

ANNUAL PLAN 2016

Introduction

SFI Mission and Remit

Science Foundation Ireland (SFI) funds oriented basic and applied research in the areas of science, technology, engineering, and mathematics (STEM) which promote and assist the development and competitiveness of industry, enterprise and employment in Ireland. The Foundation also promotes and supports the study of, education in and engagement with STEM, and an awareness and understanding of the value of STEM to society and to the growth of the economy in particular. As outlined in Science Foundation Ireland's (SFI) strategy document, *Agenda 2020*¹, the Foundation focuses its research funding on scientific excellence, and couples that with an equal focus on impact to realise the benefits of the scientific effort for the Irish economy and Irish society.

SFI is mandated to fund research predominantly within the areas set out in the recommendations of the *National Research Prioritisation (NRP) Steering Group report*², which was adopted as government policy in 2012. There are fourteen priority areas and six underpinning platform science and technology areas identified in the report and the majority of SFI's research funding must be directed towards these areas. However, it is acknowledged that research priorities can evolve with time, so in that context SFI can also fund in previously-unidentified emergent areas of strategic opportunity that have the potential to benefit the State in terms of economic and social development, long term industrial competitiveness or environmentally sustainable development. In addition, SFI, in supporting academic researcher career development (i.e. funding of early career, mid-career and outstanding individual researchers), runs programmes aligned with all areas under SFI's remit.

With the expansion of its legal remit in 2013 to include applied as well as basic oriented research, SFI increasingly provides funding that enables academic-industry linkages to be built. In stimulating such collaboration, SFI's objective is to fund early stage, innovative projects with high potential for significant and impactful technology advancement. Importantly, a partnership approach provides researchers in Ireland's Research Institutions with a funding stream to allow concepts and ideas to be explored with the potential for commercialisation. As with all SFI's funding decisions, the review of research involving industry is based on the twin principles of scientific excellence with impact.

¹ SFI Agenda 2020; Published 2012

² <u>http://www.forfas.ie/publications/featuredpublications/title,8958,en.php</u>

SFI highlights from 2015

During 2015, the Foundation continued to make great strides in the implementation of its strategy, as detailed in the *Annual Review of Agenda 2020*³. Key areas of progress over the last 12 months include:

- Twenty-three awards made to outstanding senior researchers through the Investigators Programme (IvP). This programme was run in partnership with the Department for Employment and Learning (DEL) Northern Ireland and funded seven projects involving North–South research collaboration.
- Six awards were made through the SFI Research Centres Spokes Programme involving approximately €16.3M funding from SFI, co-funded by over twenty industry partners to a cumulative value €10.5M, resulting in total 2015 Spokes funding of over €26M.
- Under the Strategic Partnerships Programme four awards were made reflecting an SFI investment of €9.8M, plus cumulative of €8.9M from industry, philanthropic, charitable and academic partners, resulting in a total value for partnership-based funding of almost €19M.
- Four awards were offered to applicants under the SFI Targeted Research Professorship Programme to internationally-renowned researchers in strategically-relevant areas to relocate to Irish universities.
- Awards funded under the SFI-Royal Society Partnership Scheme. Three prestigious Royal Society University Research Fellowship (URF) awards were made to Irish early career researchers.
- Three SFI-Pfizer Biotherapeutics Innovation Awards were made, bringing the total projects funded under two calls of this unique partnership scheme to eight.
- Three awards were made under the **SFI-HRB-Wellcome Trust Partnership.** The partnership was renewed for five more years & extended to include new Wellcome Trust schemes.
- Forty-two awards were made as part of the SFI Discover call totalling €2.8M supporting the education and engagement of the Irish public in STEM.
- A new partnership between **SFI and RTE** was established to jointly fund the development and broadcast of dynamic TV programmes on STEM and research.

³ 2015 Review of Agenda 2020

2016 – SFI's strategic objectives

The key objectives for SFI during 2016, underpinning the Foundation's annual plan of Programmes, include the following:

- 1. To continue to build and improve **national research capability** by:
 - Recruiting key talent; senior research leaders and emergent leadership,
 - Funding key research infrastructure,
 - Providing appropriate funding for early and mid-career researchers;
- 2. To continue stimulating academic researchers **to collaborate with industry** through a variety of enterprise-oriented programmes;
- 3. To support **entrepreneurial researchers** to develop their ideas and research outputs towards commercial fruition;
- 4. To better support strategic Horizon 2020 wins through bespoke funding and expert consultation;
- 5. To partner with strategically-relevant **international funding agencies** employing a lead agency approach;
- 6. To explore **challenge-based funding** mechanisms focused on Irish and global economic and societal challenges;
- To continue educating and engaging the Irish public with the aim of driving STEM awareness, life-long interest and active involvement.

The Foundation will also continue to work closely with its funded researchers to ensure that the outputs and impacts of state funded research are captured and communicated to government, industry and the general public. The data gathered from funded researchers also serves as the basis on which many future programmatic decisions are made, as well as providing the evidence that demonstrates the value of publically-funded research and underpins SFI's ongoing investments.

Overview of 2016 Planned Programmes

Details are provided in the tables below for the programmes that SFI is planning to run in 2016. Programmes fall into four categories:

- 1. Programmes launched during 2015 where a funding decision will be made in 2016
- 2. Fixed Deadline Calls open in 2016
- 3. Rolling Calls open during 2016
- 4. International Partnerships open in 2016

Please note that all launch dates provided are indicative and are subject to change, e.g. in response to alterations in SFI's annual budget, staffing resources, new schemes SFI may develop and government policy / priorities. Precise deadline dates will be available on the SFI website in early 2016. Some notable programme calls in 2016 (labelled \star) are described in further detail in the *'Highlighted Programmes'* section below. In addition, all SFI programmes are synopsised in *Appendix 1* and categorised by primary objective in *Appendix 2.*

	Programme	Call Launch	Call Deadline	Award Decision Timeframe
IvP	SFI Investigators Programme 2015	March 2015	June 2015	April 2016
RI	SFI Research Infrastructure Call Phase 1	June 2015	July 2015	January 2016
URF	SFI Royal Society University Research Fellowship 2015	July 2015	Sept 2015	May 2016
SIRG	SFI Starting Investigator Researcher Grant 2015	June 2015	Nov 2015	June 2016
CDA	SFI Career Development Award 2015	June 2015	Dec 2015	June 2016
IF	SFI Industry Fellowship, Round 2	March 2015	Dec 2015	May 2016

Programmes launched during 2015; funding decision to be made in 2016

Fixed Deadline Calls Open in 2016

	Programme	Call Launch	Call Deadline	Award Decision Timeframe
RC	SFI Research Centres 2016 ★	Dec 2015	Apr 2016**	Q3 2017
FRL	SFI President of Ireland Future Research Leaders Award ★	Dec 2015	Q2 2016	Q1 2017
CDA	SFI Career Development Award ★	Q2 2016	Q4 2016	Q3 2017
IvP	SFI Investigators Programme ★	Q2 2016	Q4 2016	Q2/3 2017
RI	SFI Research Infrastructure Call (Phase 2) ★	June 2015	Jan / Feb 2016	Q4 2016
Spokes	SFI Research Centres – Spokes Fixed Call ★	Nov 2015	March 2016	Q4 2016
TIDA	SFI / EI Technology Innovation Development Award	Q1 2016	Q2 2016	Q4 2016
IF*	SFI Industry Fellowship (two rounds)	Q1 2016	Q2 2016 Q4 2016	Q4 2016 Q2 2017
SPD	SFI St. Patrick's Day Science Medal	Q2 2016	Q3 2016	Q1 2017
Discover	SFI Discover Programme	Q2 2016	Q3 2016	Q4 2016

* Industry Fellowship: Two deadlines (June & December 2016)

** Research Centre deadline for pre-proposal submission. The deadline for full proposal submission will be in Q4 2016

Rolling Calls Open during 2016 (open for application at any-time)

	Programme
Res Prof	SFI Research Professorship Programme
Spokes	SFI Research Centres – Spokes
SPP	SFI Strategic Partnerships Programme
ERC	SFI ERC Development Programme
ERC	SFI ERC Support Programme
C&W	SFI Conferences and Workshops
Discover	SFI Discover Opportunistic Programme
SFI Fellows	SFI Fellowship Programme

International Partnerships Open in 2016

	Programme	Call Deadline
BBSRC	SFI-BBSRC Partnership ★	BBSRC deadlines - Jan, Apr, Sept 2016
US Irl	US-Ireland R&D Partnership Programme	Various NSF & NIH deadlines
WT	SFI-HRB-Wellcome Trust Biomedical Research Partnership	Various WT deadlines
URF	SFI Royal Society University Research fellowship	RS deadline
GROW	SFI-NSF Graduate Research Opportunities Worldwide (GROW)	NSF deadline
JPIs & ERANETS	SFI's support for European Joint Trans- National Funding Initiatives	Various

Highlighted Programmes in 2016

Research Centres 2016

SFI will run a third call for Research Centres in 2016. The call will be open to applications in any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact (e.g. a sustained track record of major industrial funding, significant international funding and/or spin out activities). The basis for funding, as before, will be a hub and spoke model, with SFI funding a maximum 70% of the cost of the Centre and industry the remaining 30%. The milestones for the call are as follows:

- December 2015: The call will launch.
- April 2016: The deadline for pre-proposal submission by applicants
- June/July 2016: Short-listing of proposals
- Q4 2016: Full proposal deadline
- Q3 2017: Award announcements

Research Centres Spokes - Fixed call

The aims of the SFI Spokes programme are to increase the number of targeted projects within an existing SFI Research Centre and to provide a mechanism to allow new industry partners and/or new academic partners to join the Research Centre. SFI will run a Fixed Spokes call in 2016 in which there will also be an objective to develop targeted projects in the strategically-important area of advanced manufacturing. Advanced Manufacturing refers to all production activities through the application of cutting edge knowledge and technologies that lead to improvements of existing products, processes and business models. Advanced Manufacturing can lead to improvements in production speed, productivity, energy and materials consumption, operating precision, waste, pollution management and enabling resource efficient and low emission production, and consequently development of research in the area is considered to be an important strategic objective for Ireland in the coming years.

In a change with previous calls, the 2016 fixed call will require a 30% cash contribution from industry. However, as a strategic stimulus, proposals in Advanced Manufacturing will be subject to a lower threshold of 10% industry cash, within an overall co-fund requirement of 30%. The milestones for the call are as follows:

- November 2015: Call launch
- March 2016: Deadline for submission of proposals
- Q4 2017: Award announcements

Investigators Programme 2016

SFI will again run the Investigators Programme (IvP) in 2016. The aim of IvP is to support the development of world class research capability and human capital in STEM research through the funding of outstanding people with innovative ideas and capability to create strategic collaborations. IvP 2016 will be an open call under SFI's remit and will launch in early 2016 with a deadline in Q4 2016 and a funding decision mid-2017.

President of Ireland Future Research Leaders Programme

The SFI President of Ireland Future Research Leaders (FRL) programme will replace SFI PIYRA in 2016. The objective of FRL is to recruit top-tier early & mid-career researchers to carry out their research in Ireland. To be successful, applicants will need to have demonstrated *proven potential* by securing research funding and accumulated significant supervisory experience. The call will be opened as a fixed deadline call in December 2015 to researchers based outside of Ireland, as well as those recently recruited from overseas, with a call deadline in Q2 2016.Some additional details of the call are as follows:

- Eligibility: 3 to 15 years post-PhD
- Funding: Up to €1M (incl. Research Body salary contribution of >50%)
- Additional start-up costs available
- Duration: Up to five years

SFI-BBSRC Partnership

The UK Research Council, BBSRC and SFI have entered an agreement to encourage and support research applications that cut across national boundaries involving collaborative teams led by researchers from the UK and Ireland. The new partnership will support collaborative research and technology development in all areas of the BBSRC remit including bioscience for health, agriculture, food security, industrial biotechnology and bioenergy. BBSRC will be the lead agency in the partnership, evaluating Irish applicants under its three calls in 2016 with three deadlines in January, April and September.

CDA call

The SFI Career Development Award (CDA) Programme supports excellent investigators still in the earlier stages of their research career who are already in an independent (either permanent or fixed-term) academic position. The award has a four-year duration and is intended to provide award holders with the opportunity to extend their research activities by allowing research teams to be built or expanded, and to assist in the procurement of required items of equipment and consumable materials to carry out the planned activities. In 2016, the CDA will for the first time become an annual call and will run as per the following milestones:

- Q2 2016: Call launch.
- Q4 2016: Deadline for submission of proposals
- Q3 2017: Award announcements

Research Infrastructure call

The purpose of SFI's Research Infrastructure Call is to support the research community in building and sustaining the required infrastructural capacity to accomplish high quality, high impact and innovative research in areas of STEM that demonstrably enhance and underpin enterprise competitiveness and societal development in Ireland. SFI launched the first phase of this call in 2015 with the emphasis on supporting future submissions under H2020 Advanced Infrastructure Communities calls and the building of capacity in the SFI Research Centres. In 2016 SFI, as part of Phase 2, will invite proposals from the broader HEI community under two descriptors:

- Category C: Large Scale Research Infrastructure for Research Bodies. Focused on infrastructure requests in areas of national priority and other areas of strategic opportunity that are aligned with the strategic research objectives of research body. Each research body will be permitted to submit a prioritised list of up to six requests under this category.
- **Category D: Opportunistic Funding.** Focused on bids representing smaller infrastructure needs that can be purchased through a value-for-money opportunity.

For further discussion in 2016

Following consultation with the research community, industry and other stakeholders throughout Q3/Q4 2015 and the publication of the national science strategy - *Innovation 2020* in December 2015, the following disruptive programmes and initiatives will be explored and developed (subject to additional funding) during 2016.

PhD funding programme

A clear decline in the number of PhDs in STEM research is developing that is likely to lead to a skills deficit in future years. In this context, SFI will explore potential solutions towards enhancing the quantity and quality of Irish PhD students during 2016. One outcome that this could lead to is the development of a structured PhD programme to ensure the provision of a skilled workforce to meet the demands of the industry and academia.

Challenge-based funding

There is clearly a growing appetite for competitive funding mechanisms aimed at stimulating solutions-driven collaborations and engagement with the research, civic and enterprise communities in identifying the grand challenges that Ireland could and should be addressing. Having already consulted with some stakeholders in 2015, SFI will further explore this opportunity during 2016, with the aim of potentially launching a challenge-based funding programme in 2017.

Broader international engagement

SFI will continue to meet with international research funding agencies and/or government departments in 2016 with the aim of ensuring that Irish researchers have the best possible range of strategically-relevant co-funding partnerships. SFI's policy is to explore international partnerships that are based on a 'lead agency' model as per previous partnerships whereby either SFI conducts the review of proposals as part of an existing programme (i.e. DEL NI) or where the partner agency conducts the review as part of their programme or suite of programmes (i.e. Royal Society, Wellcome Trust, BBSRC, NSF, NIH).

Support on communicating research impact

Following feedback at the SFI Summit 2015, there is evidence of a need to continue to work with researchers to improve their capability in conveying the actual or potential impact of their research to different stakeholders. In 2016, SFI will therefore continue to work with the research community to improve and hone communication skills with the aim of stimulating better linkage of Irish taxpayer funding to tangible impacts of relevance to the general public and other important stakeholders.

Appendix 1 – Description of all SFI Programmes

SFI's current portfolio of programmes are synopsised in the table below. Not all of these programmes are active every year. The suite of programmes offered by SFI in any one year is determined by a number of factors, including the available budget, the priority requirements at a national strategy level and within the research community and the potential for partnering opportunities.

Most SFI programmes support research on a multi-annual basis, usually 3-6 years. Thus in any one year 60-80% of available funding is already assigned to previous commitments.

For detailed information, including eligibility criteria and important dates, for each programme, please visit <u>www.sfi.ie</u> and please sign up to SFI e-alerts to be notified of new call launches.

PROGRAMME	BRIEF DESCRIPTION	REMIT AREA	
FOR <u>ALL</u> PROGRAMMES SFI WILL ONLY FUND RESEARCH TOPICS THAT ARE COVERED BY THE LEGAL REMIT OF THE FOUNDATION. PLEASE REFER TO INDIVIDUAL CALL DOCUMENTS FOR FURTHER DETAILED ELIGIBILITY CRITERIA THAT WILL APPLY TO SPECIFIC CALLS ¹			
SFI Research Centres Programme	SFI Research Centres link scientists and engineers in partnerships across academia and industry to address crucial research questions, foster the development of new and existing Ireland-based technology companies, attract industry that could make an important contribution to Ireland and its economy, and expand educational and career opportunities in Ireland in science and engineering. They are structured on a hub & spoke model consisting of a number of targeted projects undertaken in partnership with industry that connect into a central hub containing the platform research and core operations. Research Centres Programme calls may be open or themed – generally rotating between the two formats in sequential calls. In 2016 there will be an open call in the first part of the year.	14 NRP areas or Aligned with thematic areas identified in specific calls or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact (e.g. a sustained track record of major industrial funding, significant international funding and/or spin out activities)	
SFI Research Centres: Spokes	To promote the further development of SFI Research Centres to incorporate new areas of research, new industrial and academic collaborators. The Spokes Programme includes both a rolling component and a fixed deadline component. Proposals will be accepted at any time (rolling call) if 50% or more of the costs are paid for in cash by the industry partners.	14 NRP areas or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact (e.g. a sustained track record of major industrial funding, significant international funding and/or spin out activities)	

SFI Investigators Programme (IvP)	SFI's Investigator Programme supports the development of world class research capability and human capital in areas of science, engineering and mathematics that demonstrably support and underpin enterprise competitiveness and societal development in Ireland. To this end, SFI funds outstanding people with innovative ideas and strategic partnerships, recognising that excellence remains a paramount criterion in the research it funds. Investigator Programme calls may be open or themed – generally rotating between these two formats on an annual basis.	14 NRP areas. or Aligned with thematic areas identified in specific calls Also open to Investigators, working in fields covered by SFI's legal remit
SFI Research Professorship Programme	The recruitment of world leading scientists and engineers will build the national research and enterprise base, and enhance Ireland's reputation as a centre of excellence for research. The SFI Research Professorship Programme is intended to support national strategic priorities by assisting research bodies in their recruitment of world-leading researchers for Professorial Chairs, or similar research leadership positions in targeted scientific areas. The programme may also act as a mechanism to support the recruitment of individuals that possess a strong industry background, as well as directorship roles in established research centres within Ireland.	14 NRP areas or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact
SFI Starting Investigator Research Grant (SIRG) Programme	The SFI Starting Investigator Research Grant (SIRG) Programme provides an opportunity for excellent early-career investigators to carry out independent research and gain important experience on which to build their future research careers.	All areas covered by SFI's legal remit
SFI Career Development Award (CDA)	SFI's Career Development Award Programme supports excellent early- and mid-career investigators who are already in an independent academic position and who obtain their salary either from the organisation with which they are employed or from an alternative funding source. The award provides an opportunity to extend research activities by allowing teams to be built or expanded.	All areas covered by SFI's legal remit
SFI President of Ireland Future Research Leaders Programme	The President of Ireland Future Leaders Programme is Science Foundation Ireland's most prestigious award to recruit and retain outstanding early and mid-career researchers. This programme emphasises the importance of recruiting potential top research talent to Ireland. The award recognises outstanding engineers and scientists who, early in their careers, have already demonstrated or shown exceptional potential for leadership at the frontiers	All areas covered by SFI's legal remit

	of knowledge and who have a desire to relocate in Ireland.	
SFI Partnerships	Science Foundation Ireland will engage with partners to co-support outstanding initiatives which will build research strength in Ireland. The programme will fund projects or people (for a limited time) to aid development and retention of talented researchers, foster industrial collaborations and develop capacity in areas of emerging importance.	All areas covered by SFI's legal remit
SFI / EI Technology Innovation Development Award (TIDA)	The TIDA Feasibility Study programme is designed to enable researchers to focus on the first steps of an applied research project which may have a commercial benefit if further developed. Researchers who have the scientific and technical capability to produce novel technologies and who are keen to develop a better understanding of the commercialisation process are especially encouraged to apply for this award. Convergent applications from researchers within different disciplines are also encouraged.	14 NRP areas or Any area under SFI's legal remit, where strong evidence can be provided of significant industrial relevance and strong economic impact
SFI Industry Fellowship Programme	To promote the exchange of people at all levels between academia and industry (both SME and MNC). Fellowship funding is provided across the entire academic salary scale for awards up to 1 year full time or 2 years part time (renewable competitively).	14 NRP areas or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact
SFI Research Infrastructure Programme	The overall goal of the SFI Research Infrastructure Call is to support the research community in building and sustaining the required infrastructural capacity to accomplish high quality, high impact and innovative research in areas of science and engineering that demonstrably enhance and underpin enterprise competitiveness and development in Ireland in a timely manner.	14 NRP areas or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact
SFI ERC Support Programme	The SFI ERC support programme supports the Irish host institutions of awardees of the ERC Starting and Advanced Grant schemes. This programme will assist Irish host institutions in providing the appropriate support to ERC awardees. Awards may also be made when an ERC awardee moves to an Irish institution during the course of their ERC award. This programme will increase the benefits for institutions and applicants of applying to the ERC award schemes, increase Irish participation in the ERC programmes, increase Ireland's success rate in the ERC award schemes.	All areas covered by SFI's legal remit

SFI ERC Development Programme	This programme supports researchers who have submitted a proposal to the ERC, been deemed fundable, but not funded due to a lack of programme budget. The objectives of the ERC Development Programme are to encourage unsuccessful ERC applicants, either Irish based or willing to relocate to an Irish Institution for their resubmission, to resubmit to the ERC in a future call, to encourage new submissions to the ERC from Irish- based investigators, and to increase success in obtaining funding through ERC award schemes.	All areas covered by SFI's legal remit
US-Ireland R&D Partnership Programme	The Governments of the United States of America, Ireland and the Northern Ireland Executive have come together for a unique initiative to advance scientific progress in fields that will have a significant impact on the health, well-being and economic prosperity of all their citizens. Under the US-Ireland R&D Partnership, a 'single- proposal, single-review' mechanism is facilitated by the National Science Foundation (NSF) and National Institutes of Health (NIH) who accept submissions from tri-jurisdictional teams to a number of their existing funding programmes. The "US-Ireland R&D Partnership" links scientists and engineers in partnerships across academia and industry to address crucial research questions; fosters new and existing industrial research activity that could make an important contribution to the respective economies: and expands educational and research career opportunities in science & engineering.	Nanoscale Science & Engineering Sensors & Sensor Networks Telecommunications Energy & Sustainability Health (Areas covered by the 14 NRP areas)
SFI-Royal Society University Research Fellowship	This scheme is for outstanding scientists in the Republic of Ireland who are in the early stages of their research career and have the potential to become leaders in their field. The scheme provides the opportunity to build an independent research career. The scheme covers all areas of the life and physical sciences, including engineering, but excluding clinical medicine and any researcher addressing a direct biomedical question.	Please see the Royal Society website for details
SFI-HRB-Wellcome Trust Biomedical Research Partnership	The Wellcome Trust, in partnership with SFI and the HRB, will fund biomedical and clinical research in the Republic of Ireland under the auspices of the SFI- HRB-Wellcome Trust Biomedical Research Partnership. In line with their strategic research agendas, SFI and the HRB will co-fund with the Wellcome Trust successful biomedical and clinical science applications under the following Trust funding schemes: Investigator Awards, Fellowships, including Principal Research Fellowships (PRFs), Strategic Awards and new schemes for collaborative	Please see the Wellcome Trust website for details

	research and seed funding. The Wellcome Trust will be responsible for the administration of grant applications and awards made under this Partnership.	
	Note that most other Wellcome Trust Schemes are also open to applicants based in Ireland	
SFI-BBSRC Partnership	The new partnership between the UK's Biotechnology and Biological Sciences Research Council (BBSRC) and SFI will support collaborative research and technology development in all areas of the BBSRC remit including bioscience for health, agriculture, food security, industrial biotechnology and bioenergy. BBSRC will be the lead agency in the partnership, evaluating Irish applicants under its three calls in 2016 with three deadlines in January, April and September.	Please see the BBSRC website for details
SFI-NSF-Graduate Research Opportunities Worldwide (GROW)	The SFI-NSF GROW programme enables NSF Graduate Research Fellows to carry out research visits in Irish Research Centres who have agreed to participate in the scheme. The agreement aims to strengthen the internationalization of the Irish centres of excellence and to give U.S. fellows the opportunity to gain international experience in a research environment at the highest level. NSF funds the student scholarships and travel expenses and SFI provides additional living expenses for the fellows whilst based in Ireland.	14 NRP areas or Aligned with thematic areas identified in specific calls or Any area under SFI's legal remit where strong evidence can be provided of significant industrial relevance and strong economic impact
European Joint Trans-National Initiatives (JTNIs)	 SFI currently supports Ireland to participate in a number of member-states Joint Trans-National Initiatives including: ERA-Net in Systems Medicine (ERACoSysMed) – joined in Feb 2015 ERA-Net on Materials Science and Engineering (M.ERA-Net) – joined in Feb 2015 Joint Programming Initiative (JPI) HDHL – Healthy Diet for a Healthy Life – joined in 2014 ERA-Net on Healthy Diet for a Healthy Life (ERA-HDHL) – joined in 2014 These initiatives are now in the implementation phase with calls to be launched and developed over to course of 2016 	All areas covered by SFI's legal remit
Centres of Excellence in Neurodegeneration (CoEN) Initiative	The network of Centres of Excellence in Neurodegeneration (CoEN) is an international initiative involving research funders in number of countries including in the UK (Medical Research Council), Canada (Canadian Institute of Heath Research), Germany (DZNE), and Ireland (SFI). The aim of the CoEN initiative is to build productive links between recognised national centres of excellence in neurodegeneration in order to accelerate progress in understanding the mechanisms of	All areas covered by SFI's legal remit

	Neurodegenerative Diseases as well as the identification of new therapeutic approaches.	
SFI Conferences and Workshops	Science Foundation Ireland's Conferences and Workshops Programme provides support for the organisation of national and international meetings that enable Irish research bodies to contribute to international scientific debate, encourage industry- informed research, and foster academic-industrial collaborations to build a competitive advantage for Ireland. There are different award types within the Conference and Workshop Programme, namely Conferences, Exceptional Conferences, Workshops, and Conference Bids.	All areas covered by SFI's legal remit
SFI Fellowship Programme	Science Foundation Ireland offers researchers as well as research body staff, the opportunity to experience an internship at the Foundation. The internship provides a broad base of experience in research administration, and gives successful awardees the opportunities to engage with academic, government and industrial stakeholders	All areas covered by SFI's legal remit
SFI Discover Programme	The SFI Discover Programme will support national and regional projects in STEM education and outreach in Ireland with the aim of engaging and scientifically informing the general public. The Programme will fund both large scale national and regional projects as well as smaller local events concerning public engagement, education and outreach and STEM careers awareness.	All areas covered by SFI's legal remit
SFI St. Patrick's Day Science Medal	The SFI St. Patrick's Day Science Medal will be awarded annually to a distinguished Irish scientist or engineer living and working in the USA. The medal will recognize individuals who are not only outstanding in their fields of expertise but who also have demonstrably assisted researchers in Ireland in either academia or industry – via mentorship, supervision, collaboration, industrial development, entrepreneurship etc., or who have made significant contributions to developing the research ecosystem in Ireland.	All areas covered by SFI's legal remit

¹ For the majority of SFI's programmes, alignment is required with (i) at least one of the National Research Priority (NRP) areas or (ii) an area underpinning the National Research Priority areas or (iii) a strategic area of opportunity as identified in a themed call. For certain programmes involving partnership with major national or international research entities or for programmes aimed at (i) researchers at an earlier stage of development; (ii) research dissemination; (iii) and/or public engagement, applications will be considered within the broader SFI legal remit. Details are provided in the relevant call document. The fourteen priority areas in the National Research Prioritisation Exercise are abbreviated above as "NRP areas".

Appendix 2 - Categorisation of SFI Programmes

Science Foundation Ireland offers a range of funding schemes which support scientists and engineers to create both research excellence and impact. The following table delineates how SFI programmes support researchers and research activities in different ways and with different areas of focus, with each of SFI's programmes is set against a primary category. It should be noted that many programmes fulfil multiple objectives and therefore could be set against more than one category as outlined in italics.

LARGE SCALE CENTRES

SFI provides funding to enable large groups of researchers to come together and address major research challenges, in conjunction with industry and/or partner institutions

• SFI Research Centres Programme

RECRUITMENT

SFI offers programmes to support the recruitment of outstanding scientists and engineers to work in Ireland.

- SFI Research Professorship Programme
- SFI President of Ireland Future Research Programme
- Also, ERC supports, see 'European' section below

OUTSTANDING INDIVIDUALS

SFI supports world-class researchers to carry out their work in Ireland

- SFI Investigators Programme
- Also, 'Recruitment' schemes outlined above.

EARLY and MID-CAREER RESEARCHERS

Early career researchers are supported by SFI through several programmes, including awards which enable researchers to obtain their first independent grant.

- SFI Starting Investigator Research Grant
- SFI Career Development Award
- Royal Society Scheme
- Wellcome Trust Schemes
- SFI Fellowship Programme

PHD SUPPORT

SFI provides supports for NSF Graduate Research Fellows to visit Ireland to do some of their research

• SFI-NSF-Graduate Research Opportunities Worldwide (GROW)

ENTERPRISE & INDUSTRY FACING

SFI provides supports for the early stages of commercialisation research, often in conjunction with industry

- SFI Research Centres Spokes
- SFI Strategic Partnership Programme
- SFI Co-funded Partnership Scheme, e.g. SFI-Pfizer BIAP
- SFI/EI Technology Innovation and Development Award
- SFI Industry Fellowship Programme

INFRASTRUCTURE

SFI supports the provision of world-class research facilities in Ireland.

• SFI Research Infrastructures Call

EUROPEAN SUPPORT

SFI provides funding to enable Irish researchers to better compete in the H2020.

- ERC Development Programme
- ERC Support Scheme
- European Joint Trans-national Initiatives, e.g. JPIs, ERANETs
- Brussels H2020 support fund

INTERNATIONAL

SFI's Internationally-focused programmes help to develop links with top international research institutions and important enterprise markets. In addition they highlight Ireland's standing as a top research-performing nation.

- US-Ireland R&D Partnership Programme
- SFI-HRB-Wellcome Trust Biomedical Research Partnership
- SFI-Royal Society University Research Fellowship Scheme
- SFI-BBSRC Partnership Programme
- SFI-NSF-Graduate Research Opportunities Worldwide (GROW)
- SFI St. Patrick's Day Science Medal

NETWORKING & EXTERNAL ENGAGEMENT

Through personnel exchange programmes, and support for Conferences and Workshops, SFI enables researchers to come together, debate current research challenges/findings, work towards common goals, and engage in science outreach. Through a variety of outreach programmes, SFI aims to have a scientifically informed public and aims to engage children to study and pursue a career in STEM subjects.

- SFI Conferences and Workshops
- SFI Discover Programme