Adecco

Adecco Research and Insights

Future-Proofing Ireland's STEM Workforce

2025



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Executive Summary

Ireland's STEM sector is undergoing rapid transformation, shaped by technological innovation, a shifting global market, and rising demands for specialised talent. As of 2025, crucial skills shortage persist in science, engineering, and ICT, a challenge for both future development as well as employers.

The technology sector has seen a **9.8%** annual growth, while biopharma and environmental sciences continue to expand rapidly. Yet, with **104,000** open STEM positions in the last 12 months alone and only **25%** of these roles filled by women, the sector faces a widening gap in talent, inclusivity, and future-readiness. This report explores the trends, challenges, and regional dynamics shaping Ireland's STEM workforce, but more importantly, it highlights actionable insights for employers aiming to build resilient, future-proof teams. From Galway's cybersecurity ecosystem to Cork's life sciences cluster, opportunities are emerging across the country – if organisations act now to build pipelines, reskill teams, and compete globally for critical talent.

At Adecco Ireland, we go beyond market insight. We work hand-in-hand with STEM employers to navigate talent shortages, diversity challenges, and workforce transformation. Whether this is sourcing specialist roles or adapting to immigration and hiring regulations – we help clients move from workforce planning to workforce execution.



9.8%
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25%
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The Current STEM Landscape in Ireland

Ireland's STEM workforce is experiencing significant shifts in 2025, driven by rapid technological advancements, increased global competition, and the growing demand for highly skilled professionals. Emerging trends indicate a surge in demand for expertise in areas such as artificial intelligence, renewable energy, biotechnology, and cybersecurity.

With global trade disruptions continuing, Interaction's Research found that STEM (science, technology, engineering, and mathematics) skills are viewed as increasingly important to Ireland's economic resilience, as **71%** of people feel that global trade instability has made the STEM talent gap a more prevalent issue[1]. While opportunities are expanding, Ireland continues to face a persistent skills gap, with a shortage of qualified professionals hindering innovation and productivity across key sectors. In order to maintain Ireland's leadership in tech, pharma, and engineering, at least **20%** of school-age students will need to pursue STEM subjects[2]. Underscoring this urgency, job posting **data reveals that from May 2024 to May 2025, there were approximately 104,000 open roles across the STEM sector in Ireland alone**, demonstrating both the scale of demand and the opportunity to build a future-ready workforce.

Sources:

1. **STEM skills crucial to Ireland amid global trade instability, Silicon Republic, 2025**
2. **Can Ireland sustain its leadership in tech, pharma and engineering, Silicon Republic, 2024**



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104,000

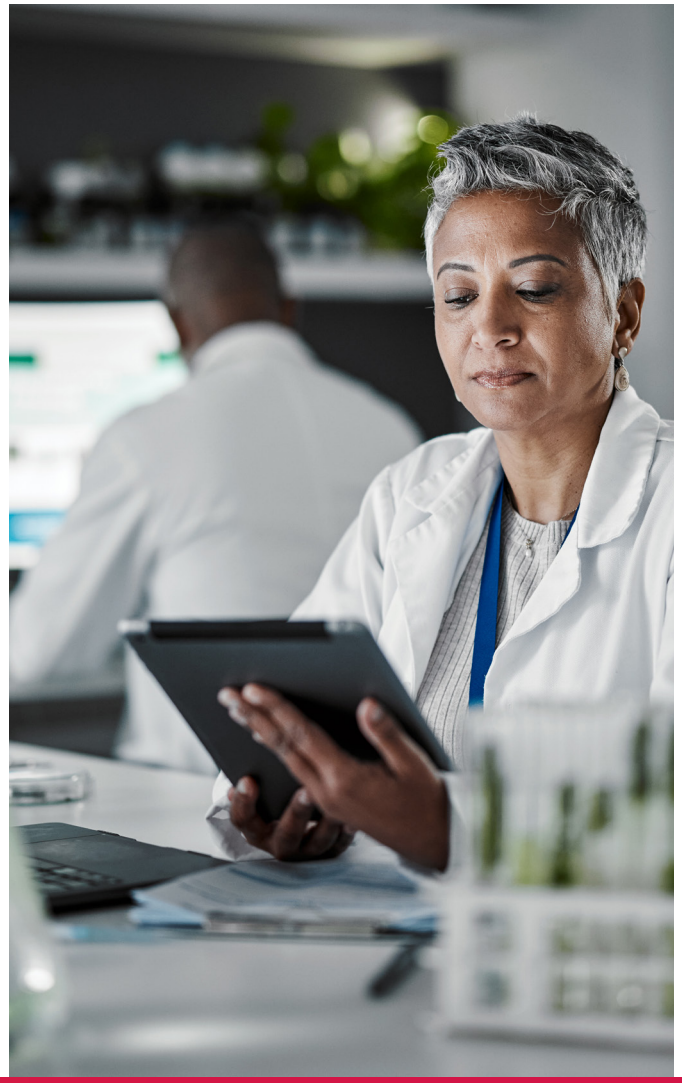
open roles across the STEM sector in Ireland alone

Diversity and Inclusion

Adecco Ireland highlights that diversity in STEM remains a pressing issue, as women and historically excluded groups are still significantly underrepresented in STEM fields. This emphasises the need for targeted initiatives to promote inclusivity and engagement from an early age. Despite significant progress over the years, equity, diversity, and inclusion (EDI) in Ireland's STEM sector still requires substantial improvement. Specifically addressing gender barriers, women make up only 25% of STEM roles nationwide, according to the latest I Wish survey[3].

To enable businesses to thrive and innovate, it is crucial to actively promote STEM careers among these groups. Accelerating diversity efforts is not only a moral imperative but is also a strategic imperative with the latest World Economic Forum (WEF) Future of Jobs Report indicating that employers in Ireland are steadily expanding their diversity, equity and inclusion measures. **The report highlights employer initiatives, with 73% conducting pay equity reviews, 53% establishing employee resource groups, and 40% employing diversity, equity and inclusion officers.**

Looking ahead, leveraging the evolution of Artificial Intelligence (AI) is also becoming an increasingly important component of diversity and inclusion, with the World Economic Forum expressing that gender parity in AI presents a rare opportunity: integrating women into the development and application of AI will double the available talent and unlock fresh perspectives in innovation. Companies that achieve gender balance in AI-intensive fields will see improved product design, enhanced decision making and better financial performance[4].



Sources:

3. STEM Women Whitepaper, 2024
4. Gender Parity in the Intelligent Age, World Economic Forum in collaboration with LinkedIn, 2025

Sector Spotlight: Technology

Ireland's technology sector continues to be a key component of economic growth and innovation, with sustained demand for highly skilled talent across both core Information and Communications Technology (ICT) and adjacent industries. According to the SOLAS National Skills Bulletin 2024, critical vacancies persist across science, engineering, and ICT, highlighting that upskilling current staff is not just advisable but is paramount for businesses to keep up with an evolving talent landscape.

The data shows that the ICT occupational group recorded the strongest average annual employment growth rate of all sectors from 2019 to 2024, at **9.8%**. While the majority of professionals in these roles are employed within the ICT sector itself, the demand for digital skills now spans across financial services, manufacturing, and professional services, among others. This cross-sector competition for tech talent intensifies the recruitment challenge, particularly in roles requiring specialised or emerging skills[5]. **Employers must therefore prioritise offering competitive remuneration, flexibility and an attractive employer value proposition to attract and retain their staff and skills.**

In terms of the sector's talent pipeline and preparing for the future, migration is a key source of skills for these roles. Non-Irish citizens account for almost two-fifths of persons employed, the highest share across all occupational groups, placing global mobility as a key priority for employers. **Access to global talent is therefore critical and employers must ensure they stay up to date with any potential barriers to visas processes, immigration policies and crucially, global competition.**



Sources:

5. National Skills Bulletin, SOLAS, 2024

Sector Spotlight: Life Sciences

One of the most critical challenges currently facing Ireland's life sciences sector is a persistent and widening skills gap. With an estimated 29,000 new roles projected to emerge by 2027, the demand for qualified talent is rapidly outpacing supply, particularly in specialised areas such as bioprocess engineering, quality assurance, clinical research, and regulatory affairs.[6] According to the Expert Group on Future Skills Needs, this shortfall is not only driven by sectoral growth, but also by evolving manufacturing technologies, increased digitalisation, and the growing need for innovation and R&D capabilities.

At Adecco Ireland, we recognise the urgent need to align workforce skills with industry demands. Employers are increasingly investing in targeted upskilling and reskilling programmes, often in collaboration with academic institutions and training providers, to future-proof their talent pipelines. Tony Donohoe, Chair of the Expert Group, highlights that while the biopharma sector continues to experience robust growth, "there is likely to be a significant shortfall of skilled individuals in the sector over the next five years"[7].

To remain globally competitive and ensure sustainable sectoral growth, Adecco Ireland strongly advocates for continued investment in STEM education, scalable workforce development initiatives, and proactive talent attraction strategies.



"Ireland has firmly established itself as a global hub for both life sciences and technology, fuelled by world-class talent, innovation, and international investment. At Adecco Ireland, we see consistent demand for highly skilled professionals across these sectors, from specialist scientific roles to cutting-edge technology positions. The pace of transformation means companies require agile, scalable workforce solutions, while professionals seek meaningful career pathways. Our role is to bridge these needs - helping businesses secure the right expertise and supporting individuals to realise their potential. This alignment is critical to sustaining Ireland's competitiveness and leadership across life sciences and technology."

Stephen Flanagan
Executive Director
Country Lead Adecco Ireland

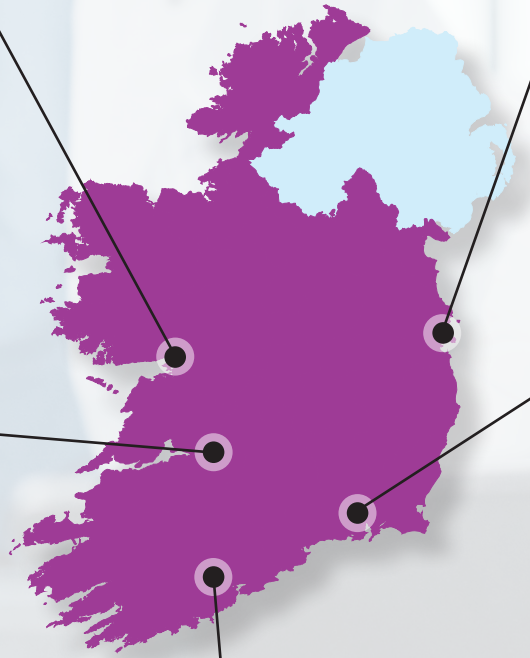
Sources:

6. **Ireland: How The Irish Life Sciences Sector is Leading the World, 2024**
7. **Skills for Biopharma, Expert Group on the Future of Skills, 2024**

Regional Analysis

Shifting regional dynamics play an important role in shaping Ireland's skills and economic landscape. There are distinct regional STEM talent hubs across Ireland with unique specialisms, for example, life sciences in Cork, advanced manufacturing in Limerick, and cybersecurity in Galway. Employers that look beyond a Dublin-centric mindset can access untapped local and regional talent pools, diversify hiring locations, and reduce competition for in-demand skills.

By understanding where these strengths lie, businesses can build resilient workforces and stay ahead of the competition. Adecco can help clients activate effective regional hiring strategies, including relocation support, remote work planning, and regional salary benchmarking.



Galway:
Cybersecurity

Galway is a well-established technology hub with a strong ecosystem of talent, innovation, and industry collaboration. Its universities actively partner with businesses and have recently launched two new master's programmes in cybersecurity to meet industry demand.

Dublin:
Tech Hub

Dublin remains the dominant tech hub, accounting for over **40%** of the country's ICT employment, driven by a high concentration of tech giants and startup businesses.

Limerick:
Manufacturing

Limerick is at the forefront of Ireland's manufacturing sector, with advanced manufacturing and engineering among the region's largest and fastest-growing industries. Significant investment from both government and global businesses has strengthened Limerick's reputation as a centre of excellence for high-value manufacturing.

Waterford:
Environmental

Ireland's largest city region with **603,902** people and ranked as the **6th** fastest growing EU region in terms of job creation. Projections expect **40%** of private-sector employment by 2040 to be in high-value sectors such as ICT and environmental technologies.

Cork:
Life Sciences

Cork leads in the life sciences sector, hosting more than **30%** of Ireland's pharmaceutical and biotech workforce, bolstered by evolving infrastructure as well as world leading research institutions.

PEST Analysis

To effectively future-proof Ireland's STEM workforce, businesses must not only understand current talent trends, but also the broader environment shaping them. The PEST framework (Political, Economic, Social, and Technological) offers a strategic lens to evaluate the external forces influencing the availability, mobility, and development of STEM talent across Ireland.

By analysing these macro-environmental factors, we help employers anticipate change, adapt hiring strategies, and make more informed workforce decisions. This analysis is particularly important in a dynamic, skills-driven economy where policy shifts, economic volatility, social expectations, and rapid technological innovation directly impact talent attraction and retention.

At Adecco Ireland, we use this insight to inform practical, forward-looking solutions for our clients – whether it's planning for global mobility, building inclusive pipelines, or responding to tech disruption with agile workforce strategies.

Political



- Government Support: Ireland's government has consistently invested in STEM through initiatives such as the National Skills Strategy 2025 and tax incentives for R&D activities, creating a favourable environment for businesses and talent development.
- EU Membership: As a member of the EU, Ireland benefits from collaboration on cross-border STEM projects, access to European funding programmes, and alignment with global scientific standards.
- Policy Challenges: Potential changes in tax policies (e.g., corporation tax) or labour laws might impact foreign direct investment (FDI) and STEM talent migration.
- Global Political Uncertainty: Shifts in international trade policies, tariffs, and regulatory frameworks - particularly between major economies like the US, UK, and EU can disrupt supply chains, investment confidence, and the global movement of STEM professionals.
- Geopolitical Tensions: Conflicts, sanctions, and shifting diplomatic alliances may affect the stability of multinational operations in Ireland and impact access to international STEM talent pools.

Technological



- Innovation and R&D: Ireland is a leader in innovation, with strong performance in sectors such as AI, biotechnology, and renewable energy. Continued investment in R&D will be crucial to maintaining this competitive edge.
- Digital Transformation: Advances in digital technologies are reshaping industries, driving demand for skills in AI, data science, cloud computing, and automation.
- Emerging Technologies: Ireland's focus on cutting-edge fields like quantum computing, green tech, and precision medicine positions it as a global innovator, though the pace of adoption may create skill mismatches.

Economic



- Foreign Direct Investment and Multinational Presence: Ireland is a hub for multinational tech, pharmaceutical, and medical device companies, which drive demand for STEM skills and offer competitive salaries.
- STEM Skills Gap: While demand for STEM professionals is high, a persistent skills shortage could hinder growth, requiring increased investment in upskilling and education.
- Economic Stability: Ireland's strong economic performance and pro-business climate make it an attractive destination for STEM industries, but global economic uncertainty could pose risks.

Social



- Education and Skills Development: Ireland's focus on STEM education at both secondary and tertiary levels is helping address workforce needs, though more work is needed to increase enrolment in STEM fields, especially among women and underrepresented groups.
- Diversity and Inclusion: The lack of diversity in STEM is a challenge. Encouraging women and underrepresented communities to pursue STEM careers remains a priority.
- Socio-Economic Disparities in STEM: TASC's 2024 report, The State We Are In, highlights persistent socio-economic inequalities in Ireland, particularly in access to education and career opportunities. These inequalities are especially evident in STEM fields, where students from disadvantaged backgrounds remain significantly underrepresented.
- Changing Workforce Demands: The workforce is increasingly prioritising flexible working arrangements, particularly in tech and R&D roles, which employers must adapt to in order to attract top talent.

Strategic Recommendations

As Ireland's STEM sectors continue to grow and diversify, the workforce strategies that supported past success may no longer be sufficient. The scale and complexity of today's talent challenges – from deepening skills gaps and shifting workforce expectations to global competition for niche roles – requires a more proactive, agile approach.

To future-proof Ireland's STEM economy, organisations must act across three critical time horizons. The following recommendations are designed to help employers attract, develop and retain the talent needed to stay competitive, innovative and inclusive.

Short-Term Solutions (next 12 months)

Prioritise upskilling and reskilling
Focus on critical capabilities in AI, cybersecurity, and biopharma manufacturing.

Benchmark remuneration & EVP
Conduct salary benchmarking and review your Employee Value Proposition to stay competitive – especially in hard-to-fill, high-demand roles.

Launch fast-impact DEI initiatives
Implement practical interventions to attract and retain women and underrepresented groups – such as mentorship schemes, early outreach and flexible work offerings.

Medium-Term Solutions (1-3 years)

Invest in regional clusters
Leveraging emerging hubs like Galway, Cork and Limerick to access untapped talent pools and ease pressure on saturated areas.

Widen diversity pipelines
Proactively address gender and inclusion gaps in tech and AI leadership by supporting early-stage talent development.

Develop clear career pathways
Establish transparent structures to retain STEM professionals and reduce attrition.

Stay legally informed
Stay up to date with hiring processes and immigration legislation to support access to wider global talent pools quickly.

Long-Term Solutions (3+ Years)

Build partnerships
Collaborate with education providers to ensure graduates are equipped with both technical and soft skills.

Grow apprenticeships & early talent programmes
Embed STEM pathways early by targeting secondary school students and diverse communities.

Fund lifelong learning culture
Support continuous development initiatives to help your workforce adapt to evolving technologies and sector demands.

How Adecco Ireland Can Help

At Adecco Ireland, we don't just identify these challenges we help employers solve them. As a trusted talent partner with both local insight and global reach, we offer:

Whether you're **scaling a team** in Cork's life sciences sector, **exploring talent opportunities** in Galway's cybersecurity hub, or tackling a **company-wide skills transformation** we're here to help you **secure the talent you need today and into the future** with strategies grounded in **data, insight, and experience**.

Contact us or schedule a meeting to discuss how we can support your **STEM hiring strategy**.

Contact us

Schedule a meeting

STEM Talent Acquisition & Workforce Planning:

Adecco provides access to specialist candidate pipelines and real-time labour market intelligence, delivering tailored workforce strategies that align with your specific STEM requirements. Our deep industry expertise ensures strategic talent planning that anticipates market shifts and secures the right capabilities for your organisation's growth.

Upskilling & EDI Programmes:

Adecco develops inclusive talent strategies by assessing clients' diversity landscapes, setting tailored EDI goals, and delivering structured programmes that build equitable work environments through inclusive hiring frameworks and bias mitigation training. We address skill gaps by broadening talent attraction channels and partnering with educational institutions to create alternative pathways into STEM for underrepresented groups through apprenticeships, internships, and graduate programmes.

Regional & Global Mobility Solutions:

Adecco leverages its global network and local expertise across the UK & Ireland to source STEM talent both regionally and internationally, bringing together local knowledge with access to global specialists. We provide end-to-end mobility support and workforce flexibility through scalable solutions – from temporary staffing to full managed services – backed by robust infrastructure covering payroll, vetting, and compliance.

EVP, Salary Benchmarking & Retention Advisory:

Adecco delivers strategic guidance on employer brand development and compensation planning to help you differentiate your organisation in the competitive STEM market. Our comprehensive advisory services combine market intelligence with proven retention strategies, ensuring your value proposition attracts top talent whilst maintaining cost-effective compensation structures.