



Key Statistics 2020

Chairman's Statement



Annual Report and Accounts 2020



Rialtas na hÉireann
Government of Ireland

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About Science Foundation Ireland

Science Foundation Ireland is the national foundation for investment in research in the areas of science, technology, engineering, and mathematics (STEM), which assists in the development and competitiveness of industry, enterprise and employment in Ireland. It also promotes and supports STEM education and engagement to improve awareness and understanding of the value of STEM to society and to support the STEM careers pipeline. See www.sfi.ie for more information.

We fund research that makes a real difference to our society and our economy, both now and into the future – join the conversation online at **#BelieveInScience** **@Scienceirel**

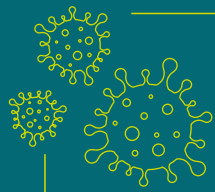


Key Statistics 2020

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Key Statistics 2020



Addressing the COVID-19 Crisis

€22.8 million

was invested in 84 COVID-19 research and innovation projects

SFI delivered a **Five Point Plan** to support the Irish Government's National Action Plan

Excellent Science

Ireland is¹...

12



in global scientific ranking

Ireland ranks¹...

2nd Immunology

3rd Agricultural Sciences

3rd Pharmacology and Toxicology

4th Neuroscience and Behaviour

5th Material Sciences

Ireland is²...

1st In the world for knowledge diffusion

1st For knowledge impact

3rd For knowledge absorption

15th Most innovative country

28

of the most highly cited researchers in the world have been funded by SFI⁴

5,888 publications reported³

SFI-funded publications are **2.5 times** more likely to be star publications than the global average³

Talent & Skills



43,307

Jobs supported, directly and indirectly in Ireland

5,447

People working on SFI-supported projects

1,966

Postgraduate students supported

2,262

Education and public engagement activities delivered by SFI researchers ensured equitable and inclusive access to STEM

¹ InCites by Clarivate Analytics

² Global Innovation Index 2020

³ Star publications are publications in the top 1% of most cited publications, globally

⁴ Clarivate Web of Science



Driving Competitiveness

€49.6m

Funding from Industry

2,951

Industry collaborations

9

Spin-out companies

97

Patents filed

48

Patents awarded

220

Invention disclosures

Regional Development

1,497 Regional industry collaborations in Ireland

747 Collaborations with Multinationals (MNC)

750 Collaborations with Small to Medium Enterprises (SME)

Northern and Western
86 MNCs / 144 SMEs

Northern Ireland
11 MNCs / 27 SMEs

Eastern and Midlands
386 MNCs / 392 SMEs

Southern Region
264 MNCs / 187 SMEs

Value for money

From **€199m**, SFI investments leverage:

€255m Total external funding

€174m Total non-exchequer funding

which includes

€106m won from the EU

10 ERC awards won by SFI researchers

Global Footprint

5,513
international collaborations
in **86** countries

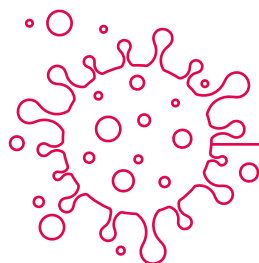
72% of academic-academic collaborations are international

SFI-funded researchers were involved in or organised

532 virtual STEM conferences

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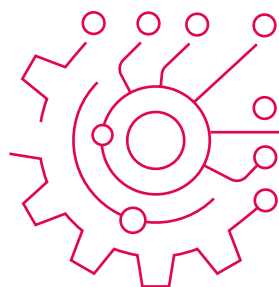
Chairman's Statement



Responding to COVID-19

Strong Interagency Partnership

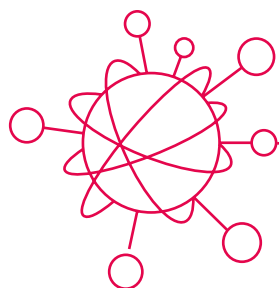
SFI worked with Government departments, IDA Ireland, Enterprise Ireland, Health Research Board, Irish Research Council and the wider research and innovation community to address the key challenges presented by the COVID-19 crisis. SFI's Five Point Plan saw the COVID-19 Rapid Response Research and Innovation Funding programme invest €18 million in 83 projects throughout 2020. In addition, €4.8 million was invested in the TCD COVID-19 Research Hub project under the SFI Strategic Partnership Programme. The resulting collaborative research engagement focused on immediate solutions like treatments and tests, as well as longer term solutions. SFI worked to collate national and global data, and connected experts from across academia and industry.



Excellent Science

SFI Frontiers for the Future

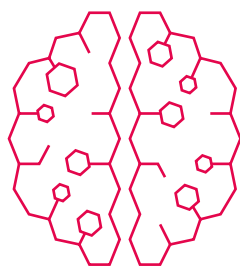
The first awards under the new SFI Frontiers for the Future programme saw €52 million invested across 72 grants to support excellent independent researchers through to well established leaders - providing opportunities for high-risk, high-reward research projects. In 2020, an important gender initiative was also implemented through the programme, which is run in partnership with Geological Survey of Ireland and the Environmental Protection Agency.



Disruptive Innovation

Challenge-based Funding

SFI continued to incentivise researchers to address specific complex challenges through the SFI Future Innovator Prize, in partnership with the Department of Foreign Affairs (Irish Aid). In 2020, Dr Alison Liddy and her team at NUI Galway (NUIG) were awarded €1 million for their project Hydrobloc. 12 teams progressed under challenges in the areas of Artificial Intelligence (AI) for Societal Good, and Zero Emissions, while two new challenges were launched in the areas of food waste and plastics sustainability.



Driving Competitiveness

SFI Research Centres

SFI's network of 16 SFI Research Centres, played a central role in Ireland's success at drawing down EU Horizon 2020 funding delivering on national targets. To date, SFI Research Centres have participated in over 680 major EU-funded initiatives and cumulatively won 45 prestigious European Research Council awards. Five SFI Research Centres progressed to a second six-year research programme, following rigorous international peer review, with an investment of €193 million, supporting over 1,000 research positions in 17 Higher Education Institutions. This commitment is backed by 200 Industry partners who will contribute an additional €91 million.

Chairman's Statement

Professor J. Peter Clinch

Chairman of the Board, Science Foundation Ireland



Looking back over 2020, I am struck by the strength of our scientific community's sense of purpose and the determination of researchers to make the world a better place now and for future generations. In a year where, on so many levels, we were collectively pushed to the limit by COVID-19, scientists, mathematicians and engineers continued to discover, innovate, and have a vital positive impact on Ireland's society and economy.

Deeply collaborative partnerships with researchers, Higher Education Institutions (HEIs), industry, and government, underpin SFI's success. In 2020, we saw just how valuable these partnerships are in driving, at an unprecedented speed, innovative solutions to the pandemic. Through SFI's Five Point Plan to support the Irish Government's National Action Plan, SFI invested €18 million in 83 projects via the new COVID-19 Rapid Response Research, Development, and Innovation Call in partnership with IDA Ireland, Enterprise Ireland, the Health Research Board, and the Irish Research Council. In addition, €4.8 million was invested in the TCD COVID-19 Research Hub project under the SFI Strategic Partnership Programme. Importantly, despite the need for a rapid process, rigorous standards of review were utilised to ensure world-class research is funded. These projects continue to support our national response to COVID-19.

I am very heartened to see the exceptional achievements of the Irish research system over the last year in what has been, due to restrictions, a difficult year to carry out research, let alone deliver rapid and impactful results. From SFI funding of €199 million, researchers further leveraged external funding of €255 million, highlighting the value for money to the exchequer from SFI's investment. This approach is maximising the return on the taxpayer's investment through supporting high-quality research, research-informed teaching in our HEIs, supporting direct and indirect jobs, and driving the recovery of the Irish economy.

SFI funding supported 2,951 industry collaborations, with 1,497 regional collaborations across Ireland. A good balance was struck with 747 of these regional collaborations being with multinational companies (MNCs), while 750 are with small to medium enterprises (SMEs). In supporting Ireland's ambition to be a global innovation leader, and a location for research excellence and investment, SFI supported 1,966 graduate-student positions in 2020 and, with our HEI and enterprise partners, this continues to create employment opportunities for graduates while promoting Ireland as an attractive destination for top research talent.

The SFI Research Centre network, in collaboration with its industry partners and 17 HEIs across the country, continues to deliver excellent science. Following a rigorous international review process, five SFI Research Centres progressed to a second six-year research programme.

SFI's New Strategy

I was delighted to introduce the Taoiseach when, earlier this year, he launched SFI's ambitious new Strategy, *Shaping Our Future 2020-2025*. The objective of the Strategy is to deliver impact from research today, while preparing to address the challenges of tomorrow. The Strategy supports the priorities outlined in Ireland's Programme for Government and the objectives of the national recovery plan. Strong and continued investment in research will be a key determinant of the future success and prosperity of Ireland and its people. The Irish research sector remains essential for supporting economic recovery, job creation and national prosperity, built on a strong Research, Development and Innovation (RD&I) base, and supported by a pipeline of highly-educated and well-trained people.