A report produced by Lightcast for the Futures Group

Lightcast

Life Sciences 2035: Developing the Skills for Future Growth

Executive Summary

In partnership with:

ABHI abpi BIA UK BioIndustry Association SIP POWERED BY Cogent Skills

Forewords

Lord Vallance

Minister of State for Science, Research and Innovation

Science should enhance everyday life and Life Sciences is an excellent example of an industry applying scientific advances for citizen benefit. The sector is crucial to this Government's Plan for Change: our Missions to grow the economy and build an NHS fit for the future.

The UK is home to some of the most exciting and innovative Life Sciences companies in the world – from embracing AI, to bringing new treatments from the lab to patients, to improving our ability to detect and diagnose disease earlier. But to drive this we need a talented and multi-disciplinary workforce which invests in its skills and training to adopt new approaches and technologies to build successful companies.

I am pleased that the Futures Group has drafted this report on skills needs within the Life Sciences sector, with the support of the Office for Life Sciences. The final report demonstrates the sector's potential – projecting growth of 70,000 additional jobs by 2035, as well as highlighting the unprecedented pace of innovation that will ensure the healthcare system is ready for the future.

I also welcome the report's insights on the growing importance of digital and data skills, research talent, and business skills in driving the continued success of the sector. However, the report also highlights the challenges ahead, from people leaving the sector through retirement to the impact of new technologies.

Developing the necessary skills requires time, resources, and dedication. The government is committed to working with the sector to meet these needs. We are targeting key Life Sciences skills gaps through initiatives like the Medicines Manufacturing Skills Centre of Excellence – RESILIENCE and the Industry Skills Accelerator. These programmes are enhancing our talent pipeline through education, mentoring, outreach, and innovative training methods like virtual reality.

We are embedding skills within the Industrial Strategy and transforming how we deliver skills training through Skills England, which will collaborate with employers, training providers, unions, and other partners to identify priority skills gaps. This ensures that levy-funded training is effective, meets business needs, and supports economic growth.

Collaboration will be essential, and I am grateful to the Futures Group for bringing the sector together to complete this important report. By fostering strong partnerships across the UK, we can attract top talent and support their growth. Let's seize this opportunity to make a lasting impact on growing our sector, enabling innovation to deliver novel treatments and services to improve the health of our nation.

Jacqui Hall

Head of Early Careers, BioPharma R&D at AstraZeneca and Chair of the Futures Group

The UK Life Sciences sector is a powerhouse of innovation, leading groundbreaking research that not only improves global health and well-being, but also serves as a critical part of the UK economy, contributing £36.9 billion in Gross Value Added (GVA) annually.

Currently, the sector is upheld by over 250,000 dedicated professionals, whose collective contribution is indispensable. The stability of the workforce for Life Sciences is vital – not only for the growth of the sector but for the national economy. We must ensure that the UK remains equipped to fulfil the skill requirements of the sector, both by cultivating a strong domestic talent pipeline and by remaining competitive in attracting global talent.

A collaboration between the Science Industry Partnership, the Office for Life Sciences, the Association of British HealthTech Industries, the BioIndustry Association, and the Association of the British Pharmaceutical Industry, this report provides an in-depth analysis of the growth potential in Life Sciences. Building on the previous 2030 Skills Strategy, this report goes further by incorporating advanced analytics and real-time data to discern workforce needs and identify skill gaps, mapping out the challenges we face and the opportunities we must grasp for our sector to thrive.

The report reveals that, if the sector continues to grow at its current pace, employment could increase by an additional 70,000 jobs by 2035, with a further 75,000 workers needed to replace those leaving the workforce. The report further highlights the need to ensure that the Life Sciences sector in the UK invests in education and training pathways, promotes lifelong learning, and fosters an inclusive work environment that attracts and retains diverse talent.

One of the remarkable – but perhaps underappreciated – aspects of Life Sciences is the diverse range of careers available across the sector. Whether in research and development, medical technologies, manufacturing, commercial or critical enabling roles, there is no one way to enter a career in Life Sciences. From traditional academic routes to apprenticeship programmes, there are a myriad of opportunities to work for organisations ranging from some of the world's largest companies to dynamic start-ups and scale-ups. This variety calls for a blend of highly specialised scientific roles and a growing emphasis on skills in areas like digital technology, data science, and engineering, especially as we move into the next phase of personalised medicines and therapies.

Harnessing the potential of the next generation of skilled professionals is no small task, and this effort begins with understanding our current workforce and shaping the future talent pipeline to support its growth.

We have an opportunity to take action now, and drive change that will ensure we can deliver an effective, forward-thinking strategy that fosters an environment prepared for the workforce of tomorrow. Working together, we can help ensure that the Life Sciences sector of the future continues to be dynamic, innovative, and vital to the UK's prosperity.

Supporting Statements

From medical devices to diagnostic tools and digital health technologies, the HealthTech sector has a long and proud history of advancing innovations that improve healthcare outcomes. Ensuring a robust pipeline of skilled professionals is essential to this, not only to meet current healthcare demands, but to drive the cutting-edge solutions that will shape the future of global health.

This report highlights the urgency of equipping the workforce with the advanced skills required to tackle emerging healthcare challenges, to foster continuous innovation, and to maintain the UK's leadership in the global HealthTech arena. A strong talent pipeline is critical for sustaining the sector's growth, enhancing patient outcomes, and securing long-term competitiveness on the world stage. By strategically investing in the development of this workforce, we are not just supporting the sector's success, we are laying the foundation for a healthier, more innovative future for generations to come.

Association of British HealthTech Industries

ABHI

As the UK's largest investor in research and development (R&D), the pharmaceutical industry is an integral part of the UK economy, developing medicines and vaccines that improve patient care while driving high-productivity growth.

Access to a highly skilled workforce is vital to attracting and retaining global investment. This report demonstrates the life sciences sector's huge potential to create tens of thousands of new high-quality and well-paid jobs in every part of the UK, provided the right building blocks for growth are in place. An effective and responsive skills ecosystem is critical if we are to compete effectively for global investment.

To unlock this potential, the UK should invest strategically in its skills offer. This means ensuring people across all four nations of the UK have access to both academic and vocational routes into the sector, alongside opportunities for upskilling and retraining throughout their careers. With technological developments transforming the way the industry operates and necessitating new combinations of skillsets, it is vital now more than ever that industry, the education system, and governments across the UK work hand in glove to meet our shared ambitions.

Association of the British Pharmaceutical Industry

abpi

The UK's life sciences and biotech industries are at the heart of global innovation, addressing critical health and economic challenges. Life sciences has rightly been identified as one of the eight growth-driving sectors in the UK government's Invest 2035: The UK's Modern Industrial Strategy. Our ability to advance our sector depends on how we address emerging challenges around workforce readiness.

This report shines a light on the critical skills and support systems needed to secure the UK's position as a global leader in innovative life sciences, particularly as we expand into areas of data-driven discovery and applications of AI. However, the sector faces a skills shortage that could limit our competitive edge. The work of the Futures Group outlines the urgent need to develop and attract a highly skilled workforce capable of working across both technological and biological domains, creating a robust talent pipeline that will support the UK's long-term global leadership.

BioIndustry Association

UK BioIndustry Association

Life science employers are among the most innovative and dynamic in our economy. Collectively the sector makes a significant contribution to the UK, both in terms of economic value and wide-ranging innovation and developments which positively impact people's lives.

The sector has a vital role to play in our future prosperity and at the heart of this lies a workforce which has the right skills, in the right places, to meet a number of challenges. A world-class workforce requires planning and investment – and this report makes the case for doing so in key areas, in anticipation of a significant demand for new roles.

We see this report as a catalyst for bold, long-term commitments from both industry and government. Together, we can build a thriving life sciences sector that strengthens the UK's global leadership, fuels innovation, delivers confidence to industry and lasting benefits to society.

Science Industry Partnership

SIP POWERED BY Cogent Skills

Introduction

The UK Life Sciences sector is on the brink of a transformative era, driven by rapid advancements in biology, artificial intelligence, and cutting-edge innovations in treatment, diagnosis, and prevention. The coming wave of innovation holds the potential to revolutionise patient outcomes, offering earlier and more accurate diagnostic capabilities, personalised treatments, and major leaps forward in both primary and secondary prevention.

The government's ambition to achieve the highest economic growth in the G7 and build an NHS fit for the future places Life Sciences at the heart of its growth and health missions. The sector's ability to deliver cutting-edge treatments and improve patient outcomes will be critical to achieving these national objectives. A new Industrial Strategy presents an opportunity to enhance the UK's standing as a global hub for Life Sciences, driving inward investment, supporting innovation, and ensuring sustainable growth.

To seize these opportunities, the sector will need a workforce equipped with a deeper and more varied range of skills than ever before. From advanced scientific expertise to digital proficiency and AI-driven problem-solving, the demands on the Life Sciences workforce are increasingly complex. This transformation will require strategic collaboration between industry, government, and educational institutions to ensure the UK has the infrastructure, policies, and workforce needed to remain at the forefront of global innovation.

This report, commissioned by the Futures Group, offers a comprehensive analysis of the workforce and skills landscape within the UK Life Sciences sector. Alongside updating findings from the previous 2030 Skills Strategy, this research introduces new insights derived from both official statistics published by government departments and an innovative data source—big data from online job postings—to enhance understanding of business needs, recruitment priorities, and skills requirements over the next decade.

The research has four objectives:

1. Project sector growth potential over the next decade by analysing past trends.
2. Identify specific skill requirements needed to realise the sector's potential.
3. Outline current skill gaps by job type.
4. Assess the talent pipeline required to achieve the sector's potential.

Grounded in the latest data, the findings provide strategic insights for industry leaders and policymakers to ensure the UK maintains its position as a global leader in Life Sciences.

About the Futures Group

The Futures Group is a consortium comprising representatives from the following organisations:

- The Association of British HealthTech Industries (ABHI)
- The Association of the British Pharmaceutical Industry (ABPI)
- The BioIndustry Association (BIA)
- Cogent Skills' Science Industry Partnership (SIP)
- The Office for Life Sciences (OLS)

Originally established to develop and implement the Life Sciences 2030 Skills Strategy—a key deliverable of the 2017 Life Sciences Industrial Strategy—the group works collaboratively to ensure that UK Life Sciences companies can access the skills needed to support the government's ambitions for sector growth.

To support this goal, the Futures Group has partnered with Lightcast, a labour market analytics company specialising in jobs and skills dynamics, to update and expand the strategy.

Meeting Skills Demand to Support Sector Growth

Shared goals for industry, government, and education and skills ecosystem partners.

Innovation and Technological Integration

Foster a workforce that integrates diverse disciplines and leverages advanced technologies to drive innovation and commercial success.

- **Ensure industry skills keep pace with innovative technologies** such as advanced therapies, digital health, AI, and robotics, supporting sector growth and positioning the UK as a leading choice for investment.
- **Drive innovation through industry-academia collaboration** by leveraging UKRI funding and establishing partnerships, internships, apprenticeships, innovation hubs, and Knowledge Transfer Partnerships (KTPs).
- **Promote interdisciplinary learning and collaboration** within the UK research environment to support innovation and translate research into commercially viable products.
- **Enhance entrepreneurial skills and support for SMEs and start-ups** through mentorship, funding, access to advanced technologies, partnerships, and shared resources to lower barriers to scaling up and cultivate a thriving ecosystem for research.

Enhanced Academic and Career Pathways

Strengthen education and training pathways to build a thriving and sustainable Life Sciences workforce.

- **Invest in technical education, vocational pathways, and higher education**, working with training providers to ensure training evolves alongside breakthroughs and innovations.
- **Bridge the gap between academic learning and practical experience** by expanding industry placements, internships, and work-based learning opportunities, ensuring graduates are equipped with the skills needed by an evolving industry.
- **Continue to promote apprenticeships, including degree and masters level options**, to provide clear entry routes and career progression while expanding geographic coverage and increasing SME participation.
- **Collaborate with Skills England, the devolved nations, and other relevant bodies** to optimise the use of government funding mechanisms such as the Growth and Skills Levy to support sector-wide upskilling initiatives.

Global Leadership and International Talent

Maintain the UK's global leadership in Life Sciences by growing the domestic talent pool, supporting UK companies, and attracting top international talent.

- **Promote the UK as a global Life Sciences hub** by ensuring regulatory frameworks, government support, and industry partnerships encourage both domestic and international engagement, fostering long-term investment and talent development.
- **Strengthen the retention of graduates and researchers trained in the UK** by expanding access to early-career funding, PhD, and postdoctoral opportunities, ensuring that researchers remain in the UK and contribute to the sector's long-term competitiveness and growth prospects.
- **Ensure the UK visa system is competitive for attracting specialist international talent**, particularly for science and technology roles, and provide targeted support for businesses navigating immigration pathways.
- **Facilitate international staff exchanges and knowledge transfer** through policies and partnerships that support long-term growth and global competitiveness.

Sector Attractiveness and Talent Retention

Enhance the appeal of Life Sciences careers by fostering a diverse, inclusive, and supportive work environment that promotes well-being, continuous development, and long-term career satisfaction.

- **Attract and retain diverse talent** by embedding Equality, Diversity & Inclusion (ED&I) practices and supporting social mobility. Position the sector as a leader in providing equal career opportunities and valuing diverse perspectives.
- **Build on STEM careers outreach initiatives** to engage and inspire young people and their career influencers. Target outreach efforts that clearly communicate the dynamic career opportunities in the sector, fostering early interest and growing the talent pipeline.
- **Promote lifelong learning** through flexible, accredited Continuing Professional Development (CPD) programmes. Enable existing employees to upskill and adapt to technological advancements, promoting long-term career satisfaction and enhancing the sector's resilience to future challenges.
- **Cultivate a collaborative and innovative work culture** that prioritises employee well-being, community building, and engagement. Strengthen workplace connections and provide opportunities for networking to improve retention and long-term satisfaction.

Key Findings at a Glance

70,000
additional jobs generated by 2035:

Depending on market conditions and other factors, cumulative job growth by 2035 ranges from **13%** to **44%**

70%
of the Life Sciences workforce holds a degree or equivalent qualification, nearly twice the UK average

+33,000
in **BioPharma**

+37,000
in **MedTech**

Approximately **1,500** apprenticeships starts per year in England over the past five years

Employment in the sector grew by 16% between 2016/17 and 2021/22, far exceeding the national average of 2.4%

The sector has an above-average and fast-growing demand for skills related to AI

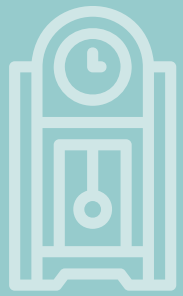
A wide range of key occupations are needed in the sector, from research to regulation, to data science and digital jobs

3,935

graduates secured employment in the sector within 15 months of qualifying in 2020/21

The sector recorded **65,000** online job postings between April 2023 and March 2024

The most recruited-for area in the sector is IT and computer science, representing **13%** of job postings



Approximately

16%

of the sector's workforce is expected to retire over the next decade

50%+

of the sector workforce is in highly technical roles requiring advanced qualifications

25%

of the sector workforce is born outside the UK

Sector Growth Potential

The future growth of the UK Life Sciences sector will be shaped by a complex interplay of factors, including global competition, rapid technological advancements, and domestic industrial strategy. Emerging trends—such as automation, artificial intelligence, innovative therapeutic modalities, and the shift towards personalised and preventative care—are redefining the sector's workforce needs. These trends will influence not only the scale and variety of roles required but also the skills necessary to maintain the UK's competitiveness on the global stage.

Skills are a cornerstone of growth and a vital element of the UK's appeal for inward investment. Ensuring the sector's skill base evolves in tandem with these advancements will be critical to sustaining its future success.

- The UK Life Sciences sector directly employs 270,900 people across 5,800 businesses focused on core technical activities.[1]
- At the current pace of growth, sector employment could increase by an additional 70,000 jobs by 2035, with a further 75,000 workers needed to replace those leaving the workforce.
- Between 2016/17 and 2021/22, employment in the sector grew by 16%, significantly outpacing the national average employment growth rate of 2.4% over the same period.[2] This highlights the sector's strength in driving job creation and positions it as a key contributor to the UK's overall employment landscape.
- The Greater South East of England remains the primary hub for Life Sciences employment, accounting for 49% of the sector's workforce. The sector is a crucial economic driver for this region, supporting innovation, investment, and a high concentration of highly skilled jobs.
- Regions such as the North West and the devolved nations, while smaller in absolute terms, have seen impressive growth. Northern Ireland, for example, experienced a 40% rise in Life Sciences employment between 2016/17 and 2021/22, underscoring the sector's role in accelerating high-productivity and regional economic development.
- Employment growth in the UK's Life Sciences sector has been outpaced by key competitor nations, such as the United States and Singapore, over the past decade. This trend is mirrored in R&D investment, where the UK's year-on-year growth in biopharmaceutical R&D investment has lagged behind global growth.[3] This highlights the potential to further accelerate domestic job creation if improvements are made to the UK's international competitiveness and its offer to investors.

16%
employment growth between 2016/17 and 2021/22

70,000
additional jobs by 2035

[1] An additional 33,000 are employed in 'service and supply' segments, such as patent and legal services, recruitment, and training, which are excluded from this analysis.

[2] Office for National Statistics: UK labour market: June 2017 and Employment in the UK: June 2022

[3] Association of the British Pharmaceutical Industry: Life Sciences Superpower Report, 2022

The UK Life Sciences industry

Scotland
Life Sciences Employment, 2021/22 **18,660**
Share of Sector Employment **6%**
Life Sciences Employment per 10,000 Population **34**

North West
Life Sciences Employment, 2021/22 **31,870**
Share of Sector Employment **10%**
Life Sciences Employment per 10,000 Population **43**

Northern Ireland
Life Sciences Employment, 2021/22 **6,910**
Share of Sector Employment **2%**
Life Sciences Employment per 10,000 Population **36**

West Midlands
Life Sciences Employment, 2021/22 **19,910**
Share of Sector Employment **7%**
Life Sciences Employment per 10,000 Population **33**

Wales
Life Sciences Employment, 2021/22 **13,390**
Share of Sector Employment **4%**
Life Sciences Employment per 10,000 Population **42**

South West
Life Sciences Employment, 2021/22 **14,370**
Share of Sector Employment **5%**
Life Sciences Employment per 10,000 Population **25**

North East
Life Sciences Employment, 2021/22 **9,310**
Share of Sector Employment **3%**
Life Sciences Employment per 10,000 Population **35**

Yorkshire and The Humber
Life Sciences Employment, 2021/22 **21,930**
Share of Sector Employment **7%**
Life Sciences Employment per 10,000 Population **39**

East Midlands
Life Sciences Employment, 2021/22 **17,850**
Share of Sector Employment **6%**
Life Sciences Employment per 10,000 Population **36**

East of England
Life Sciences Employment, 2021/22 **43,850**
Share of Sector Employment **14%**
Life Sciences Employment per 10,000 Population **69**

London
Life Sciences Employment, 2021/22 **34,820**
Share of Sector Employment **11%**
Life Sciences Employment per 10,000 Population **38**

South East
Life Sciences Employment, 2021/22 **71,310**
Share of Sector Employment **23%**
Life Sciences Employment per 10,000 Population **76**

Source: Lightcast aggregation of data from the Office for Life Sciences (2022) Bioscience and Health Technology Sector Statistics.

Skills Requirements

As a major employer with a diverse footprint of companies, ranging from small spinouts to large multinational organisations, the sector requires a wide range of talent spanning various business functions.

In roles associated with R&D and manufacturing, there is often a need for skillsets covering core and established scientific disciplines, alongside a growing need for emerging specialisations aligned with recent advancements in science and technology — and, in many cases, a blend of the two.

With skills forming a foundational requirement for inward investment and growth, the sector must prioritise three key categories of skills to fully realise its potential, while also recognising the increasing interdependencies between them. This report categorises these skills as follows:

- Core Scientific Expertise
- Broader Operational Skills
- Emerging Tech Skills

Core Scientific Expertise

The first category is particularly relevant to highly specialised roles that are central to science and research. This includes positions such as biomedical scientists, chemical scientists, and process engineers. These roles typically require advanced qualifications and sector-specific expertise, which are critical for driving scientific discovery and innovation. They are highly concentrated within the sector, accounting for at least 10% of such roles across the UK economy.

Ensuring a steady pipeline of skilled professionals in these areas will require active collaboration with the UK skills system, targeted careers outreach, and long-term workforce planning.

Broader Operational Skills

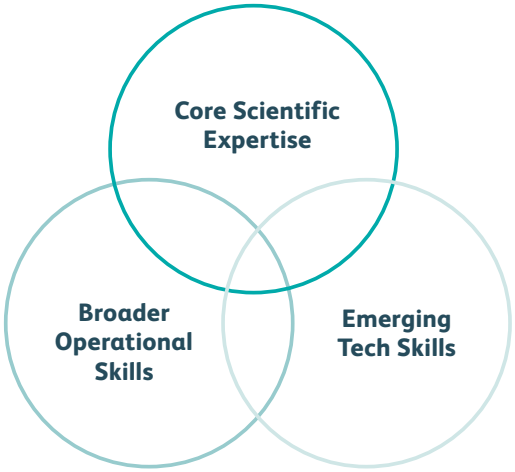
The second category is particularly relevant to operational roles that are essential for the sector but face high competition from other industries. These include production managers, software developers, quality assurance and regulatory professionals, whose skills are transferable across various sectors.

To succeed, the sector must develop recruitment and retention strategies that set it apart, emphasising unique benefits such as the opportunity to work on innovative projects impacting global health, an inclusive and collaborative workplace culture, and opportunities for continuous professional development.

Emerging Tech Skills

The third category reflects the growing need for skills in areas such as artificial intelligence, data modelling, and digital innovation. These new capabilities are increasingly crucial to how Life Sciences companies research, develop, and manufacture. They will also play a significant role in meeting net-zero and sustainability targets, driving efficiency across the sector.

Developing these skills will be critical for the sector to remain at the forefront of technological advancement, ensuring it continues to innovate and respond to future challenges.



Key occupations

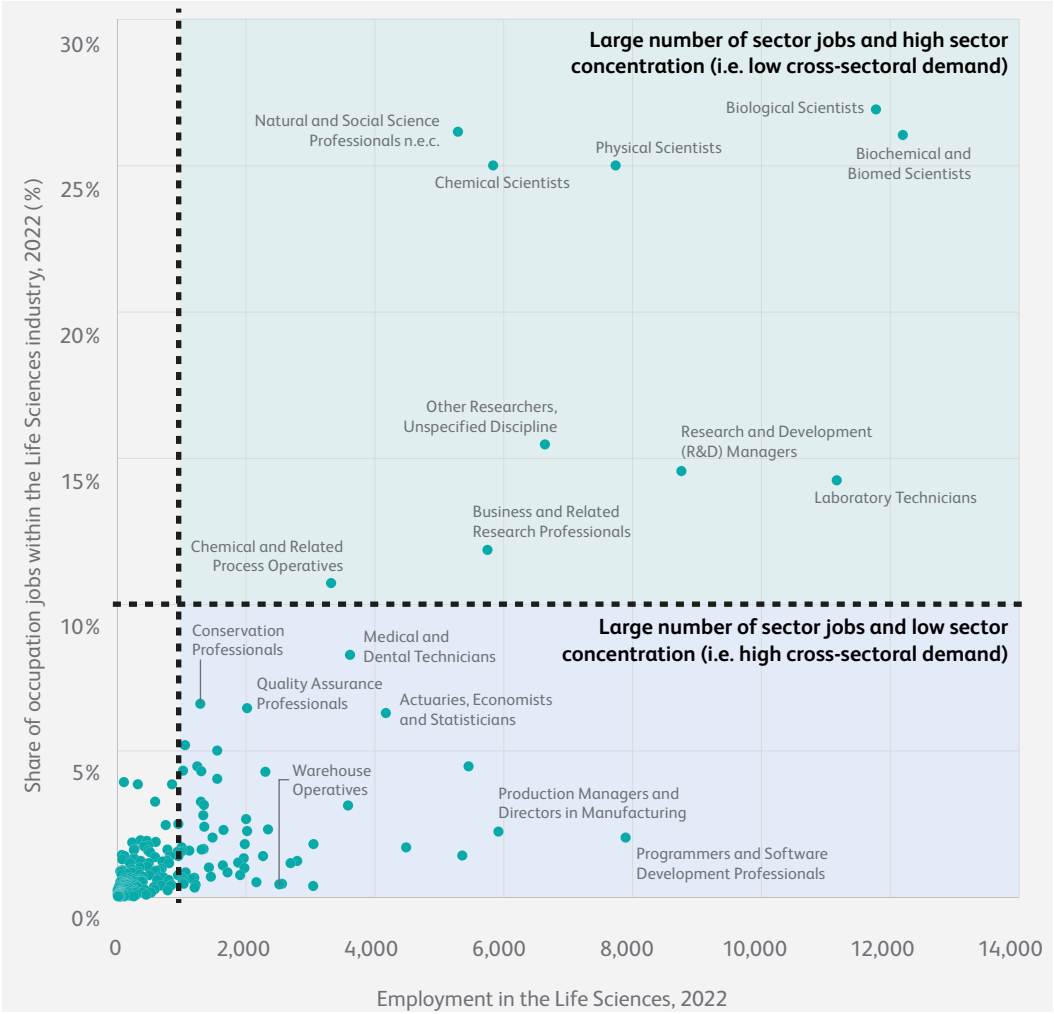
This chart plots jobs in the UK Life Sciences sector by 4-digit Standard Occupational Classification (SOC) code. The x-axis shows the number of jobs in each occupation, while the y-axis indicates the percentage of each occupation's total UK workforce employed within Life Sciences. This provides an 'at-a-glance' view of the occupations most prevalent in the sector and those facing the highest cross-economy competition for talent.

Occupations in the upper-right quartile are in high demand within the Life Sciences sector but face lower cross-economy competition. Those in the bottom-right quartile are also in high demand within Life Sciences but encounter greater cross-sector competition for talent.

Occupational boundaries are increasingly blurred

It should be noted that, while occupational codes provide a useful framework, they often overlook the growing need for interdisciplinary skills that are difficult to capture within these classifications. For example, roles classified as biological scientists may also require integrated data science or computational modelling skills. The integration of data, analytical, computational, and AI skills across various occupations is increasingly common, both within Life Sciences and other sectors, intensifying competition for talent. The table on the following page provides examples of sector roles that fall within these broad occupational classifications.

50%+
of the sector workforce is in highly technical roles requiring advanced qualifications



Source: Lightcast aggregation of data from the Office for Life Sciences (2022) Bioscience and Health Technology Sector Statistics, combined with Lightcast staffing pattern matrix.

Occupations with the Highest Projected Job Growth in the Life Sciences Sector by 2035

Broad occupation (4-digit SOC)	Examples of relevant sector roles within SOC classification	Additional jobs
Biochemists and Biomedical Scientists	Clinical technologists, medical technologists, etc.	3,450
Biological Scientists	Microbiologists, pathologists, etc.	3,370
Laboratory Technicians	Assistant scientists, scientific technicians, etc.	3,130
Research and Development Managers	Clinical trials managers, market research managers, etc.	2,470
Programmers and Software Development Professionals	Software developers, computer programmers, etc.	2,240
Physical Scientists	Medical physicists, physicists, etc.	2,210
Other Researchers, Unspecified Discipline	Researchers, research assistants, etc.	1,900
Production Managers and Directors in Manufacturing	BioPharma manufacturing director, MedTech manufacturing manager, etc.	1,650
Business and Related Research Professionals	Fellow researchers, inventors, etc.	1,630
Chemical Scientists	Analytical chemists, research scientists, etc.	1,630

Source: Lightcast aggregation of data from the Office for Life Sciences (2022) Bioscience and Health Technology Sector Statistics, combined with Lightcast staffing pattern matrix.

Recruitment Trends

To ensure this research reflects the sector's latest recruitment trends and requirements, a detailed analysis of 65,000 job postings has been undertaken to identify the most in-demand skills. The diversity of roles being advertised reflects the broad range of skills needed to drive research, development, and production in a sector that is constantly evolving with new technologies, modalities, and ways of working.

- Job postings in the sector show high demand for IT and computer science roles, with these positions including software developers, data scientists, and biostatisticians, making up 13% of the total.
- Other key recruitment areas include business management (12%), healthcare (12%), engineering (7%), and science (7%), reflecting the sector's diverse and evolving occupational needs.
- 15% of job postings were linked to 'Core Life Sciences Roles', a subset of around 100 specialised roles focused on science, research, regulation, and compliance, requiring specific sector knowledge and skills.
- The sector has a higher-than-average and fast-growing demand for digital skills, including both basic and advanced capabilities, particularly in AI. Approximately 2% of Life Sciences job postings specifically mention AI skills, compared to the UK average of 1%, with this figure rising to 3% in BioPharma job postings.
- Over the past three years, there has been a 7% increase in job postings that mention law, regulation, and compliance skills, reflecting growing demand in these areas.
- Skills factsheets have been developed for 'Core Life Sciences Roles', showing the top 10 common, specialised, and software skills listed in job postings for these roles.
- 70% of the Life Sciences workforce holds a degree or equivalent qualification, compared to 41% of the UK workforce overall. Life Sciences employers are also twice as likely (43%) to require degree-level qualifications in job postings compared to the broader UK labour market (22%).

Future Talent Pipeline

To meet its evolving needs, the sector must draw on talent from a wide range of educational and training pathways, creating opportunities for individuals at all stages of their careers. From traditional academic routes to vocational training and apprenticeships, the sector benefits from a diverse spectrum of skills and expertise that drive innovation and resilience.

Addressing skills gaps and maintaining global competitiveness will depend on ensuring accessible entry points, clear progression pathways, and effective retention strategies. This requires an inclusive and adaptable skills system that not only attracts and nurtures diverse talent but also ensures equitable opportunities are available across all regions of the UK.

- Approximately 3,935 graduates from the 2020/21 academic year secured employment in the UK Life Sciences sector within 15 months of qualifying, with 39% holding postgraduate qualifications. This highlights the sector's strong demand for advanced skills, particularly in R&D roles that require specialised expertise.
- Apprenticeship starts (in England) have remained relatively stable, ranging between 1,450 and 1,520 annually since 2017/18. There has been a significant shift towards higher-level and degree-level apprenticeships, giving employers an alternative route to meeting their advanced educational and technical skill needs.
- Approximately 16% of the sector's workforce is expected to retire over the next decade.
- Only 4% of the sector workforce is under the age of 25, reflecting the extended educational requirements for many roles and reinforcing the need for strategic, long-term workforce planning.
- The Life Sciences sector draws on a wide range of international talent, with 25% of its workforce born outside the UK, compared to an average of 19% across the UK labour market.
- Career pathway data shows that many 'Core Life Sciences Roles' share overlapping skill sets, often serving as feeder and next-step jobs for one another. This provides workers with multiple options to advance their careers while remaining within the sector.
- Feeder occupations, such as laboratory managers and biomedical engineers, provide potential sources of talent for many 'Core Life Sciences Roles', helping to address skill shortages by drawing talent from related fields.
- Occupations such as Environmental Planners and Compliance Officers share similar skill profiles with several 'Core Life Sciences Roles'. These occupations could serve as valuable sources of talent for the sector by drawing skilled professionals from related fields.

Approximately **1,500** apprenticeship starts per year in England over the past five years

3,935 graduates employed within 15 months of qualifying in 2020/21

Call to Action

The UK Life Sciences sector stands at a pivotal moment, with extraordinary potential for growth and innovation. Realising this potential requires a unified, collaborative approach, with success relying on shared responsibility and coordinated efforts between government, industry, and the wider Life Sciences community.

Together, we must work to achieve the goals outlined in this report through a shared commitment to nurturing talent, advancing technological innovation, and developing the infrastructure critical for sustained growth. Now is the time to invest in the future of UK Life Sciences, ensuring long-term success and delivering transformative outcomes for both the economy and society.

In partnership with:

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