



Country profile: Ireland

Introduction to the national research landscape



Higher education in Ireland is provided mainly by universities and technological universities, institutes of technology, and colleges of education. Other tertiary institutions provide specialist education in fields such as art and design, medicine, business studies, rural development, theology, music, law, etc.

Internationalisation provides significant new opportunities for Irish higher education. The government has invested heavily in research and innovation (R&I) to support this. Today, Ireland ranks 8th out of 29 countries (EU, Japan and the US) in terms of research publications per 1,000 inhabitants. It is regarded as a leader in the advancement and implementation of the [Bologna Declaration](#) and its higher education structures and national guiding principles resonate well with the values of institutional autonomy, academic freedom, and social equity. By international standards, Ireland has a relatively large number of tertiary institutions, offering a rich learning, teaching and research environment. Some 25 of Irish higher education institutions, including eight universities currently receive public funding.

Ireland was ranked highest of all countries in the international recruiter reviews of graduate employability and second highest of 28 countries in the international peer review of graduate quality.

In respect to female researchers in the higher education sector, Ireland has been steadily moving up the ranks over the past ten years, ranking 8th out of 31 OECD countries in 2018. In the field of medical and health sciences, female researchers account for 62%.

The main sources of R&D funding come from three distinct areas: direct government, indirect government and other sources such as Irish industry, foreign industry, and EU funding programmes. Direct government funding comes via various government departments and agencies that fund research projects performed in the higher education sector. According to 2018 figures, direct government funding amounted to €364m. The largest proportion (€213m) of R&D expenditure was in the field of engineering and technology, up 39% from 2016. Expenditure on R&D in the humanities amounted to €47m. The total spend on R&D in the higher education sector amounted to €876.1 million, an increase of 17% over 2016, and also of 17% over the past decade.



According to Ireland's Strategy for Science, Technology and Innovation (SSTI), four sectors – electrical and optical equipment (which includes ICT and medical devices), chemicals and pharmaceuticals, food and drink, and print and recorded media – account for the largest share of Irish manufacturing output.

Main government departments/agencies with spending on R&D include:

- [Higher Education Authority](#)
- [Science Foundation Ireland](#)
- [Enterprise Ireland](#)
- [Teagasc](#)
- [IDA Ireland](#)
- [Health Research Board](#)
- [Irish Research Council](#)
- [Dept. of Agriculture, Food and the Marine](#)
- [Environmental Protection Agency](#)
- [Marine Institute](#)
- [Sustainable Energy Authority of Ireland](#)
- [Department of Further and Higher Education, Research, Innovation and Science](#)

Funding from Science Foundation Ireland (SFI) to the higher education sector amounted to €169.2m in 2018, accounting for 46% of total direct government funding.

Department of Education funding is available to all universities and institutes of technology to support the development of their research capabilities and talented individual researchers, and to encourage cooperation within institutions and between institutions. This funding is primarily aimed at boosting research the higher education system and developing and improving postgraduate-level education. Funding is provided for PhD students and early-stage postdoctoral researchers under the Irish Research Council. Funding for these programmes is made available through the Higher Education Authority (HEA). The education related elements of the regional operational programmes – funded through the Department of Enterprise, Trade and Employment – also supports R&D activities in the higher education sector.

The establishment of the Department of Further and Higher Education, Research, Innovation and Science was completed in January 2021 following a transfer of functions. A number of agencies involved in research were consequently transferred over to this Department in 2021. The Department funds and creates policy for the higher and further education and research sectors. It also oversees the work of the state agencies and public institutions operating in these areas. With respect to research activity, its approach will be grounded in the next national strategy for research and innovation, which will run until end 2027 and will be broken down into two work programmes: to end 2024 and then end 2027.

University level studies in Ireland:

Students enrolled in tertiary studies in Ireland typically obtain a Bachelor's Degree or a professional equivalent (Professional Degree). The length of study for this stage varies between three and four years. The Bachelor's Degree may be



awarded as a General Degree, an Honours Degree or a BA (Special) Degree. Courses in veterinary medicine/science, architecture and dentistry last for five years, while medicine takes six years. More advanced studies at university level typically lead to a Postgraduate Diploma and/or Master's Degree. These studies last for a minimum of one year after the award of the Bachelor's Degree, and candidates are usually expected to present a thesis based on research. After the Master's, a further two years of study are normally required to obtain a PhD Degree – a Higher Doctorate is awarded on the defence of a thesis introducing more detailed original research several years longer.

Around 12% (~20,000) of the total student body (~156,000) attending Irish universities are international students representing more than 120 countries, which reflects the attractiveness of the Irish university experience to students from across the globe.

The importance of higher education is evident in the high value-added sectors of the Irish economy, such as information and communication, professional, scientific and technical activities. Universities also play a significant role in Irish social and cultural life. They are deeply embedded in the communities in which they are located with socio-cultural activities spanning tourism, sport, music and entertainment, arts and culture. There are eight universities in Ireland:

- [Dublin City University](#)
- [University of Galway](#)
- [Technological University Dublin](#)
- [University College Dublin](#)
- [Maynooth University](#)
- [Trinity College Dublin](#)
- [University College Cork](#)
- University of Limerick

Research priorities:

The Department of Further and Higher Education, Research, Innovation and Science focuses on a selection of priority areas for future R&D investment to achieve the government's economic objectives, including:

1. Future networks and communications
2. Food for health
3. Data analytics, management, security and privacy
4. Sustainable food production and processing
5. Digital platforms, content and applications
6. Marine renewable energy
7. Connected health and independent living
8. Smart grids and smart cities
9. Medical devices
10. Manufacturing competitiveness
11. Diagnostics
12. Processing technologies and novel materials
13. Therapeutics, synthesis formulation, processing and drug delivery
14. Innovation in services and business processes



There are several centres of excellence spread throughout Ireland focusing on, for example, ICT, nanotechnology, medical devices, and more. One centre of excellence, **Adapt**, is a Science Foundation Ireland (SFI) research centre for AI-driven digital content technology based in Trinity College Dublin. Another is **Lero**, Europe's first e-sport science research lab, co-funded by industry and SFI, which investigates how software and technology can "impact, a person's physical and mental condition, and performance".

Special features of R&D strategy:

Innovation aspects (funding, companies, startups, Global Innovation Index, GII)

Ireland ranks 19th among the 132 economies featured in the GII 2022. Ireland performs above the high-income group average in five pillars, namely: institutions; human capital and research; infrastructure; business sophistication; and knowledge and technology outputs.

The Irish Government budget allocation for R&D in 2020 was €866.8m and €949.1m in 2021 which marks an increase of over 8% in expenditure compared to 2019.

Innovation 2020, the national science and innovation strategy, includes an Action (No. 3.10), to "develop a coherent national policy on structured progression for researchers". The [Irish Researcher Career Development and Employment Framework](#) put together by the Irish Universities Association aims to deliver on this national policy action.

Business enterprise sector:

With its budget of nearly €1.13b (2021), [Enterprise Ireland](#) provides a range of programmes that help enterprises to innovate. These range from programmes for short-term and relatively small innovation projects, right through to building deeper engagement through large-scale, multiannual collaborative projects. Included are programmes to drive in-company R&D in Irish-owned companies and programmes to support the translation of academic research into new products, processes and services by industry. Enterprise Ireland's innovation programmes are centred on:

- Transforming R&D activity in enterprise
- Direct support to help Irish companies build R&D capability and acquire new technology through licensing, and equity support for new High Potential Start-ups (HPSUs)
- Promoting industry collaboration with the higher education sector
- Programmes to increase the level of collaborative R&D activity between industry and academia
- Realising the commercial potential of the Irish research community

[The Disruptive Technologies Innovation Fund](#) is a €500m challenge-based fund established under Project Ireland 2040. It is one of four funds set up under the National Development Plan (NDP) 2018-2027. It is managed by the Department of Enterprise, Trade and Employment and administered by Enterprise Ireland. The Fund is seeing investment in the development and commercial deployment of disruptive, innovative technologies tackling national and global challenges. The



fund is driving collaboration between Ireland's research base and industry, as well as helping enterprises to compete directly for funding to further develop and deploy these technologies, and seeding a new wave of start-ups.

[IBEC](#) is Ireland's largest lobby and business representative group seeking to build a better, sustainable future by influencing, supporting and delivering for business success.

[Industrial Development Agency](#) (IDA) has national responsibility for securing new investment from overseas in manufacturing and international services, and for encouraging existing foreign enterprises to expand their businesses. Through its 23 overseas offices, the IDA Research, Development & Innovation programme is designed to support companies at all research and development stages, enabling them to move from start-up R&D, through developing capacity and adding competence, to a fully integrated RD&I function.

[InterTrade Ireland](#) is the only organisation which supports SMEs across Ireland to develop North/South trade and business development opportunities for the mutual benefit of both economies.

Academy – industry relations and networks:

[Science Foundation Ireland](#) funds a diverse and balanced portfolio of programmes, supporting both individually led researchers (from early stage to mid-stage career researchers, to emerging research stars and established research leaders), and research teams working collaboratively in large-scale SFI Research Centres. Many of SFI's funding programmes involve national and international collaborations with both small and large companies, charities, international funders as well as national funders such as Teagasc, Marine Institute, Environmental Protection Agency, Health Research Board, etc.

[Innovation Partnership Programme \(Enterprise Ireland\)](#) supports collaborative research projects between Irish higher education institutes and companies. The financial support is provided to the college with co-funding from the partner company. The proposal process and administration of the project is managed by the participating institute. Researchers participating in an Innovation Partnership will benefit from the opportunity to work with companies working to solve real technical challenges and develop new products or services. The initiative also allows researchers to apply for a small grant to undertake a feasibility study that could lead to a full Innovation Partnership project.

[Wild Geese Network of Irish Scientists](#) (WGNIS) enables connection, communication and collaboration among Irish scientific, technological and engineering diaspora.

EURAXESS Ireland

[EURAXESS Ireland](#) has one main office under the Irish Universities Association umbrella. Staff in Ireland provide practical assistance to researchers relocating to and from Ireland to pursue research careers in academia and industry among other sectors. Services include advice on immigration, fast-track researcher work permits, research jobs and funding opportunities, networking events for researchers, and outreach activities to research institutions and human



resources. EURAXESS Ireland is a government-funded, central processing hub for hosting agreements (visas for scientific research, employed in Ireland). Over 7,000 researchers have benefited from the scheme to date. Researchers working under hosting agreements in Ireland don't need any additional work permits and, under certain conditions, may stay in the country to work freely in any sector after their research contract has expired. The scheme covers immediate family members (spouses and children) accompanying the researcher in Ireland.

Contact details

Offices: Irish Universities Association 48 Merrion Square E, Dublin, D02 PK02, Ireland, Telephone: +353 16764948

Dr Magdalena Wislocka (Head of Euraxess Ireland): magda@iua.ie

Mr Fernandos Ongolly (Euraxess Ireland Portal Administrator): fernandos@iua.ie



L-R EURAXESS Ireland Team Fernandos Ongolly and Magdalena Wislocka
(Picture credit: Marguerita Lardner, IUA)

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) to stimulate researcher mobility and career development. This pan-European effort is currently supported by 43 countries, one of which we profile in each of our quarterly e-newsletters.