

SFI Annual Programmes Plan 2022

1. Summary

Science Foundation Ireland's 2022 programme plan has been developed to align with the implementation of SFI's strategy, *Shaping Our Future*. This proposed annual plan has been developed in keeping with the following objectives from the new strategy:

- Funding a balanced national portfolio between individual investigator-led and industry-facing, across all career levels, from frontiers research to applied and including top-down and bottom-up programmes
- Continued focus on SFI Research Centres to drive excellent research and tangible benefits for the economy of Ireland
- Ongoing support for Education and Public Engagement to ensure we have an informed public and to secure the pipeline of future talent
- International collaboration with prestigious organisations overseas which raises Ireland's profile and is operationally efficient
- Funding the research Infrastructure which underpins the implementation of many of the research grants funded by SFI.

The plan has been developed to ensure a broadly balanced multi-year budget, considering the required DPER Multi-Annual Capital Commitment % thresholds, and maintaining the 50%/50% balance between individual-led and industry-facing research programmes.

The plan will support new awards for:

- Mid-career and established Investigators via the Frontiers for the Future and the Research Professorship programmes
- Early-career researchers through the Pathway programme, in partnership with the Irish Research Council

- Researchers and PhD students in the new Technological Universities (TUs) and Institutes of Technology (IoTs) through completion of the 2021 Frontiers for Partnership call
- International partnerships
- Challenge-based funding approaches through the SFI Future Innovator Prize
- I-Corps@SFI Entrepreneurial Training Programme
- Education and Public Engagement programmes
- Fellowship programmes (Industry Research Development & innovation (RD&I) and SFI).

The programme also provides funding for:

- The new National Grand Challenges Programme supported by the European Union.
- Industry partnerships through Spokes and Strategic Partnerships

2. Investigator-led Research

SFI Frontiers for the Future

A key action of the SFI strategy is to deliver 140 investigator grants every year to support excellent research, and to attract and develop top talent. The SFI Frontiers for the Future Programme is the primary mechanism to achieve this goal and provides access to funding for high risk/high reward projects as well as larger scale awards with clearly defined impacts. Women researchers are encouraged and supported, as well as emerging researchers and those coming back from industry or long terms leaves-of-absence.

The programme supports partnerships with other agencies and to date Geological Survey Ireland (GSI) and Sustainable Energy Authority of Ireland (SEAI) have co-funded Frontiers for the Future Awards and Projects. A new partnership with Children's Health Foundation (CHF) has more recently been established.

The 2022 plan is divided out into three elements:

- Completion of the Frontiers for the future Programme 2020 Awards rolling call
- Completion of the Frontiers for the Future Programme 2021 call
- Completion of Frontiers for Partnership 2021 call (support for Technological Universities and Institutes of Technology).

Early career Programme (Pathway) in partnership with the IRC

The “Our Shared Future” Programme for Government sets a vision for Ireland “to be a global leader in research and innovation across the art, humanities, social sciences and STEM”. Part of that vision includes a commitment to develop career pathways for early career researchers with starting grant funding rounds to be issued on an annual basis from each of our funding institutions. This is reflected in *Shaping Our Future*, in which a key theme is to foster diverse Top Talent by building, attracting, and retaining the academic and research talent that powers Ireland’s innovation society.

Since SFI has transitioned into D/FHERIS, additional funding was provided to support a joint SFI/IRC programme which is open to postdoctoral researchers (2 yrs post PhD) in the STEM and AHSS fields. The call was launched and run for the first time in 2021 under a single banner with SFI acting as lead agency for all STEM-related applications, and the IRC leading on all AHSS application. The new SFI-IRC Pathway programme was launched in 2021 and a second call is planned for 2022

Research Professorship Programme

A key objective of *Shaping Our Future* is to recruit world leading researchers and rising stars to move to Ireland. The Research Professorship Programme facilitates this objective and continues to operate as a rolling call.

3. Research Infrastructure.

A key action from *Shaping Our Future* is to Invest in state-of-the-art research infrastructure programmes which will facilitate high-quality, excellent research. The SFI Research Infrastructure Programme ran in 2021. The current reserve list will be kept open until Q1 2023.

4. International Collaboration

Lead Agency agreements with the UK and other international funding agencies are an important component of SFI's portfolio. In many cases SFI funding is leveraged by combining with funding from other jurisdictions to support a larger international project. The number of partnerships has increased in recent years, offering further opportunities to the Irish research community to compete at an international level, to foster links with international collaborators and to expand their teams through international recruitment. The importance of these partnerships from a science diplomacy standpoint, as well as enabling exchange of ideas and knowledge between SFI and its partners at an agency level, must also be acknowledged.

US-Ireland Programme

The US-Ireland tri-jurisdictional schemes, involving Ireland, the US and Northern Ireland include the US-Ireland Investigator calls with the National Science Foundation (NSF) and the National Institutes of Health (NIH), and the US-Ireland Centre-to-Centre calls with the NSF. The partner agencies in the Republic of Ireland are SFI and the Health Research Board (HRB), in the US are the NIH and the NSF, and in Northern Ireland are the Department for the Economy (DfE), and the Health and Social Care agency NI (HSC NI).

SFI-Royal Society Partnership

The SFI-Royal Society partnership will continue to support Ireland-based applicants under the Royal Society University Research Fellowship (URF) scheme.

SFI-HRB-Wellcome Partnership

To support their new strategy, Wellcome has ceased the operation of its partnership programming including the SFI-HRB-Wellcome Partnership. Although closed to new applications, the partnership will continue to support all funded awards to completion, including any awards made following these final closing deadlines. SFI will also support any small supplemental awards which current award holders can receive.

SFI-EPSRC Partnership

SFI will continue its partnership with the UK Engineering and Physical Sciences Research Council (EPSRC).

European Co - Funding Initiatives

The 2022 programme will provide support for the EU QuantERA programme.

5. Science Engagement, Policy and Career development

SFI Fellowship Programme

The SFI Fellowship Programme provides a training opportunity for the research community to engage in the role of science policy and administration within SFI, while providing expertise and support across SFI functions.

SFI Discover Programme

- The SFI Discover Programme Annual Call will run in 2022, supporting projects that broaden STEM awareness and engagement with STEM, strengthen STEM education

activities, build capacity for public engagement and contribute to the development of a talent pipeline in STEM areas.

- The SFI Science Week Call will run in 2022, to support digital and in-person activities that broaden nationwide access and public engagement during Science Week.
- The SFI/RTÉ Joint Initiative Agreement will be continued into 2022, subject to review by both parties.

SFI Maternity Allowance

SFI will continue to support Maternity Allowance awards, in line with SFI's Gender Strategy.

6. Innovation, Entrepreneurship and Commercialisation

This area is divided out into three elements: Future Innovator Prize, the SFI-NSF I-Corps@SFI Entrepreneurial Training Programme and the recently announced National Grand Challenges Programme.

Future Innovator Prize

The SFI Future Innovator Prize (FIP) is a solution-focused **challenge-based prize funding programme** that involves the use of well-defined, ambitious targets and timeframes along with competitive processes to direct and accelerate RD&I activity to address significant societal challenges.

- SFI Food Challenge (FIP 2020)
- SFI Plastics Challenge (FIP 2020)
- SFI Irish Defence Organisation Innovation Challenge (FIP 2021)
- SDG Challenge in partnership with Irish Aid (FIP 2021)

SFI-NSF I-Corps@SFI Entrepreneurial Training Programme

The I-Corps@SFI Programme which supports evidence-based entrepreneurship training, will be supported in 2022 following renewal of the current agreement with the NSF.

National Grand Challenges Programme

The National Grand Challenges Programme is a €65.4M capital programme running until the end of 2026 which is included in Ireland's National Recovery and Resilience Plan (funded under the EU Recovery and Resilience facility). The programme will aim to incentivise and facilitate researchers and innovators to employ interdisciplinary RD&I approaches to tackle national and global societal challenges in support of green transition and digital transformation objectives. It will utilise SFI capabilities in challenge-based funding. It is anticipated that challenge-based funding initiatives will be launched in phases and will involve extensive stakeholder engagement in scoping and delivery.

7. Research Centres

Research Centres

Shaping Our Future sets out an objective to grow and evolve the Research Centres programme and other enterprise facing SFI programmes to drive research across all areas of STEM, supporting economic recovery, All-Island collaboration, as well as addressing major societal challenges, such as climate change.

Phase 2 Funding of SFI Research Centres

The call for Phase 2 funding of the 2016 cohort of Research Centres has launched, with proposals due to be submitted on 30th March 2022. Applications will be processed in 2022, with site reviews taking place in Q2-Q4 2022.

8. Encourage and fund new industry partnerships

SFI has developed a research ecosystem where academia and business collaborate effectively, driving research out into the market and society. *Shaping Our Future* will build on this success through driving deeper company research and innovation engagement, addressing Ireland's underperformance within the EU in terms of private investment in public R&D, and contributing to economic recovery through supporting the development of new enterprises and the competitiveness of existing ones.

Spokes programme

The Spokes Programme is a rolling call that enables SFI Research Centres to apply together with industry partners for additional funding to support new collaborative research projects at any time. A revised version of the SFI Spokes Programme launched in January 2022 with a new focus on driving development of cross-Centre Spoke applications via utilisation of the 'hybrid funding model' (mix of core centre funding plus additional funding awarded through Spoke grant) in addition to single industry partner collaborations.

Strategic Partnerships

The Strategic Partnerships programme supports novel co-investment partnerships with the private sector including industry, philanthropy and charitable organisations, in areas not covered by an existing SFI Research Centre. The programme underwent an enhancement and was re-launched in Q2 2021.

Industry RD&I Fellowships

Shaping Our Future aims to continue to develop SFI's Fellowship programmes, including Industry Fellowships, to support life-long learning and knowledge exchange out of academia into industry and public service. The Industry RD&I Fellowship programme first launched in 2021. The programme will launch in early 2022 with deadlines for proposal submission in Q2 and Q4 2022.

Overview of 2022 - Planned Programme Calls

1. Programmes launched during 2021 or earlier, with a 2022 funding decision

Programme	Award Decision Timeframe
SFI Frontiers for the Future 2021 (Projects)	H2 2022
Future Innovator Prize - Food and Plastics (Prize Phase)	Q1 2022
Future Innovator Prize – SFI/Irish Defence Organisation Challenge (Prize Phase)	Q4 2022
SFI/IRC Pathway Programme (2021)	Q2 2022

2. Fixed Deadline Calls Open in 2022

Programme	Call Launch	Call Deadline	Award Decision Timeframe
SFI Frontiers for the Future (Projects)	H2 2022	Q1 2023	H2 2023
SFI Industry RD&I Fellowship	Q1 2022	Deadline 1: Q2 2022 Deadline 2: Q4 2022	Q3 2022 Q1 2023
SFI Discover Programme Annual Call	Q2 2022	Q3 2022	Q4 2022
SFI Discover Programme Science Week Call	Q1 2022	Q2 2022	Q3 2022
SFI Fellowship	Q1 2022	Q1 2022	Q2 2022

SFI/IRC Pathway Programme	H2 2022	H2 2022	H1 2023
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3. Rolling Calls Open during 2022

Programme
SFI Strategic Partnerships
Frontiers for the Future (Awards)
SFI Research Professorship
SFI Spokes Programme
Maternity Allowance
SFI Discover Programme Opportunistic Funding Mechanism

4. International Partnerships Open in 2022. Deadlines as scheduled by Lead Agency.

Programme
US-Ireland R&D Partnership Programme
SFI-Royal Society University Research Fellowship
EPSRC-SFI Standard Research Grants
SFI/NSF I-CORPS@SFI Entrepreneurial Training Programme