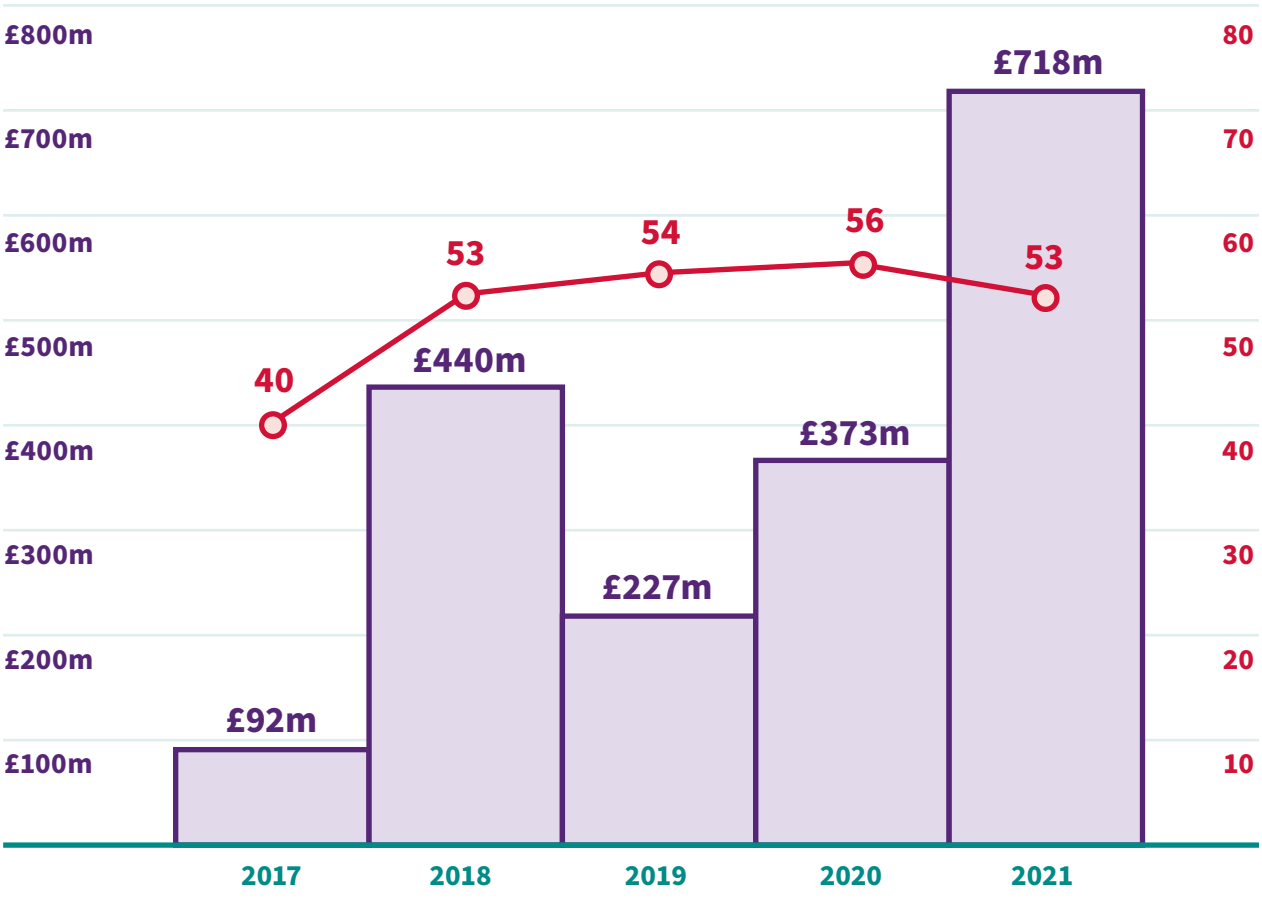
Genomics companies are a highly investible sub-sector. Venture investments secured by UK genomics companies represented a disproportionately large amount of the total value of fundraisings secured by UK pharma and life sciences businesses.

Although genomics companies represent just 9.8% of the total population of the life sciences sector in Beauhurst's dataset, from 2017 to 2021 they were able to attract 23.4% of all venture investment.

Between 2017 and 2021, genomics companies have raised a total £1.85b of venture investment — with 39.2% of this taking place in 2021 alone. In 2021, £718m of venture investment was raised by genomic companies across 53 deals. This includes companies that exited during this time.

Private investment: venture raised over time

Amount raised / Number of deals

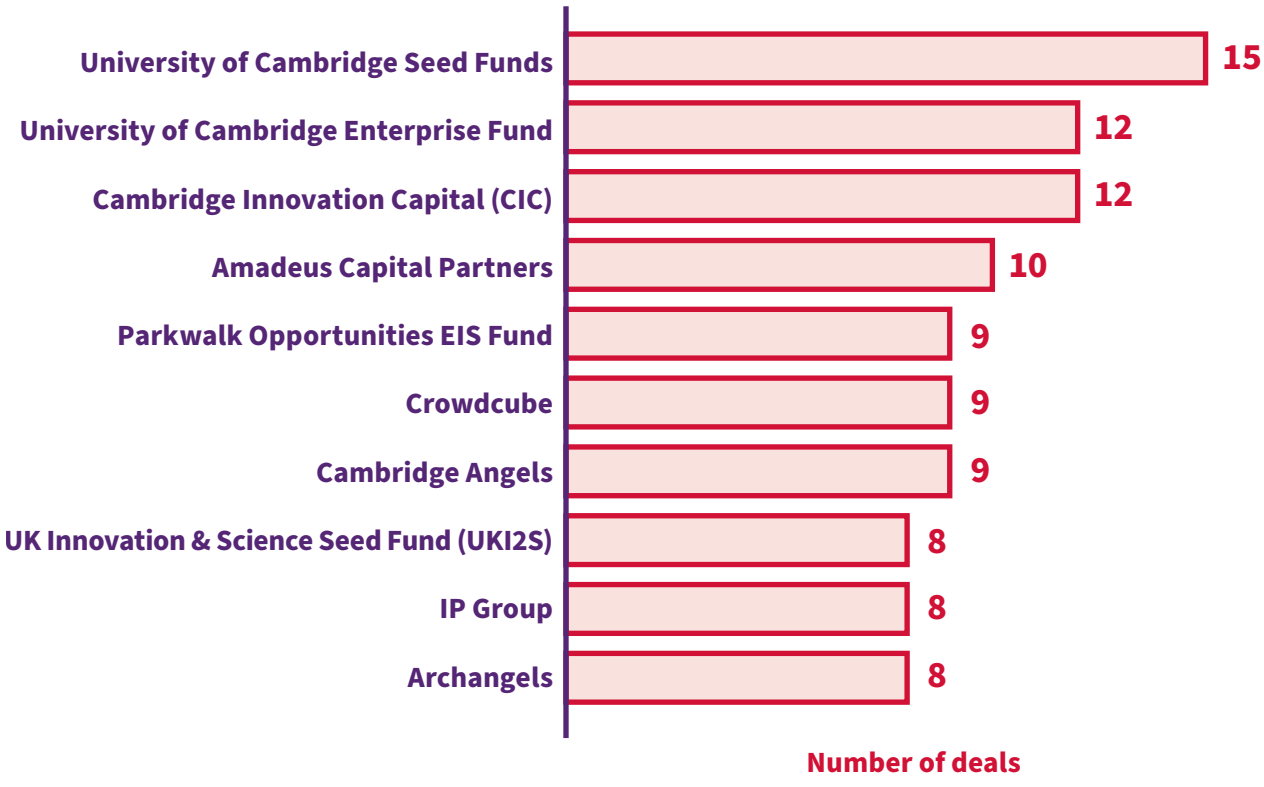


As illustrated in the previous chart, the value of venture raised by genomic companies has continued to grow over the last five years, increasing from £92m to £718m. Despite this exponential increase in the value of funding, the number of deals taking place have been relatively stagnant. This therefore indicates that genomic companies have benefited from higher-value venture investments in recent years, with markets recognising the importance of research and developments in the field.

For genomics companies, the average deal value for all venture investments in 2021 was £13.8m. For comparison, the average for companies raising funding across the broader life sciences and pharmaceutical sector was distinctly lower, sitting at £8.4m in 2021.

The top three investors in this sector are entities with strong links to the University of Cambridge, once again emphasising the important role played by those institutions commercialising academic research within the genomic community. Other investors that have participated in numerous funding rounds supporting genomics companies include Amadeus Capital Partners, Parkwalk Opportunities EIS Fund, and the crowdfunding platform Crowdcube.

Top investors



Across the broader life sciences and pharmaceutical industry, funding between 2017 and 2020 stemmed from a wider range of sources. The most prominent investor in the industry, based on the number of deals, was Scottish Enterprise, which is Scotland's national economic development agency aiming to support and enhance entrepreneurship across Scotland. Prominent investors within the ranking also include Technology Venture Investment, which is managed by the Development Bank of Wales, and Oxford Science Enterprises — a fund strongly focused on commercialising research from the University of Oxford.

Public investment

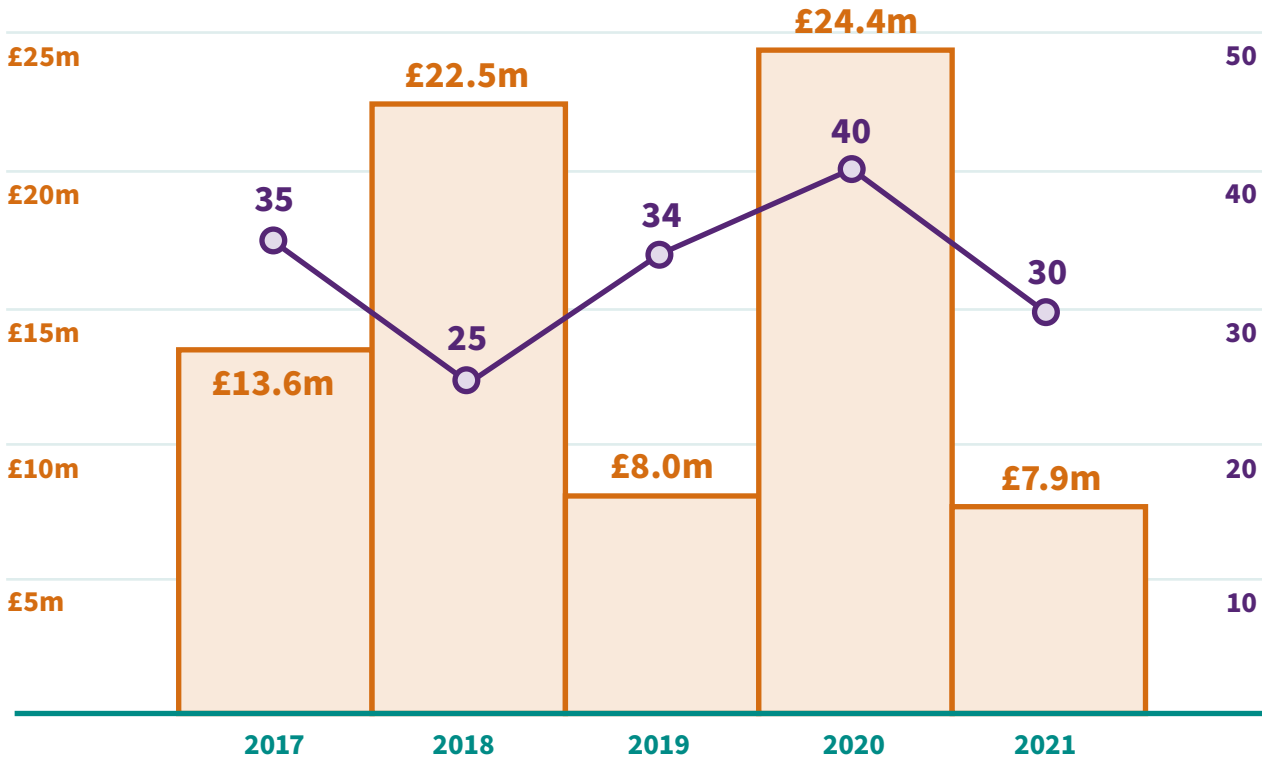
Genomics companies continue to secure a higher proportion of UK grant funding compared to the wider life sciences sector. From 2017 to 2021, genomics companies received £76.5m of grant funding across 164 awards. This represents 21.1% of the £362m grants awarded to life sciences and pharmaceutical companies within this time frame.

Similar to the trends observed for private investment, this indicates that genomic businesses hold a disproportionate amount of the funding received by the broader sector, given that they represent under 10% of the total life sciences and pharmaceutical industry.

In 2021, the average size of grants received by genomics companies was broadly similar to the average for all life sciences and pharmaceutical companies. However, across the whole five-year period analysed, there was a greater disparity between the two cohorts. For genomics businesses this figure stood at £501k, whereas for life sciences and pharmaceutical companies this was lower at £321k.

Public investment: grants awarded over time

Amount received / Grants awarded



IPOs and acquisitions

Since 2017, eight genomics companies have exited Beauhurst's high-growth database via either an acquisition or an IPO.

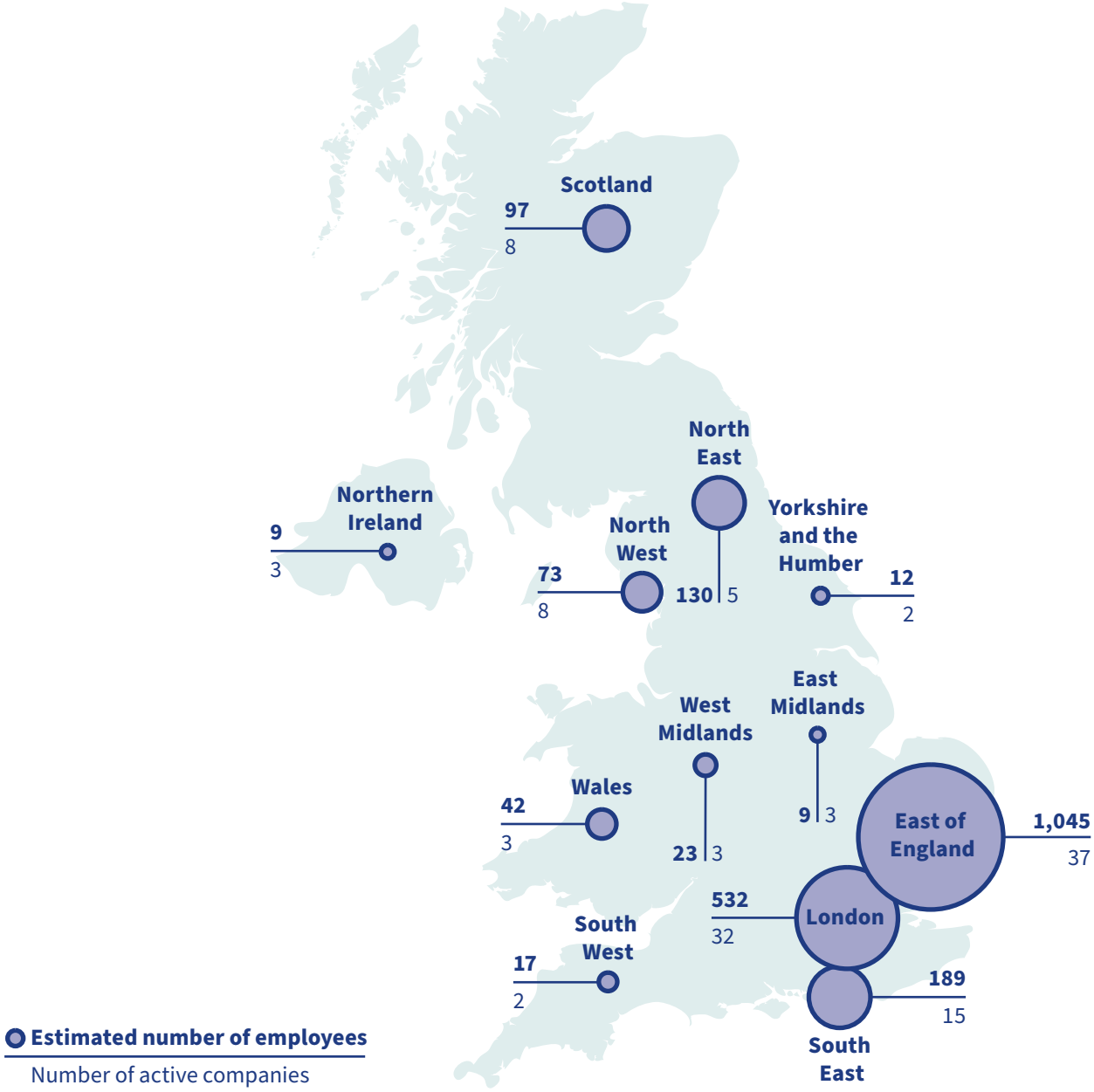
In this time frame, there were also three genomics companies that had undergone an IPO. The largest of these took place in September 2021, when Oxford Nanopore Technologies—a developer of portable DNA and RNA sequencing devices—floated with a market capitalisation of £3.4b. The company also raised £350m in its IPO, representing the largest amount raised in a listing on the London Stock Exchange by a biotech company. The listing generated a great deal of interest, including from retail investors.

Amongst the five businesses that were acquired, only one of these deals was accompanied with a price. This transaction featured ATDBio, a business researching short DNA and RNA polymers, that was acquired by the Swedish consultancy service Biotage for £45m.

Company name	Market capitalisation of IPO (2017–2021)
Oxford Nanopore Technologies	£3.4b
Aptamer Group	£80.7m
Gen inCode	£42.2m

Genomic hotspots

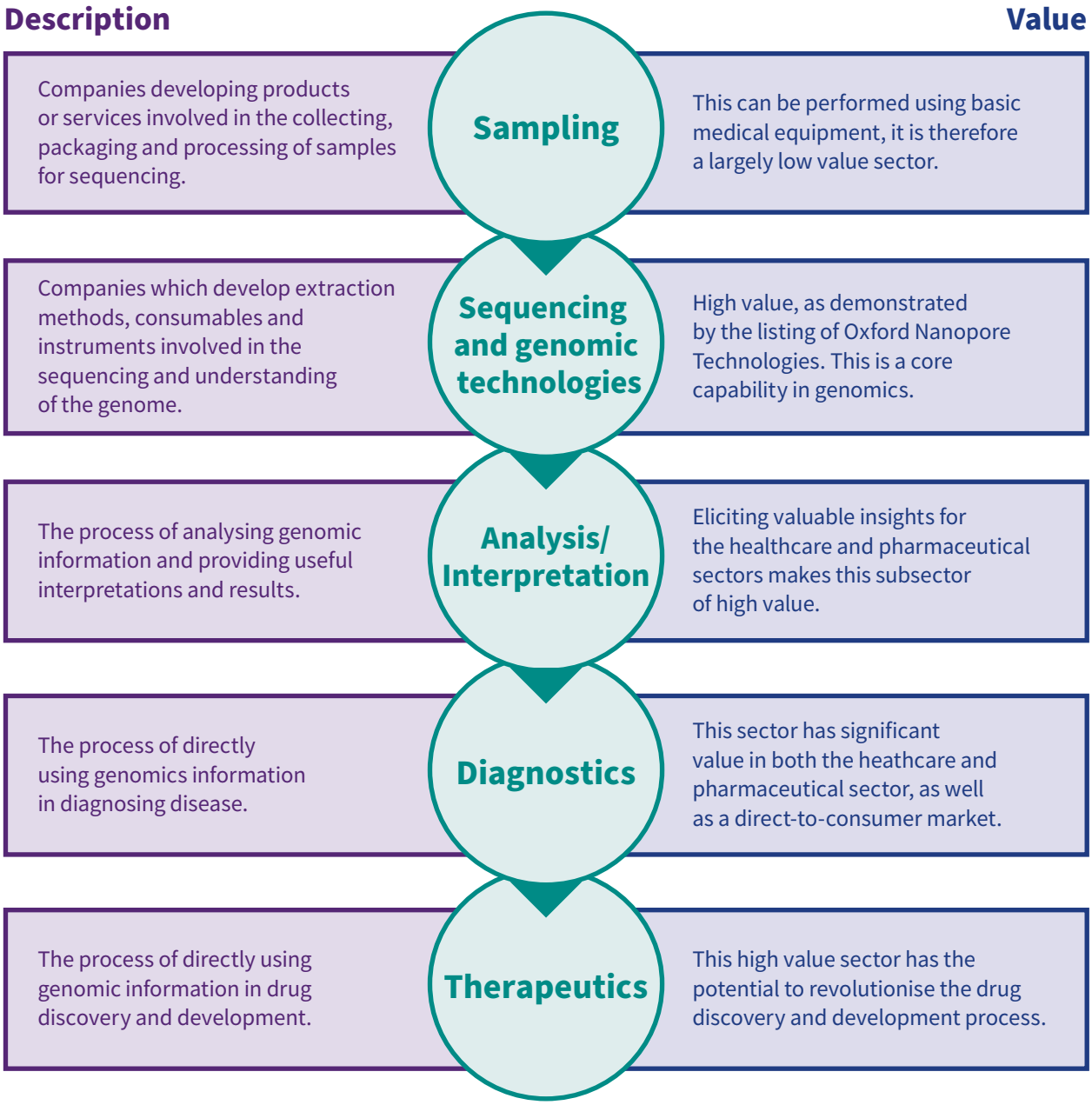
Genomics companies are most prevalent in the East of England, London and the South East, with these three regions accounting for 69% of the UK's active genomics company population. However, there is a spread of genomics companies across the UK that have the potential to be expanded into vibrant genomics hubs. For example, there are eight genomics companies in Scotland and eight in the North West of England.



Subsectors

The genomics sector can be broken down into several subsectors. Based on the 2015 Deloitte and Office for Life Sciences Report[1] we adopted the value chain as a way of categorising companies.

The definitions we used to categorise these companies are shown below, along with a description of the financial value. For companies that spanned several subsectors, a lead category was used for our analysis.

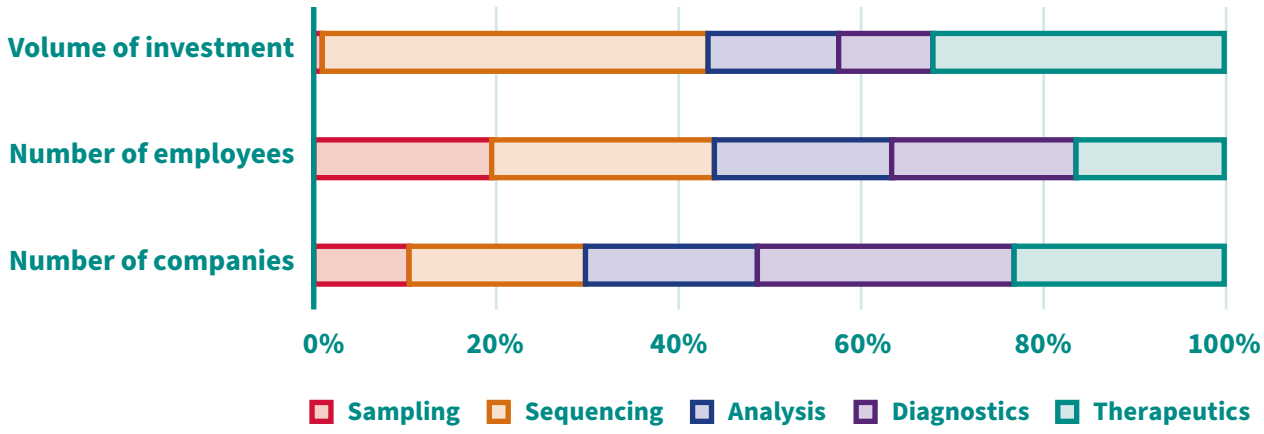


1 www.gov.uk/government/publications/genomics-industry-study-uk-market-analysis

The largest of these subsectors in terms of the volume of venture investment secured between 2017 and 2021 is sequencing and genomic technologies. This is largely due to various fundraising rounds hosted by the aforementioned Oxford Nanopore Technologies, genome sequencing technology research and producer Cambridge Epigenetix and QuantuMDx—a developer of molecular medical devices.

Diagnostics hosts the greatest number of companies, with 34 active genomics businesses falling within its scope. The second largest subsector is therapeutics, representing 28 active companies with 335 employees. While there are fewer sequencing companies (23), this presents the largest subsector by employment with 523 employees. The sampling subsector is the second biggest employer with 452 employees. The various subsectors rely on highly trained lab and data scientists, which are needed across the broader genomics ecosystem in academia, charities, research institutes, the NHS and public diagnostics labs.

Subsector	Volume of investment (2017–2021)	Number of companies	Number of employees
Sampling	£23.2m	13	452
Sequencing and genomic technologies	£785.6m	23	523
Analysis/Interpretation	£256.7m	23	420
Diagnostic	£189.0m	34	429
Therapeutics	£595.2m	28	354



Showcasing genomics technologies

Functional genomics

The study of how the genome and intergenic regions jointly affect biological processes, linking your genome to observable characteristics.

Why is this important?

Determining the function of interacting genes in a genome in a particular context will help us understand disease, leading to better strategies for disease prevention, intervention, and management. For example, understanding the genomics of different types of cancer has helped identify new drug targets.

Case study

Genomics plc aims to transform health, healthcare, and drug discovery through a better understanding of the human genome. Genomics plc uses its extensive data platform, breakthrough machine learning algorithms and novel analytical and risk prediction tools to better understand the relationship between your genome and disease. It will use this knowledge to realise preventative medicine, precision healthcare and improve drug discovery.

Epigenetics

The study of behavioural and environmental factors that cause reversible changes to gene expression without changing the DNA sequence of the genome.

Why is this important?

Understanding what turns a gene on and off, or up and down, and why will help us understand what factors are responsible for disease or good health. Importantly, it will help us understand how to influence these processes. Epigenetic factors change with the environment, cellular composition, and disease treatments. Understanding both the genetics and epigenetics of a sample enables better identification of disease relevant biomarkers.

Case study

Cambridge Epigenetix (CEGX) develops and commercialises unique sequencing technologies that easily integrate into existing sequencing and computer platforms. They enable more information to be read from DNA, such as the gene sequence and whether the gene is being turned on or off. CEGX's technology is enabling researchers to advance our understanding of genetic-epigenetic correlates of disease, ageing and cell identity. As our understanding of these mechanisms increases, they can be used in a diagnostic setting to help detect disease, guiding the most appropriate treatment.

Transcriptomics

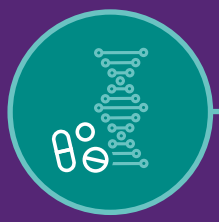
The study of all the RNA molecules produced by the genome, under specific circumstances or in a specific cell or tissue.

Why is this important?

RNA is the vehicle through which genes are expressed into proteins, and this is regulated at the cellular level. Looking at RNA expression in a diseased cell compared with a control cell may help us to understand the disease process. Furthermore, we may be able to target RNAs if they are causing disease, as a type of treatment, thereby intervening in disease development.

Case study

Oxford Nanopore Technologies has developed a new generation of sensing technology that uses nanopores to sequence DNA and RNA. Oxford Nanopore's technology sequences full-length RNA molecules, supporting the quantification of RNA expression, and enabling greater characterisation of the transcriptome at the molecular level across all different tissue types. This can even be measured down to the single-cell level for more in-depth gene expression analysis. Uniquely, this technology also enables sequencing of native RNA, allowing you to identify epigenetic markers that might be important in regulating RNA activity and function.



Pharmacogenomics

The study of how a patient's genome influences their response to medicines. For example, correlating gene expression or changes with drug efficacy or toxicity.

Why is this important?

One in 15 hospital admissions are linked to adverse drug reactions. In addition, many drugs are not effective in a proportion of the population due to varying patient responses. Targeting drugs to the right patients will improve clinical trial outcomes, improve patient responses, and decrease the number of adverse reactions. The NHS Genomics Medicine Service aims to better use pharmacogenomic insights to inform care decisions.

Case study

Yourgene Health develops, manufactures, and commercialises simple and accurate molecular diagnostic solutions, for reproductive health, precision medicine and infectious diseases. Yourgene supply a simple genotyping test that can identify patients with dihydropyrimidine dehydrogenase (DPD) deficiency. These patients suffer from toxicity to a common chemotherapy drug. Screening for DPD deficiency allows an alternative treatment to be offered.

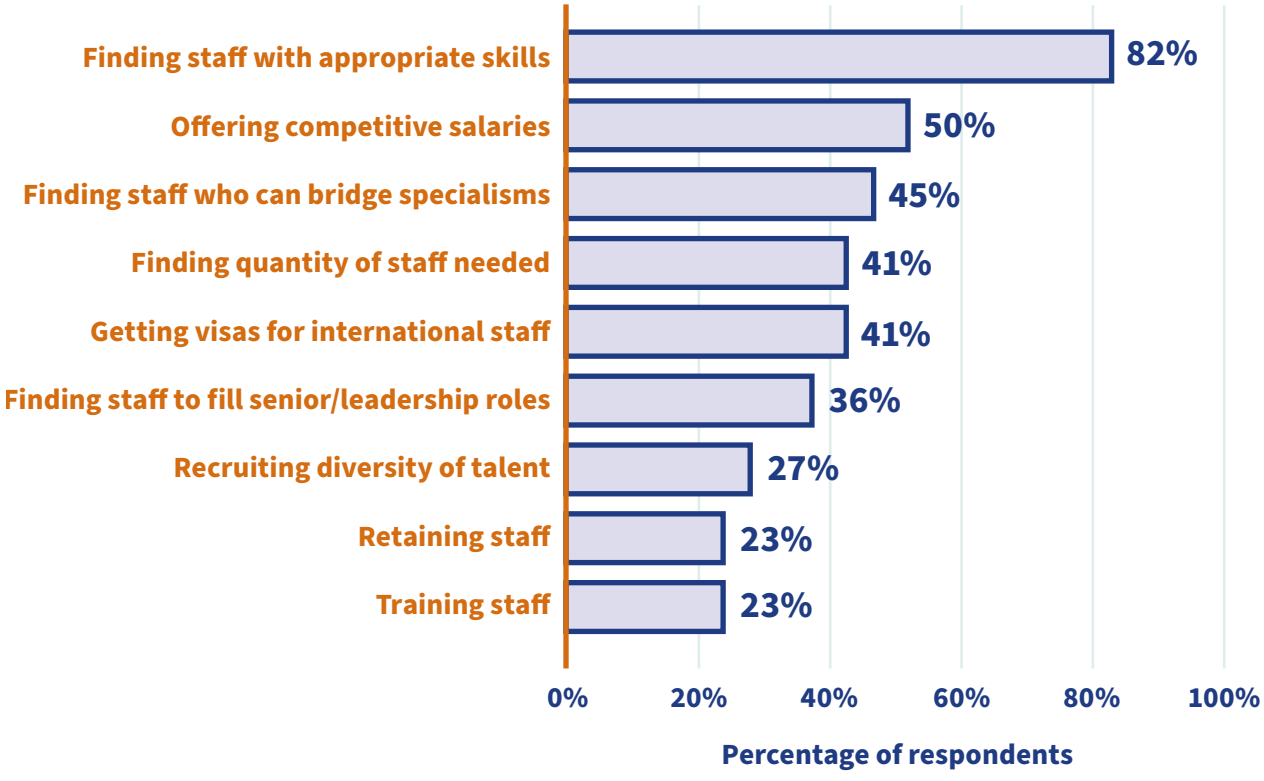
Spotlight on skills

Any growing sector needs access to a pool of specialised skills and talent to thrive. Genomics companies require a range of skills, from laboratory skills to data analysis and software engineering.

Genomics sits at the nexus of formerly unrelated disciplines, such as machine learning and biosample processing, posing a challenge to successful companies that need to recruit into niche specialisms as they scale up.

UK genomics SMEs were invited to complete a survey on skills to find out more about the opportunities and challenges they face (full methodology at the end). Finding staff with the appropriate skills was rated as the number one issue genomics companies faced when it came to skills and talent, with 82% of respondents citing this as a challenge. Second to this was the ability to offer competitive salaries, which 50% of respondents cited as a key issue. This suggests that the lack of suitable skills is causing competition in salaries being offered. More specific issues individual respondents raised included recruiting candidates with the right experience in the North East of England and finding candidates who would commit to balancing home and office working.

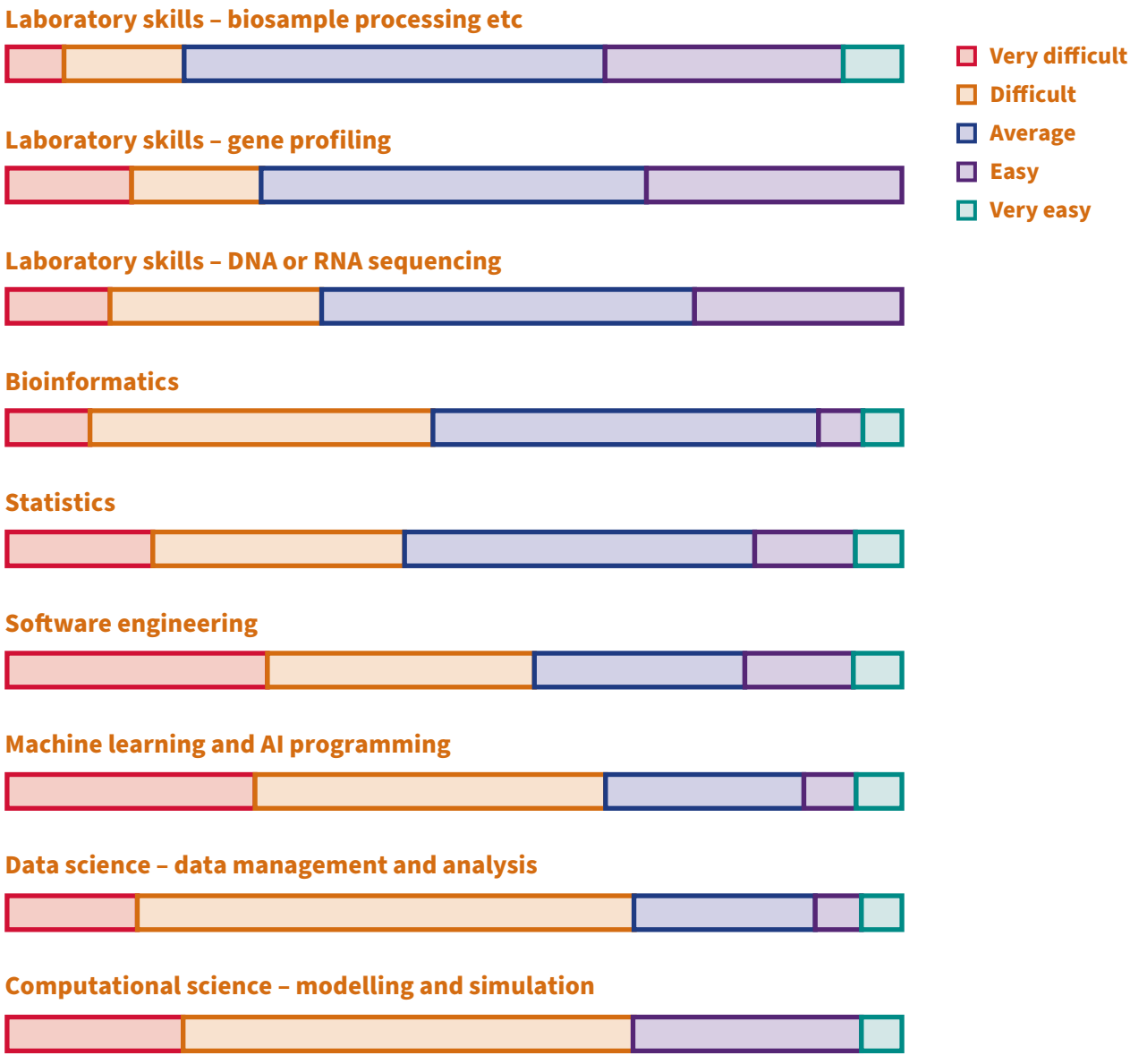
What are the main issues you face when it comes to skills and talent?



Computer science, data science and machine learning skills were seen as the most challenging to recruit for, with up to 70% of respondents who needed these skills saying it was difficult or very difficult to recruit such candidates. This highlights a shortage of computer and data scientists for the sector. With modelling, data analysis, and AI programming being key to the work of many genomics companies, this is an issue that needs to be addressed to facilitate the sector's continued growth. Furthermore, one respondent commented that desirable candidates should also have a broader understanding of the sector: "Finding staff from the software and data world with an appreciation of the challenges of working in healthcare and regulated healthcare [is a challenge]."

The high demand for these skills, with competition from the pharmaceutical, technology, and finance sectors, has led to competition in salaries. The nature of small but growing companies means they struggle to attract the same talent as the larger, more established sectors.

How would you rate your ability to recruit these skills at present?



Genomics companies predominantly recruit from the UK, but many respondents cited challenges in hiring international candidates.

> **"There is talent shortage in the UK for data scientists/ bioinformaticians and it is expensive to sponsor visas for a start-up to bring people from outside the UK."**

Respondents called for further support from the Government to streamline job applications coming from the EU to enable the best talent to enter the UK's world-leading genomics industry.

What proportion of staff do you recruit from outside the UK?

Proportion of staff	Percentage
Less than 25%	77%
25–50%	18%
51–75%	0%
Over 75%	5%

Recruiting experienced or quality candidates was another key challenge that respondents cited. "The challenge is quality – exceptional candidates obviously have a greater choice of company and role and it's much more competitive to attract them". Others pointed to the fact that whilst talented individuals exist, "there is a general lack of broad knowledge and training in this sector", identifying the need to nurture a breadth of skills in the sector.

Investment in developing pipelines of talent is needed to address the issues associated with the depth and breadth of skills needed. This can come in the form of funding for higher education or more vocational training such as apprenticeships. Co-developing these initiatives with industry will ensure that appropriate topics and specialisms are covered on curricula and in new types of professional training. Enhanced support for small companies seeking to recruit from outside the UK is also needed.

UK genomics – the future

The UK's genomics heritage runs deep, from the solving of the DNA double helix structure in 1953 to the completion of the 100,000 Genomes Project in the 2010s. With recent investment continuing to fuel the genomics revolution, this trend of discovery and innovation looks set to continue.

The high-growth companies showcased in this report are a vital part of the genomics ecosystem. These businesses are young and proportionately more successful than their life science peers. Continued public and private investment in this area will cement the UK's position as a leader in genomics. The technologies that these companies are working on will change our health and wellbeing, as well as improving our understanding of human biology.

While the UK remains a fertile home for genomics companies, this report has also shown that these companies struggle to recruit staff with the right skills at competitive salaries. With data and computational techniques being at the forefront of innovation, these companies rely on a pipeline of high-quality talent to develop their products and services. Investment in these skills within the UK, while also maintaining flows of international talent, will be vital in supporting this growing sector.

Finally, the strong genomics cluster evident in the South East of England represents a blueprint that can be replicated outside of this area. By investing in places, infrastructure, supporting spin-outs, and continuing the flow of public and private investment, the UK can become a network of vibrant genomics hubs that brings skills and employment across the length and breadth of this Genomics Nation.

Methodology

Definition of genomics companies

The BIA, MDC and the Wellcome Sanger Institute collaborated to build a dataset of high-growth UK genomics companies. After a thorough refinement process, Beauhurst was commissioned to analyse the dataset that is presented in the report.

The following criteria were used to determine what companies were in scope:

- UK headquartered companies
- Genomics as a core aspect of their business

The following companies were regarded as out of scope:

- Multinationals with a UK satellite activity
- Cell and Gene Therapeutics companies
- Companies which incorporate genomics as a non-core aspect of their business, e.g. many traditional drug discovery companies

High-growth triggers

Beauhurst identifies ambitious businesses using eight triggers that suggests a company has high-growth potential. More detail on Beauhurst's tracking triggers is available via the company's website (www.beauhurst.com).

- Equity investment
- Scale-ups
- Accelerator attendance
- MBO/MBI
- Academic spinouts
- High-growth lists
- Major grants recipients
- Venture debt

The analysis on pages 6–8 includes the 121 high-growth companies throughout their existence. For the analysis on pages 9–15 this includes companies that exited or closed and covers the period 2017–2021 only.

Venture investment

To be included in Beauhurst's analysis, any investment must be:

- Some form of venture investment
- Secured by a non-listed UK company
- Issued between January 2011 and May 2021

Announced and unannounced fundraisings

An unannounced fundraising is an investment made into a private company that is completed without press coverage or a statement from the recipient company or funds that invested. These transactions are an integral part of the UK's high-growth economy, accounting for around 70% of all equity transactions.

Unfortunately, where deals are unannounced, Beauhurst cannot identify the fund type of the investors involved in the transactions. For this reason, we have only included announced deals in any of the analysis that includes investor types.

Skills survey

Genomics companies were surveyed to better understand their skills' requirements and recruitment challenges. C-suite representatives from the companies selected in the cohort with publicly listed contact details were invited to participate. The BIA also invited members who had listed genomics as an interest area. In total, 22 company representatives responded, from the full range of genomics subsectors and a variety of sizes (headcount range 1–250).

About Beauhurst

Beauhurst

Beauhurst is a searchable database of the UK's high-growth companies.
Their platform is trusted by thousands of business professionals to help them find, research and monitor the most ambitious businesses in Britain. They collect data on every company that meets their unique criteria of high-growth; from equity-backed startups to accelerator attendees, academic spinouts and fast-growing scaleups.

www.beauhurst.com

About the BioIndustry Association

The BioIndustry Association (BIA) is the trade association for innovative life sciences and biotech industry in the UK, counting over 500 companies including start-ups, biotechnology, universities, research centres, investors, and lawyers among its members. Our mission is to be the voice of the industry, enabling and connecting the UK ecosystem so that businesses can start, grow and deliver world-changing innovation.

www.bioindustry.org

About the Wellcome Sanger Institute

The Wellcome Sanger Institute is a world leading genomics research centre. We undertake large-scale research that forms the foundations of knowledge in biology and medicine. We are open and collaborative; our data, results, tools and technologies are shared across the globe to advance science. Our ambition is vast – we take on projects that are not possible anywhere else. We use the power of genome sequencing to understand and harness the information in DNA. Funded by Wellcome, we have the freedom and support to push the boundaries of genomics. Our findings are used to improve health and to understand life on Earth. In the last 15 years, Sanger's science has given birth to successful, market leading companies such as Kymab, Congenica and Microbiotica.

www.sanger.ac.uk

About Medicines Discovery Catapult

Medicines Discovery Catapult (MDC) is reshaping the UK's medicines discovery industry. Part of a network of Catapults established by Innovate UK, MDC is an independent, not-for-profit organisation that is transforming great UK science into better treatments through partnership.

md.catapult.org.uk

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