

SCIENCE FOUNDATION IRELAND

2012 Research Centres - AMBER, APC, INFANT, Insight, IPIC, MaREI and SSPC

Call for Submission of Proposals for Phase 2 Funding

Deadline for submission of Progress report **and** Phase 2 Proposal - **13:00 (Dublin time) on 14th June 2017.**

Terms of Reference

While every effort has been made to ensure the accuracy and reliability of this document, it is provided for information purposes only and as a guide to expected developments. It is not intended, and should not be relied upon, as any form of warranty, representation, undertaking, contractual, or other commitment binding in law upon Science Foundation Ireland, the Government of Ireland, or any of their respective servants or agents. SFI Terms and Conditions of Research Grants shall govern the administration of SFI grants and awards to the exclusion of this and any other oral, written, or recorded statement.

All responses to this Call for Submission of Proposals will be treated in confidence and no information contained therein will be communicated to any third party without the written permission of the applicant except insofar as is specifically required for the consideration and evaluation of the proposal or as may be required under law, including the Industrial Development (Science Foundation Ireland) Act, 2003, the Industrial Development (Science Foundation Ireland) (Amendment) Act 2013 and the Freedom of Information Acts 1997 and 2003.



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1. Introduction

Science Foundation Ireland (SFI) is the national foundation for investment in scientific and engineering research. SFI invests in academic researchers and research teams who are most likely to generate new knowledge, leading edge technologies and competitive enterprises in the fields of science, technology, engineering and maths (STEM). The Foundation also promotes and supports the study of, education in, and engagement with STEM and promotes an awareness and understanding of the value of STEM to society and, in particular, to the growth of the economy.

SFI's Agenda 2020¹ strategy aims to position Ireland as a global knowledge leader. A key objective of Agenda 2020 is to develop a set of world-leading, large-scale Research Centres that will provide major economic impact for Ireland. The SFI Research Centres Programme was launched in 2012 to achieve this objective. Furthermore, Innovation 2020², Ireland's five-year strategy on research and development, science and technology, has a commitment to "*further develop the network of Centres, building critical mass and addressing enterprise needs*". Seven Research Centres were funded as a result of the first Research Centres Call in 2012, and five were funded as a result of the second Call in 2013. The seven Centres that were established as a result of the 2012 SFI Research Centres call are described throughout the call document as the 7 x 2012 RCs. These 7 x 2012 RCs were awarded funding to run from June 2013 to June 2019. In this current call, they now have the opportunity to apply for a second phase of funding (Phase 2) for the period June 2019 to June 2025. This call document describes: the objectives of the programme; the eligibility criteria; the documentation required; the submission process; the review criteria and the decision-making process. **There are two key documents which are required as part of the submission process: a Progress Report and a Proposal for Phase 2 funding. The templates for the Progress Report and the Phase 2 proposal are provided in Appendices 3 and 4, respectively.**

**The call for proposals for Phase 2 funding is only open to the 7 x 2012 Research Centres
(AMBER, APC, INFANT, Insight, IPIC, MaREI and SSPC)**

¹ [SFI Agenda 2020](#)

² [Innovation 2020](#)

2. Research Centre Programme

Programme Objectives

The SFI Research Centres Programme was initiated with a clear purpose to link scientists and engineers in partnerships across academia and industry to address crucial research questions, foster the development of new and existing Ireland-based companies to create innovative products leading to job creation, 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

The specific objectives of the programme are:

- To achieve, maintain and enhance research excellence and leadership, as measured through indicators such as publication in top-tier journals and conferences, citations, editorship of top-tier journals, and invited lectures at top-tier conferences
- To deliver significant economic and societal impact – research excellence with impact – which will be aligned with areas of strategic opportunity for Ireland, including the 14 National Research Priority areas and including the six broad enterprise themes (ICT, manufacturing & materials, health & medical, food, energy, and services & business processes) outlined in Innovation 2020 - Ireland's Strategy for Research and Development, Science and Technology
- To increase the level of industrial and commercial investment in R&D activities with existing Ireland-based companies, and furthermore to attract large Foreign Direct Investments in corporate R&D laboratories
- To spin out new, high-technology start-up companies that have the potential to raise external angel or venture funding
- To transfer technology, through licences, to Multinational Companies (MNCs) and Small and Medium Enterprises (SMEs) based in Ireland
- To transfer knowledge, expertise and know-how to MNCs and SMEs based in Ireland
- To undertake joint research projects with industry
- To inspire the future generation of STEM students and train and educate a cohort of engineers and scientists at MSc/MEng, PhD and post-doctoral level that will take up high-value employment in MNCs and SMEs based in Ireland

- To attract additional non-exchequer funding through industry sources and external research-funding organisations
- To engage the general public and equip them with the tools to confidently understand and debate science, technology and engineering research in Ireland

The review process for Phase 2 funding will involve a detailed “look back” at the overall progress of the 7 x 2012 Research Centres from the start date of their award up until the time of submission (May 31st 2017). The Progress Report, (template is provided in Appendix 3), will be used by the review panel to assess the progress of each Centre. Section 2 of that report will specifically address progress against the original objectives.

As the Research Centres potentially move into a second phase of funding (described as Phase 2 throughout the call document), the programme objectives will remain the same, however, there will be a greater emphasis on industry cost share and leveraging of non-exchequer, non-commercial funding. As the Centres become more sustainable, the expectations are that they will become more integrated into the operations of the Host Research Bodies. A review of the governance structures of the Research Centres is expected following the findings of the Governance Review Advisory Committee. One recommendation from this Committee has been the implementation of a Service level agreement (SLA) between the Centre, SFI and the Host Research Body. The format and implementation of a SLA will be subject to consultation with key stakeholders.

Programme Remit

The legal remit of Science Foundation Ireland (SFI) is to promote, develop and assist the carrying out of oriented basic and applied research in strategic areas of scientific endeavour that concern the future development and competitiveness of industry and enterprise in the State³. Since the publication of the report of the National Research Prioritisation (NRP) Steering Group in 2012⁴ which identified 14 priority research areas (that are now positioned within six enterprise themes defined in Innovation 2020), a more focused approach has been adopted in the public funding of research and innovation activity. Research prioritisation has concentrated the majority of Ireland’s competitive funding on areas deemed likely to yield greatest economic and societal impact. To be eligible for Phase 2 funding through the Research Centres programme, all proposals must be aligned to one of the 14 priority research areas (see below) or to any other research area where there is convincing evidence that there will be significant potential for economic and/or societal impact in Ireland.

³ [About SFI - What-we-do](#)

⁴ <https://www.djei.ie/en/Publications/Publication-files/Research-Prioritisation.pdf>

3. Definitions

Lead Applicant	<p>The Lead Applicant is defined as the Scientific and Technical lead for the proposed Research Centre and is nominated as the Research Centre Director on the Research Centre proposal. The Lead Applicant will have overall responsibility for delivery of the objectives of the SFI Research Centre.</p> <p>The Lead Applicant will serve as the primary point of contact for SFI on the award, during the review process, and if successful, during the course of the award.</p> <p>The Lead Applicant will be responsible for the scientific and technical direction of the research programme and the submission of reports to SFI. The Lead Applicant has primary responsibility and accountability for carrying out the research within the funding limits awarded and in accordance with the terms and conditions of SFI.</p> <p>It is assumed that the Lead Applicant will be the existing Research Centre Director. If this is not the case, SFI will need to be informed at least 2 months in advance of the submission deadline.</p>
Co-Applicant	<p>A Co-Applicant has a well-defined, critical and continuing role in the proposed investigation. A Co-Applicant would be expected to lead one or more Targeted Projects, or projects within the Platform Research component of the Centre.</p> <p>For the purposes of eligibility, reviewing and monitoring, a Co-Applicant applying for funding under the SFI Research Centres programme will receive equal evaluation to the Lead Applicant and will hold equal accountability for the delivery of the proposed research objectives. In this documentation, the terms and conditions for 'applicant' and 'Co-Applicant' are interchangeable. Throughout the document, a Co-Applicant may be referred to as an existing Co-Principal Investigator (co-PI) in a Research Centre.</p>
SFI Funded Investigator (FI)	<p>A "SFI Funded Investigator (FI)" is a SFI designated title which recognises the level of input of a researcher to a large scale SFI award such as a SFI Research Centre. A FI is an academic member of staff or independent researcher employed by an eligible Irish Research Body, who is undertaking a management role in a research project within the Research Centre. FIs have responsibility for a research project, budget and personnel within the Research Centre and will serve under the direction of one of the Research Centre Co-Applicants.</p>
Official Collaborator	<p>An official collaborator may be either (a) an academic member of staff of an Irish or international Research Body or (b) a member of a relevant non-academic institution, such as a Government Agency, who is committed to providing a focused contribution for a specific task(s). The collaborator will serve under the direction of the Lead Applicant or one of the Co-Applicants, and may or may not receive funding through the award. Official collaborators</p>

	may not be the primary supervisor/mentor of postgraduate students, postdoctoral researchers or research staff enrolled on the Award.
Industry Partner	An Industry Partner is a company making a financial contribution (through cash or in-kind contribution) to the budget of the Research Centre, as well as an intellectual contribution to the research agenda of the Centre.
Industry Collaborator	An industry collaborator is the lead contact person from an Industry Partner who represents the Industry Partner in the Research Centre. Industry Collaborators are not eligible to receive funding through the award.
Applicant Group	An applicant group is defined as the set of Lead Applicant and Co-Applicants that submits a proposal for funding under the Research Centres Programme.
Research Body	An Irish Research Body eligible to apply for funding under SFI research programmes, a list of which can be found here: http://www.sfi.ie/funding/sfi-eligible-research-bodies.html
Host Research Body	The Research Body of the Lead Applicant
'Research Centre' or 'Centre' or 'RC' or '2012 RCs'	In the context of this call document, 'Research Centre' or 'Centre' or '2012 RC' or 'RC' means one of the seven research centres which were established as a result of the 2012 SFI Research Centres call. These are as follows: <ul style="list-style-type: none"> 1. Advanced Materials and BioEngineering Research (AMBER) 2. APC Microbiome Institute (APC) 3. Irish Centre for Fetal and Neonatal Translational Research (INFANT) 4. Irish Photonic Integration Centre (IPIC) 5. The Insight Centre for Data Analytics (Insight) 6. Marine and Renewable Energy Ireland Centre (MaREI) 7. Synthesis and Solid State Pharmaceutical Centre (SSPC)

4. Eligibility

General Eligibility

This call for proposals is only open to the 7 x 2012 Research Centres, namely AMBER, APC, Insight, IPIC, Infant, SSPC and MaREI. **SFI will not accept proposals from any other Research group or Research Centre. In addition, only one proposal per Centre is allowed.** The Phase 2 proposal allows for expansion or consolidation of research areas. However, the proposal must come from the original Research Centre and the proposal title will be “RC name-Phase 2”. If any of the 7 x 2012 RCs are considering a name change for rebranding purposes, they should contact SFI at least two months in advance of the submission deadline.

At the time of the original submission of the 7 x 2012 Research Centre proposals, a number of Co-Applicants were approved for each Centre and are now active in the Centre as co-Principal Investigators (Co-PIs). Since then, a number of PIs have been removed or added to each Centre, following approval by SFI. Although a number of the co-PIs in the Centre have been reviewed and approved before, the Phase 2 proposal will involve a review of the entire Centre Applicant team including the original and more recently added co-PIs. Therefore, up to date CVs for each of the existing co-PIs in the Research Centre and any additional Co-Applicants will be required as part of the submission process. An overview of the role of each of the existing PIs and any new Co-Applicants will be provided in the Team/Execution and Delivery section of the Phase 2 proposal template. For the purposes of the proposal review, all existing co-PIs will be called Co-Applicants. The uploading of CVs will be carried out in SESAME (see Section 8- Submission).

In addition, there are a number of Funded Investigator (FI)s already active within the Centre. The proposal allows for addition of new FIs. CVs are not required for new FIs, but if the Centre is funded, more detail on the FIs will be requested by the Post Award team at a later stage.

The eligibility criteria set down below must be met by the Lead Applicant, Co-Applicants, Funded Investigators and Host Research Bodies by the closing date for submissions of the proposal. In addition to the specific eligibility conditions outlined below, the Lead Applicant, Co-Applicants, Funded Investigators and Host Research Bodies must comply with SFI’s Grant Terms and Conditions⁵.

Eligibility criteria of the Lead Applicant and Co-Applicants

Applicant groups must have one Lead Applicant and a number of Co-Applicants. The appropriate number of Co-Applicants should be defined by the Applicant group. When defining the Co-Applicant group, it should be noted that all Co-Applicants will receive equal evaluation to the Lead Applicant and will hold equal accountability for the delivery of the proposed research objectives of the proposed Research Centre.

SFI expects that the Lead Applicant and Co-Applicants (or a sub-group of Co-Applicants) will form the Executive Management Committee of the Research Centre, with administrative responsibility for the performance of the Centre.

⁵ <http://www.sfi.ie/funding/sfi-policies-and-guidance/sfi-general-terms-and-conditions/index.xml>

It is assumed that the Lead Applicant will be the existing Research Centre Director. If this is not the case, SFI will need to be informed at least 2 months in advance of the submission deadline. **The following eligibility criteria are the standard criteria which apply to a Lead and Co-Applicant of a Research Centre. In some cases, the Centre Director may not satisfy all of the criteria below but is still eligible if pre-approved by SFI to act as a Centre Director.**

All Lead and Co-Applicants must be:

1. Members of the academic staff of an eligible Research Body (permanent or with a contract that covers the period of the grant), or
2. A contract researcher with a contract that covers the period of the grant, who is recognised by the Research Body as an independent investigator and will have an independent office and research space at the host Research Body for which he/she will be fully responsible for at least the duration of the SFI grant, or
3. Individuals who will be recognised by the Research Body upon receipt of the SFI grant as a member of the academic staff or as a contract researcher as defined above. The applicant does not necessarily need to be employed by the Research Body at the time of proposal submission.
4. The Lead Applicant and Co-Applicants must hold a PhD or equivalent for at least 8 years by the deadline.

The official date of a PhD is defined as the year that the degree was conferred, i.e., the year printed on the official PhD certificate. The number of years is determined by calendar year.

5. The Lead Applicant and Co-Applicants must be senior author on at least 10 international peer reviewed articles. Only original research publications, and not review articles, are acceptable. Consult the accompanying FAQ document regarding the definition of “senior author”.

Please note that 10 senior author publications is a minimum eligibility criterion, however applicants with higher numbers of publications are likely to be more competitive.

6. The Lead Applicant and Co-Applicants are required to have demonstrated research independence through securing at least one independent, internationally peer reviewed research grant as a lead investigator or as co-investigator.

Personal awards such as travel awards, career fellowships (which only include the salary of the PI and not research team costs (i.e., salary for team member(s) & consumables etc.) do not count as independent research grants. Consult the accompanying FAQ document for further details.

7. The Lead Applicant and Co-Applicants are expected to have proven prior experience, capability and authority to mentor and supervise postgraduate students and team members.

8. A Lead Applicant is only permitted to be named on one submission. An investigator may be a named Co-Applicant on a maximum of two submissions. However, their level of commitment to both Centres needs to be justified.

9. Co-Applicants who are currently under evaluation in other SFI programmes, are eligible to apply for funding under this programme.

11. Co-Applicants of currently funded Research Centres are eligible to apply as a Co-Applicant, Funded investigator or Official Collaborator.

Eligibility criteria for SFI Research Centre Funded Investigators (FIs)

All Funded investigators in the Centre must meet the following criteria:

1. FIs must hold a PhD or equivalent for at least 3 years by the submission deadline.
2. FIs must be senior author on 3 international peer reviewed articles. Only original research publications, and not review articles are acceptable.
3. The FI is expected to have the experience, capability and authority to mentor and supervise postgraduate students and team members.

In addition to the eligibility criteria above, the FI is expected to have the necessary research management experience, as exemplified by **one or more** of the following:

- the winning of at least one competitively awarded, internationally peer reviewed research grant.
- the winning of a competitively awarded R&D, innovation or commercialisation award (**not including** an Enterprise Ireland Commercial Case Feasibility Grant or Clinical Innovation Award)
- management of an industry funded project or EU award project.

The FI is also expected to have the necessary experience in the management of research staff.

Eligibility of Research Body

The Research Body is the body responsible for the overall financial and administrative co-ordination of research programmes supported by research grants from SFI. Host Research Bodies must be situated in the Republic of Ireland and be eligible for SFI funding. A list of eligible Research Bodies is available on the SFI website. It is expected that Phase 2 funding will be administered by the current Host Research Body of the Research Centre, whereby the Host Research Body is defined as the Research Body of the Lead-Applicant/Centre Director. If this is not the case, a strong case must be made as part of the Phase 2 proposal (Sections 3 and 4) as to why the Host Research Body of the Centre is going to change.

5. Economic and Societal Impact

Each year, the Irish Government spends a significant amount of public funds on scientific research, training and development. As with all public spending, it is both desirable and necessary to show value for money and, within this, demonstrate and articulate the impact and benefits arising from this investment. As Ireland's scientific infrastructure and capacity matures, there is an even greater focus on demonstrating the economic, societal and other benefits of publicly-funded scientific research to the wider society. In support of delivering impact from the state's investment, Science Foundation Ireland's strategy document, [Agenda 2020⁶](#), sets out a vision in which Ireland, by 2020, will be the best country in the world for both scientific research excellence and impact. Given the scale of the investment and the stage of their maturity, the SFI Research Centres are expected to significantly underpin SFI's success in attaining targets set against key performance indicators aligned with economic and societal impact.

In the Progress Report which must be submitted as part of the Phase 2 Proposal submission, each of the 7 x 2012 Research Centres must clearly outline progress against their Impact statement submitted as part of their original proposal. Section 10 of the Progress Report template should be used to provide strong examples of impact arising from the Research Centre's activities thus far. Cross reference should be made to specific metrics (outputs) attained during the first 4 years of funding, and surrounding narrative should be provided to add context and associate with different types of impact (or the journey towards). Centres are encouraged to consult with SFI's information and guidance on reporting on the impact arising from its funding, which can be found [here⁷](#). In line with other international funding agencies, SFI has adopted the following definition of Impact, recognising it to be the "the demonstrable contribution that excellent research makes to society and the economy".

In the Phase 2 Proposal (Section 10), a new Impact statement should be prepared for the second 6-year term. It is expected that elements of this will be an extension of the original impact statement submitted as part of phase one funding, recognising that impact can be longer term, non-linear and unpredictable. Guidance can be found [here](#) and should be consulted with. SFI regards clear and convincing impact statements as fundamental components of competitive proposals.

6. Proposal Review Process and Criteria

Applications for Phase 2 funding will be evaluated by rigorous international peer review. The submission of an application to SFI shall be construed as consent by the Applicants to participate in the peer review process. A separate panel of international, scientific experts will be convened for each Research Centre. As part of the application process, the Lead Applicant must upload two documents; please refer to Section 8 – Submission. These are the following:

- Progress Report using the template provided in Appendix 3
- Phase 2 Proposal using the template provided in Appendix 4

⁶ [SFI Agenda 2020](#)

⁷ <http://www.sfi.ie/funding/award-management/research-impact/>

The panel members will carry out both individual postal reviews of the Progress Report **and** the Phase 2 proposal, **and** will participate in an on-site review of progress and the Phase 2 proposal at the Host Research Body. There will be 5-7 panel members, one of whom will focus on Education and Public Engagement (EPE) and at least one of whom will focus on the assessment of the Impact arising. Expert panel members engaged by SFI are required to abide by the SFI Reviewer Code of Conduct.⁸

Each panel member will complete two postal reviews; one focussed on the **Progress Report** and the other focussed on the **proposal for Phase 2 funding**. The postal review forms will be completed in SESAME. Full details on reviewer guidance and the scoring mechanisms are provided in Appendix 1.

The following review criteria will be considered in relation to the **Progress Report**

- *The performance of the Research Centre management team, investigators, governance and support structures;*
- *The scientific excellence of the research that has been undertaken by the Research Centre to date;*
- *Progress of the Research Centre in meeting or exceeding its KPI targets;*
- *The Impact being made by the Research Centre to date;*
- *The quality of the Education and Public Engagement (EPE) programme of the Research Centre to date.*

The following review criteria will be considered in relation to the **Phase 2 Proposal**

- *Quality, significance and relevance of the Research Centre management team, investigators, governance and support structures which will lead the Centre into Phase 2;*
- *Quality, significance, and relevance of the proposed research, including value for money and the potential to advance knowledge and understanding within its own field or across different fields;*
- *Quality, significance, and relevance of the plans for execution and delivery of the Research Centre Business Plan;*
- *The potential for the proposed Centre to deliver direct, measurable economic and societal impact;*
- *The potential for the Centre to stimulate public understanding, interest and involvement in science, technology, engineering and maths (STEM) through its education and public engagement (EPE) programme.*

The postal reviews returned by each panel member will be collated and forwarded to the Lead Applicant, who will be provided with a defined period of time to submit a response to the comments made (advanced notice of dates and guidelines relating to the response will be indicated to Lead Applicants). The Lead-Applicant's response will be sent back to the panel members, who will then use that response to set the agenda for the site review. The site review will take place in Q4 2017 and the individual site review panel will write a combined report which will provide a recommendation with one of three possible outcomes: Fund, Do Not Fund (DNF) or Proceed to an Open Competition.

⁸ <http://www.sfi.ie/funding/grant-policies/sfi-reviewer-code-of-conduct.html>

An “oversight” panel, consisting of international reviewers who were not involved in individual postal/site reviews, will be convened to oversee the fairness and consistency of the review process across all 7 X 2012 Research Centres and to rank the “fundable” Research Centres. The oversight panel will have the authority to overturn the recommendation of the site review panel, if deemed to be unfair.

SFI reserves the right to modify the review process. Applicants will be notified of any relevant modification to the review procedure. The final funding decisions are the sole and exclusive discretion of SFI.

7. Funding

The Centres may request funding from SFI (direct costs) over six years from June 2019 – June 2025. There is no limit to the amount of funding that can be requested for Phase 2. As part of the Phase 2 proposal, the Centre must provide a business plan which outlines how the Centre will secure an overall Centre budget which combines a maximum SFI contribution of 33% and the remaining 67% of leveraged funding from industry (cash plus in-kind) and non-exchequer, non-commercial sources (cash only). Section 7 of the Phase 2 proposal document in Appendix 4 outlines the cost share requirements from industry and non-exchequer, non-commercial sources.

8. Submission

Submissions will only be accepted through SESAME, SFI's Grants and Awards Management System. The username and password of the Lead Applicant is necessary to log in to SESAME and complete the application form which should appear on the workbench at least 6 weeks in advance of the submission deadline.

As part of the application process, the Lead Applicant will be guided to complete a number of fields which are detailed below. They will then be prompted to upload two documents in pdf format:

- **Progress Report** using the template provided in Appendix 3
- **Phase 2 Proposal** using the template provided in Appendix 4

Proposals must be received by SFI no later than **13:00 (Dublin time) on 14th June 2017**.

Proposal Information Entry

Information relating to the 2012 Research Centre already exists in SESAME and the Phase 2 application will be prepopulated with this information. The Lead-Applicant will be able to edit this information as outlined below:

a) Proposal Summary

Proposal Title – This will be the existing name of the Centre _Phase 2.

After confirming that the Proposal title is correct by selecting “Save Draft” a Proposal ID is automatically generated by SESAME. The following additional fields will appear in the SESAME application form.

Total Funding Request Amount

Enter the total funding request amount in direct costs, in Euro (€).

Duration of Award Requested

This will be pre-populated as 72 months.

Alignment to SFI Legal Remit (max. 250 words)

This section must be used to describe how the proposed research aligns with SFI's legal remit. This statement will be used to determine the eligibility of the application.

NRP Area

The National Research Prioritisation (NRP) area that is currently aligned with the Centre will appear. The applicant will be guided to edit this field. The NRP area selected should be the predominant one that best aligns with the RC's activities.

Research Area (Primary)

The Research Area (Primary) area that is currently aligned with the Centre will appear. The applicant will be guided to edit this field, if required.

Research Area (Secondary)

The Research Area (Secondary) area that is currently aligned with the Centre will appear. The applicant will be guided to edit this field, if required.

Ethical Issues

All Applicants are required to answer questions related to ethical issues and will be guided to answer two questions initially, "Does your research involve the use of animals?" and "Does your research involve human participants, human biological material, or identifiable/potentially identifiable data?" If the answer is Yes, an ethical issues table will be made available in SESAME which the Lead and Co-Applicants must complete and re-upload in pdf format. For further details, please refer to the SFI Guidance document for applicants on ethical and scientific issues, available as a link on the SFI webpage for the Phase 2 call document.

Ethical Issues:

All applicants, in particular those expecting to carry out research involving the use of animals, human participants, biological material or identifiable (or potentially identifiable) data, are required to complete an Ethical Issues Table, which forms part of the application. The Research Programme section must include a description of the proposed research and methodology relating to the intended animal- and/or human-based studies.

SFI will require evidence that relevant ethical and regulatory approval has been granted for studies involving human or animal subjects prior to an award commencing. In exceptional cases where such research may not commence until a later stage of an award, SFI may permit submission of ethical and regulatory approvals following the award start date but prior to commencement of the research involving animal and/or human subjects.

Clinical Trials:

Requests for early-stage regulated clinical trials (Phase I or combined Phase I/II) and investigations may be submitted through the SFI Research Centres Programme.

Please refer to the SFI Guidance document for applicants on ethical and scientific issues, available as a link on the SFI webpage for the Phase 2 call document

ORCID ID

ORCID⁹ provides a unique identifier for all researchers, which can then be linked to their different research works across different platforms. There are a number of benefits to creating an ORCID iD, which include the following:

- ORCID allows you to pull information from different platforms, creating a centralised reference to your different works (e.g., publications, patents, awards) in one location using a single sign in.
- Your ORCID iD is a unique identifier, which distinguishes you from other researchers with a similar name.
- Using the ORCID iD helps to make your research works more visible to funders and publishers. You are able to build a complete picture of your research in one location.

As part of the integration of SESAME with ORCID, it is possible for researchers to import publication data from ORCID directly into their SESAME Research Profile. **For the Research Centres Phase 2 Proposal, the Lead Applicant and all Co-Applicants are required to link their SESAME Research Profiles to an ORCID iD before an application can be submitted.**

⁹ <http://orcid.org/>

b) Lead Applicant Details

It is assumed that the Lead Applicant will be the existing Research Centre Director. If this is not the case, SFI will need to be informed at least 2 months in advance of the submission deadline.

Lead Applicant - Commitment to Project

Indicate the percentage time commitment, as a percentage of the total working time of the Lead Applicant, to the proposed research programme, which should represent a substantial time commitment to the overall management of the Research Centre.

Lead Applicant - CV (upload; max. 6 pages)

A CV of the Lead Applicant, using the template provided in Appendix 2, must be completed and uploaded. The CV not only provides information about the applicant's education, employment record and research outputs, but also identifies up to five key achievements in research and impact. The CV must be uploaded in pdf format.

Lead Applicant - Publications to Date

Provide summary information on the total numbers of publications to date. Values should be entered for the number of publications attributed directly to the Lead Applicant.

Lead Applicant - Supervisory Experience

Provide summary information on supervisory history of the Lead Applicant to date. Indicate the total numbers of graduated MSc and PhD students, the number currently under supervision, and the number of staff currently under supervision.

Lead-Applicant - Research Funding History

The Lead-Applicant must list any prior research funding that has been received since the award of their PhD or equivalent qualification. A text box is provided in the SESAME application form to describe (in a maximum of 1,000 words) any scientific overlap that exists between any of the previously funded projects and the research proposed in the Phase 2 application. Research funding may be added directly to the application or added from the applicant's profile (see the SESAME Researcher User Guide)¹⁰. If this section is left blank it will indicate that the applicant has NO expired, current or pending funding. Both the Lead and Co-Applicant(s) need to complete this section within SESAME. Please ensure that research funding added to the profile of the Lead Applicant, or the profile of the Co-Applicant, has actually been included in the application.

¹⁰ <http://www.sfi.ie/resources/SESAME-User-Guide-Researcher-v-6-11.pdf>

c) Co-Applicant Details

The Lead-Applicant must assign all co-Applicants to the proposal using the following procedure:

- In the Co-Applicant section of the application, the Lead-Applicant will be prompted to click the button labelled “Add” adjacent to the ‘Add Co-Applicants’ text;
- In order to add a Co-Applicant, the SFI PIN number of each Co-Applicant and their last name is required;
- If the Co-Applicant is not registered with SESAME then they will need to register through their respective Research Body before the application can proceed;
- Once a valid SFI PIN number and Researcher Last Name is entered, click the Retrieve Researcher button and the co-Applicant details will be displayed;
- If the details are correct, then click on the ‘Associate Researcher with Application’ button;
- The resulting pop-up will confirm that the Researcher has been added and that you must click Save Draft to have the Co-Applicant listed against the application;
- Once a Co-Applicant has been assigned to an application, SESAME will send an email to the Co-Applicant providing them with login instructions;
- The Co-Applicant must log in to the application and provide the following information:

Note: SESAME does not permit two individuals to concurrently modify an application. The Lead Applicant must log out of the application to allow a Co-Applicant to make modifications, and vice versa. Given the large number of co-PIs in each Research Centre, it is the responsibility of the Lead-Applicant to ensure that this activity is co-ordinated well in advance of the submission deadline.

Co-Applicant - Percentage Time Commitment

Indicate the percentage time commitment, as a percentage of the total working time of the Co-Applicants to the proposed research programme.

Co-Applicant - Publications to Date

Provide summary information on the total numbers of publications to date. Values should be entered for the number of publications attributed directly to the Co-Applicant.

Co-Applicant - Supervisory Experience

Provide summary information on supervisory history of the Co-Applicant to date. Indicate the total numbers of graduated MSc and PhD students, the number currently under supervision, and the number of staff currently under supervision.

Co-Applicant - CV (upload; max. 6 pages)

A CV for each Co-Applicant, using the template provided in Appendix 2, must be completed and uploaded. The CV not only provides information about the Co-Applicant’s education, employment record and research

outputs, but also identifies up to five key achievements in research and impact. The CV must be uploaded in pdf format.

Co-Applicant - Research Funding History

All Co-Applicants must list any prior research funding that has been received since the award of their PhD or equivalent qualification. A text box is provided in the SESAME application form to describe (in a maximum of 1,000 words) any scientific overlap that exists between any of the previously funded projects and the research proposed in the Phase 2 application. Research funding may be added directly to the application or added from the applicant's profile (see the SESAME Researcher User Guide)¹¹. If this section is left blank it will indicate that the applicant has NO expired, current or pending funding. Both the Lead and Co-Applicant(s) need to complete this section within SESAME. Please ensure that research funding added to the profile of the Lead Applicant, or the profile of the Co-Applicant, has actually been included in the application.

d) Collaborator Details (Funded Investigators and industry/academic collaborators)

Include organisation (academic/industrial), name, contact information and other required details of Funded Investigators, official or industry collaborator(s), if any. Please indicate whether collaborators are based in academia or industry. Note that the "Mentor" role is not applicable for this call. Once all collaborator information has been entered, the collaborator may then be associated with the proposal by the Lead Applicant.

SFI recognises that applicants may have a prior relationship with an Industry Partner engaged in an application for funding to SFI (e.g., a decision-making role in company, such as being the CEO or a major shareholder in the company), which may be perceived as a conflict of interest. Where a potential conflict of interest exists, SFI requires that it is disclosed by the applicant to the Foundation and Research Body and is managed by the Research Body in accordance with the principles and mandates laid out in the document: *Inspiring Partnership - the National IP Protocol 2016*.¹²

Potential conflicts of interest with respect to Industry Partners named in the application should be directly declared within the applicant CV. Furthermore, the Host Research Body Letter of Support should contain a description of the institutional policy regarding management of such conflicts.

¹¹ <http://www.sfi.ie/resources/SESAME-User-Guide-Researcher-v-6-11.pdf>

¹² <http://www.knowledgetransferireland.com/ManagingIP/KTI-Protocol-2016.pdf>

e) Main Body of Proposal

Keywords (max. 15)

List a number of descriptors (max. 15) that best characterise the subject of your proposal.

Scientific Abstract (max. 200 words)

Provide a succinct and accurate scientific summary of the proposed work. Confidential information should **not** be included in the Scientific Abstract.

Lay Abstract (max. 100 words)

Provide a succinct and accurate summary of the proposed work in lay (i.e., non-technical) language. Confidential information should **not** be included in the Lay Abstract.

Programme Documents - Uploading of the Progress Report and the Phase 2 Proposal

The following two documents which are detailed in Appendix 3 and 4 must be completed and **uploaded as two separate pdf files using the file upload buttons located in the Programme Documents section of the SESAME application form.**

1. Progress Report using the template provided in Appendix 3
2. Phase 2 Proposal using the template provided in Appendix 4

Uploads in SESAME must be submitted in Adobe or Microsoft PDF format only
The number of pages in uploads must not exceed the specifications for any given section.
Appendices or other unsolicited documentation are not permitted.
The currency to be used is the Euro (€).

It is the responsibility of the Lead Applicant to ensure that eligible proposals are received by SFI on, or before, the deadline indicated. In order to safeguard against ineligibility, applicants are reminded to adhere rigorously to the guidelines in the call documentation.

Applications cannot be withdrawn and subsequently modified for re-submission in the same call

Applications not adhering to these requirements, or with incomplete content, will be deemed ineligible and will not be accepted for review, regardless of the date of submission

Proposals must be received by SFI no later than 13:00 (Dublin time) on 14th June 2017. After the submission deadline, applications will not be accepted by SESAME. Therefore, they will not be reviewed by SFI.

9. Research Body Approval

It will be noted that Research Body submission of a proposal under this call represents their approval of an application and agreement with SFI's Grant Terms and Conditions¹³. Submission must only be made by an authorised Research Body representative. In particular, the Research Body is approving:

- Eligibility of each Co-Applicant and Funded investigator;
- That the Lead Applicant and each Co-Applicant are recognised as an employee of one of the collaborating Research Bodies for the duration of the award;
- That the requested budget including salaries/stipends, equipment, travel and consumables are in line with accepted institutional and national guidelines;
- The availability of infrastructure within the institution as outlined by the applicant group in the research proposal;
- That the proposed research programme has not been funded by other sources;
- That relevant legal and ethical approval has been sought and will be granted prior to the award commencing;
- That the relevant licences will be in place at the time of award;
- That the details provided in relation to research funding history (i.e., current, pending or expired grants, as detailed in the application) are valid and accurate.

10. Applicant Agreement to Terms and Conditions

It should be noted that submission of an application represents an agreement to the SFI Terms and Conditions of Research Grants¹⁴. Applications that fail to comply with SFI terms and conditions, or with requirements outlined in this call document, will not be eligible and will be withdrawn without review.

11. SFI Policies and Positions

In advance of applying to any SFI programme, applicants are expected to be familiar with all relevant national and SFI policies including, but not limited to, the following:

Clinical Trials – Research programmes that include clinical trials as part of the study must adhere to the **SFI Clinical Trial and Clinical Investigation Policy**,¹⁵ as well as with the requirements set out by the Health Products Regulatory Authority (HPRA).

¹³ <http://www.sfi.ie/funding/sfi-policies-and-guidance/sfi-general-terms-and-conditions/index.xml>

¹⁴ <http://www.sfi.ie/funding/grant-policies/sfi-clinical-trial-and-clinical-investigation-policy.html>

¹⁵ <http://www.sfi.ie/funding/grant-policies/sfi-clinical-trial-and-clinical-investigation-policy.html>

Animal Usage – Applicants intending to use animals in their research projects are obliged to comply with the **SFI Use of Animals in Research Policy**,¹⁶ and should also ensure that their studies are in line with the HRA's position on the use of animals in research.

Research Integrity – SFI places high importance on ensuring research integrity and endorses the **National Policy Statement on Ensuring Research Integrity in Ireland**.¹⁷ All applicants and institutions are expected to abide by this policy and the **European Code of Conduct for Research Integrity**.¹⁸

Doctoral Education – For postgraduate students funded by SFI, the host Research Body is expected to adopt the principles, standards and good practice for doctoral education as described in the **National Framework for Doctoral Education (2015)**,¹⁹ which SFI has endorsed.

Intellectual Property Management – Intellectual Property (IP) should be managed according to the policies set out in the Government publication: **Inspiring Partnership - the National IP Protocol 2016**²⁰. In cases where additional guidelines are specified by SFI they must also be followed. The IP arrangements are the responsibility of the Research Body and shall reflect the collaborative nature of the project, the level of cash and in-kind commitment made by the Industry Partner and compliance with State Aid Regulations.

Gender Strategy – Research should fully consider potential biological sex and socio-cultural gender dimensions as key analytical and explanatory variables. As articulated in the **SFI Gender Strategy**,²¹ applicants are recommended to demonstrate that they have considered any potential sex/gender aspects in their proposed research programme.

Current SFI policies and positions will be reviewed on a regular basis; applicants are advised to consult the policy information in advance of submission of a proposal.

12. State Aid

All SFI funding granted as a result of this call for submission of proposals will be subject to and must be compliant with State aid law. All proposals must, therefore, be designed to ensure that any funding received from SFI does not, directly or indirectly, give rise to the grant of State aid. Such an assessment is something that SFI would expect Research Bodies and Research Centres to carry out as a matter of course and it will be the responsibility of applicants to ensure that their applications are designed accordingly. This will be made a condition of grant funding. In that regard, potential applicants are referred to the important and useful guidance provided by the European Commission in Section 2 of its 2014 Framework for State aid for research and development and innovation (2014/C 198/01). If in any doubt as to the interpretation or application of this guidance, potential applicants are advised to seek independent legal advice.

¹⁶ <http://www.sfi.ie/funding/grant-policies/sfi-policy-on-the-use-of-animals-in-research.html>

¹⁷ <http://www.iua.ie/wp-content/uploads/2014/06/National-Policy-Statement-on-Ensuring-Research-Integrity-in-Ireland-2014.pdf>

¹⁸ http://www.esf.org/fileadmin/Public_documents/Publications/Code_Conduct_ResearchIntegrity.pdf

¹⁹ http://www.heai.ie/sites/default/files/national_framework_for_doctoral_education_0.pdf

²⁰ <http://www.knowledgetransferireland.com/ManagingIP/KTI-Protocol-2016.pdf>

²¹ <http://www.sfi.ie/assets/media/files/downloads/Funding/SFI%20Gender%20Strategy%202016-2020.pdf>

13. Progress Reporting Requirements

The Research Centre must continue to follow the reporting requirements set out by SFI²².

²² (<http://www.sfi.ie/funding/research-centres-award-management/>)

Appendix 1: Review Process and Scoring Mechanism

A separate panel of international, scientific experts will be convened for each Research Centre. There will be 5-7 expert reviewers on each panel, one of whom will be focussed on education and public engagement (EPE) and at least one of whom will have a focus on Impact. Each site review panel will provide one of three recommendations; Fund, Do Not Fund (DNF) or Proceed to an Open Competition. The site review will be carried out over two days at the host Research Body. In advance of the site review, each member of the panel will have also carried out both individual postal reviews of the Progress Report **and** the Phase 2 proposal. To facilitate the postal reviews, the experts will be provided with Progress Report and the Phase 2 Proposal as well as extensive briefing material on the Research Centre (previous annual reports, KPI results, research outputs as well as original proposal and anonymised reviews). The postal reviews returned by each panel member will be collated and forwarded to the Lead Applicant, who will be provided with a defined period of time to submit a response to the comments made (advanced notice of dates and guidelines relating to the response will be indicated to Lead Applicants). The Lead-Applicant's response will be sent back to the panel members, who will then use that response to set the agenda for the site review. The reviewer guidance and scoring mechanisms for both the Progress report and the Phase 2 Proposal are provided below.

Progress Report – Postal Review

Reviewers will be asked to provide an assessment of the Progress Report under the following headings:

1. Team/Execution and Delivery
2. Research/Scientific Programme
3. KPI targets
4. Impact
5. Education and Public Engagement (EPE)

The selected EPE reviewer will complete the EPE and Impact sections and the Team/Execution and Delivery section as it relates to EPE. The Impact reviewer will also have scientific expertise in the given area and will complete all sections of the review form. All other reviewers will complete all sections of the review. The following sections provide the reviewer guidance and scoring mechanism for each heading.

1. Team/Execution and delivery

Reviewer Guidance

Please comment on the quality and performance of the Research Centre (RC) management team, investigators, governance and support structures.

As part of your response, consider the following questions:

- *Is there an operationally-effective management structure, organisation and governance structure in place?*
- *Is the RC director leading the Centre team effectively?*
- *Is the RC truly operating as a national centre?*
- *Are the co-PIs engaged and working as a team?*

- *Is there effective institutional support?*
- *Have the original objectives of the RC been met?*
- *Has the RC effectively attracted, recruited and trained key personnel?*
- *Is any gender under-represented within the team? If so, what actions are being undertaken to redress the imbalance?*
- *Has the RC demonstrated that it is competitive internationally, through for example, winning of H2020 awards?*
- *Does the RC have a track record in collaborating with other academic institutions and industry?*

Team/Execution and delivery – Score Description
1. The RC team, leadership and organisational structures have many serious deficiencies
2. The RC team, leadership and organisational structures are lacking in several critical areas
3. The RC team, leadership and organisational structures are lacking in some aspects; key issues need to be addressed
4. High quality RC team, leadership and organisational structures, in nearly all respects
5. Outstanding RC team, leadership and organisational structures

2. Research/Scientific Programme

Reviewer guidance

Please assess the scientific excellence of the research that has been undertaken by the Research Centre (RC) to date.

As part of your response, please comment on:

- *The 3 most important breakthroughs that the RC has made;*
- *How the RC has achieved research excellence and leadership in its niche area;*
- *How the RC has met or exceeded its relevant KPI targets.*

In providing your responses to the above points, consideration should be given to the outputs and impacts arising from:

- *Platform projects;*
- *Targeted projects with Industry Partners;*
- *Additional Spokes awards;*
- *US-Ireland Centre to Centre awards;*
- *Associated projects, for example Horizon2020.*

Research/Scientific Programme - Score Description
1. The scientific programme has demonstrated little progress towards achieving the goals of the RC or has moved in a direction that is not optimal
2. The scientific programme has demonstrated progress towards achieving some the goals of the RC, progress towards other goals is less than expected
3. The scientific programme has demonstrated progress towards achieving most of the goals of the RC but progress and direction lacking in one or two aspects that need to be addressed
4. The scientific programme has demonstrated significant progress towards achieving all of the goals of the RC
5. The scientific programme has demonstrated outstanding progress in all respects

3. Overall KPI performance

Reviewer guidance

Please rate the progress of the Research Centre (RC) in meeting or exceeding its KPI targets.

Overall KPI performance - Score Description
1. The RC has demonstrated little or no progress in meeting its KPI targets
2. The RC has demonstrated limited progress in meeting its KPI targets
3. The RC has demonstrated some progress in meeting its KPI targets
4. The RC has demonstrated significant progress in meeting its KPI targets
5. The RC has demonstrated outstanding progress in meeting its KPI targets

4. Impact

Reviewer guidance

Please rate the Impact being made by the Research Centre (RC) to date, taking into account, but not limiting your considerations to, the following questions:

- Is the RC on track to achieving the proposed impacts outlined in their impact statement provided in the original proposal?
- How has the RC performed against its commercialisation targets?
- How has the RC performed against its industry cost share targets?
- Has the RC successfully demonstrated impact in any of the following areas?
 - Economic
 - Societal
 - International Engagement
 - Public policy, services and regulation
 - Health and Wellbeing
 - Environmental

- Professional Services
- Human Capacity

We encourage you to consult with SFI's detailed guidance on 'Types of Impact', which can be found [here](#).²³

You may wish to consider that some projects may have more immediate impacts, while others may be long term. Impact may also be difficult to measure, hence you should cross reference results attained by the RC against KPI targets, since these can be used as "indicators" of different kinds of impact.

Impact - Score Description
1. The Centre has demonstrated little or no impact or potential for impact
2. The Centre has demonstrated limited impact or potential for impact
3. The Centre has demonstrated some impact and potential for impact in most aspects, one or more issues need to be addressed
4. The Centre has demonstrated significant impact and potential for impact in all respects
5. The Centre has demonstrated outstanding impact and potential for further impact in all respects

5. Education and Public Engagement (EPE)

Reviewer guidance

Please give your assessment of the Education and Public Engagement (EPE) programme of the Research Centre (RC) to date, taking into account, but not limiting your considerations to, the following questions:

- How is the RC performing against their EPE operational plan?
- How is the RC engaging all of its research community in delivering the public engagement plan?
- Is there evidence of applying learning or evaluation from EPE activity to research strands?
- How is the EPE agenda driving the overall Impact agenda of the RC?

Education and Public Engagement (EPE) - Score Description
1. The programme has demonstrated little or no systematic delivery of EPE activity
2. The programme has demonstrated limited systematic delivery of EPE activity
3. The programme has demonstrated some systematic delivery of EPE activity but there are some issues that need to be addressed
4. The programme has demonstrated significant impact and systematic delivery of EPE activity
5. The programme has demonstrated outstanding impact and systematic delivery of EPE activity in all respects

²³ <http://www.sfi.ie/funding/sfi-research-impact/types-of-impact.html>

Phase 2 Proposal - Postal Review

Each reviewer will be asked to provide an assessment of the Phase 2 proposal under the following headings:

1. Team/Execution and Delivery
2. Research Programme
3. Business Plan
4. Impact
5. Education and Public Engagement (EPE)

The selected EPE reviewer will complete the EPE and Impact sections and the Team/Execution and Delivery section as it relates to EPE. The Impact reviewer will also have scientific expertise in the given area and will complete all sections of the review form.

The following sections provide the reviewer guidance and scoring mechanism for each heading.

1. Team/Execution and Delivery

Reviewer guidance

Please comment on the quality, significance and relevance of the Research Centre (RC) management team, investigators, governance and support structures which will lead the RC into Phase 2

As part of your response, please comment on:

- *The quality, significance, and relevance of the recent research record of the lead and co-applicants and the strength and cohesiveness of the applicant group, including likely synergy in delivering research and potential for international leadership;*
- *The quality/calibre of the management team;*
- *The quality of the succession plan;*
- *The level of institutional support and governance;*
- *The appropriateness of the operational plan and management structures;*
- *The international competitiveness or leadership of the group and their ability to compete successfully in large research programmes such as Horizon 2020;*
- *Any unique aspects of the group that will provide the RC with an “edge” over other similar initiatives;*

Team/Execution and Delivery – score description

- | |
|--|
| 1. The RC team is unable to deliver the objectives of the Phase 2 programme |
| 2. The RC team has considerable weaknesses and is unlikely to deliver the objectives of the Phase 2 programme |
| 3. The RC team is lacking in one or two critical aspects |
| 4. High quality RC team in nearly all respects which can deliver the objectives of the Phase 2 programme |
| 5. Outstanding RC team which will deliver the objectives of the Phase 2 programme |

2. Research Programme

Reviewer guidance

Please comment on the quality, significance, and relevance of the proposed research, including value for money and the potential to advance knowledge and understanding within its own field or across different fields.

As part of your response, please comment on:

- *The novelty, significance and timeliness of the proposed research programme;*
- *The aims, objectives and scope of the research programme;*
- *The potential for the research programme to advance knowledge (within its own field or across different fields) and current state-of-the-art;*
- *The relevance of the industrial collaboration(s) and their benefit to the research programme;*
- *The competitive advantage that a dedicated RC can bring to the field identified in the research programme;*
- *Value for money of the proposed research.*

Research Programme – score description
1. Research proposed is not worthy of funding
2. Research proposed has serious deficiencies
3. Research proposed is lacking in one or more critical aspects; key issues need to be addressed
4. High quality research programme in most respects
5. Outstanding research programme in all respects

3. Business Plan

Reviewer guidance

Please comment on the quality of the plans for execution and delivery of the Research Centre (RC) Business Plan

As part of your response, please comment on:

- *The RC strategy to secure 33% industry cost share (cash + in-kind) by 2025;*
- *The RC strategy to secure 33% of its budget in non-exchequer, non-commercial funding (e.g. H2020 and future equivalent, international funding sources such as the NSF, NIH, Wellcome trust as well as charity and philanthropic sources.*

Business Plan – score description
1. The Business Plan has serious deficiencies; cannot be delivered
2. Poorly designed Business Plan with multiple weaknesses
3. Well-designed Business Plan with a 1 or 2 weaknesses to be addressed
4. High quality Business Plan
5. Outstanding Business Plan

4. Impact

Reviewer guidance

Please provide an overall assessment of the potential for the Centre to deliver direct, measurable economic and societal impact taking into consideration the content within the Centre impact statement as well as the panel's own assessment of the potential for impact.

Specific items to address in terms of potential for economic impact include, but are not limited to:

- *Potential for the Research Centre to improve the competitiveness of Irish-based enterprises to compete in large global markets;*
- *Potential to attract large Foreign Direct Investments in corporate R&D laboratories;*
- *Potential to spin out new high-technology start-up companies that have the potential to raise external angel or venture funding.*

Please take into consideration the following areas when assessing the potential for societal impact:

- *Whether the research programme has a strong educational and training component for the next generation of researchers;*
- *Whether there is a strong programme of public outreach activity;*
- *Whether the proposed Centre addresses a national and/or global challenge to which Ireland should respond;*
- *The potential for other aspects of societal benefit including, but not limited to the health and well-being of the population, food security, energy security, environmental protection, contribution towards Government policies and strategies (as appropriate to the individual centre).*

The reviewer may also wish to consider the potential of the Centre to deliver impact across a broader range of areas beyond those of a societal and economic nature, with reference to the following [guidance](#).

Impact – score description
1. Very low impact potential
2. Low impact potential
3. Good impact potential
4. High impact potential
5. Outstanding impact potential

5. Education and Public Engagement (EPE)

Reviewer guidance

Please provide an overall assessment of the potential for the centre to stimulate public understanding, interest and involvement in science, technology, engineering and maths (STEM) through its education and public engagement (EPE) programme.

Specific items to address include, but are not limited to:

- The vision for the programme, including aims, target audiences, activities and outputs;
- Public engagement experience of staff and external partners;
- How the programme will be monitored and evaluated, including success indicators;
- Host Research Body support for education and public engagement aspects of the programme.

EPE – score description	
1	Very low EPE potential
2	Low EPE potential
3	Good EPE potential
4	High EPE potential
5	Outstanding EPE potential

Site Review

The site review will be carried out over two days at the host Research Body in Q4 2017. Each site review panel will be tasked with providing one of three recommendations; Fund, Do Not Fund (DNF) or Proceed to an Open Competition. The agenda of the site visit will be determined by the outcome of the postal reviews, for example if progress is viewed to be excellent, the site review could focus on the Phase 2 Proposal.

Figure A shows a schematic of the scoring mechanism and decision making process for the Site Review panel. The individual site review panel will write a combined report which will follow the format of the postal reviews and utilise the same headings and the same guidance. An additional score will be provided for overall Progress and Phase 2 Proposal. Review criteria will be weighted as follows: 40% on Progress, 20% on the RC Industry cost share results and 40% on the Phase 2 proposal. The site review panel will be provided with a report on the up to date industry cost share results of the RC by SFI in advance of the review.

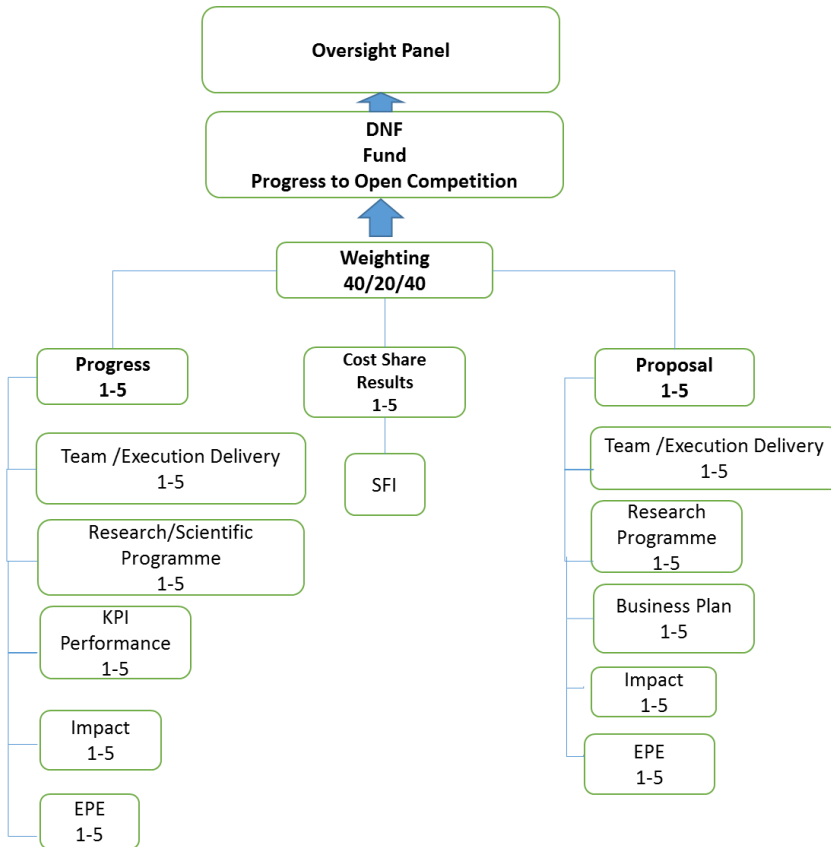


Figure A. Schematic of the scoring mechanism and decision making process for the Site Review panel

Oversight Panel

An “oversight” panel will be convened to oversee the fairness of the review process and to rank the “fundable” Research Centres. The oversight panel will receive the progress report, the proposal for Phase 2 funding, the postal reviews and scores, the Centre response to the reviews and the site visit reports from each Centre. The oversight panel will consist of members that have experience managing Research Centres and that would be familiar with the SFI operation and programmes. The oversight panel will have the authority to overturn the recommendation of the site review panel, if deemed unfair.

SFI reserves the right to modify the review process. Applicants will be notified of any relevant modification to the review procedure. The final funding decisions rests with SFI.

Appendix 2: Applicant CV Template (max. 6 pages)

Please note that the applicant's full research funding track record and supervisory details should be uploaded via SESAME and should **not** be included in this CV.

SECTION 1 – Applicant Details (max. 3 pages)

NAME AND CONTACT DETAILS

CAREER PROFILE (Education and Employment)

Applicants may provide details of any career breaks (for example, due to parental leave or long-term absence through illness) or periods of part-time work.

INNOVATION/COMMERCIALISATION ACTIVITY

Include details on, for example, relevant industry collaborations, qualified invention disclosures, pending and granted patents, licences and spin-out activities.

KEY ACHIEVEMENTS (Research and Impact)

*Give details of **up to five** achievements that have provided significant impact or which have greatly influenced any field in science, technology, engineering or mathematics. Any type of achievement may be included in this section, and applicants are encouraged to elaborate on the various ways in which they have influenced researchers and their disciplines, or demonstrated significant economic and/or societal impact(s). For each example, provide an outline of the stated achievement, what **specific** role was played by the applicant, and how the field and, where relevant, the wider community and society have benefitted or have been influenced as a result. References to published material may be added as required.*

SECTION 2 – Publication Details (max. 3 pages)

- **SELECTED SENIOR-AUTHOR PUBLICATIONS**

*Detail up to 10 peer-reviewed, senior-author (that is, first, joint-first or last author) primary-research publications, which will confirm, **where relevant**, that the applicant meets the eligibility requirements for publications for this programme. Refer to the appropriate section of this call document for details on senior-authorship requirements. Preprints may only be included where a Digital Object Identifier (DOI) is quoted. **Note that publications where the applicant claims joint-first authorship will only be accepted as senior-author publications where the article clearly verifies this.***

- **OTHER PUBLICATIONS**

Applicants should list any other publications (where they are a senior author or otherwise) that they wish to be considered in the assessment of this application. Applicants should ensure that their primary research outputs are prioritised; however, reviews, essays and any other secondary-research articles relevant to this application may also be listed.

Appendix 3 - Progress Report Template

There are two key documents which are required as part of the submission process for consideration of Phase 2 funding for the 7 x 2012 Research Centres; a Progress Report and a proposal for Phase 2 funding. The template for the **Progress Report** is provided here.

The Progress Report document must be uploaded to SESAME using the file upload buttons located in the Programme Documents section of the SESAME application form, see Section 8 of the Call Document

All text should be provided in Times New Roman font or similar, with minimum font size of 12, and at least single-line spacing as well as a minimum margin size of 2.5cm. Text in diagrams may be in any clearly legible font.

The Progress Report must capture the outputs, achievements and impact of the Centre from the start date of the award to the date of report submission, a time span of four years.

The overriding purpose of the Progress Report is to enable the RCs to provide sufficient information for an international review panel to determine whether the Centre has delivered on undertakings submitted as part of its original proposal and furthermore, if it has surpassed original objectives set including but not limited to cost share targets, targets set against defined Key Performance Indicators (KPIs), leveraged funding etc. Moreover, the review panel will determine whether the Centre has attained excellence across the Scientific and Impact pillars. The Progress Report will be made available to the review panel in June 2017, at least 3 months before the review. All panel members will provide an independent written postal review, inclusive of scoring, of the Centre's progress, in advance of the site review. The panel will also receive copies of all previous annual reports. Reference to additional details available in previous annual reports should be made in this Progress Report where necessary.

The Progress Report is structured such that the Centre provides information under each of the headings provided below, all of which must be addressed. Page limits must not be exceeded.

Progress Report - Table of Contents

1. Summary of Achievements (max. 10 pages).....	35
2. Progress against Original Objectives (max. 5 pages)	35
3. Research Centre Leadership Team (max.10 pages).....	35
4. Governance and Management (max. 5 pages)	36
5. Support from the Host Research Body and Other Participating Research Bodies (max. 5 pages).....	36
6. Research Programme (max. 40 pages exclusive of references and reports on US_Ireland and Spokes awards)	37
7. Commercialisation Plan (max. 10 pages).....	38
8. Industry Cost Share (max. 10 pages exclusive of industry testimonials)	38
9. Funding Diversification (max. 10 pages).....	38
10. Impact (max. 10 pages)	39
11. Education and Public Engagement (max. 5 pages)	39
12. Communications (max. 5 pages)	40
Appendix (A) - US-Ireland Centre-to-Centre Partnership Programme (max. 10 pages per project including list of publications).....	41
Appendix (B) - Spokes Programme awards (max. 10 pages/per project including list of publications)	42

1. Summary of Achievements (max. 10 pages)

This section of the report should focus on the achievements of the Centre from the start date of the award up to the date of the report submission. It will be incumbent on the Centre to convince the international review panel that the Centre is truly operating as a Centre and has achieved more through one award in regards to academic collaboration, industry partnership and operating as a collective, than it would have done if a number of individual awards had been made.

The following questions must be addressed:

- Has the Centre met or exceeded targets set against its minimum and ambitious KPIs?
- What has the Centre achieved that it couldn't have achieved if a number of individual awards had been made instead of an overall Centre award, i.e. how is the sum greater than the parts?
- How has the international competitiveness of the Centre increased as a result of the Centre award?
- How has the international ranking of the Centre improved relative to the global competitors in its field?
- How has the Centre established its international standing or niche area?
- How has the Centre influenced national and/or international policy?
- Describe how the Centre has benefitted from collaborating with other SFI Research Centres and any other international or national centres (e.g. NSF Centres, Fraunhofer, EI Tech Centres etc.)?
- How do the Centre's industry partners consider that the Centre has benefitted the Irish research system and their own (company) interests?

2. Progress against Original Objectives (max. 5 pages)

This section of the report must describe progress against the original objectives defined in the proposal approved for funding as part of the 2012 call. Questions to be addressed should include, but are not limited to:

- Have the original objectives been met (or not)?
- Describe if and how any of the original objectives have changed and if any new opportunities have arisen that have resulted in the Centre acquiring or changing objectives?

3. Research Centre Leadership Team (max.10 pages)

This section of the report must enable the review panel to assess the quality and performance of the Centre management team, governance structures, principal investigators and funded investigators.

The following information must be provided:

- A description of the leadership team, i.e. names and responsibilities and a brief bio-sketch of the Centre's management team including the Director, Deputy Director(s), Co-Principal Investigators (co-PIs), Funded Investigators (FIs), senior managers, including the Centre manager, business development manager, IP managers, EU grant manager, EPE manager, etc.
- A description of the Centre's organisational strategy and the underlying rationale for this.
- A description of the internal methods used for assessing the quality and impact of the projects.
- A breakdown of gender representation within the Centre and actions undertaken to redress gender under-representation, particularly at the senior level.

4. Governance and Management (max. 5 pages)

Provide a brief description of the existing Centre governance and management structure. Address the following questions:

- Are governance structures in place and are they effective?
- Is there an operationally-effective management structure and organisation in place?
- Is the Centre Director leading the Centre team effectively?
- Does the Centre have a procedure for risk management?
- Provide examples of how challenges have been resolved in the Centre.
- Describe how the Centre manages, implements and oversees good laboratory practices and research integrity.
- Describe how the Centre manages, implements and evaluates mentorship across all levels of the organisation.

5. Support from the Host Research Body and Other Participating Research Bodies (max. 5 pages)

This section of the report must enable the review panel to assess the level of support provided by the Host Research Body and partner institutions of the Centre, with reference to what was promised in the original submission. With the original proposal, letters of support from the Research Bodies of the lead applicant and co-PIs were provided. With reference to these letters, describe how the Research Bodies have supported the Centres and how the operations teams of the Centres have integrated into the administration teams of the Research Bodies. List any support services (for example, HR, TTO, IP, contracts, legal etc.) that have been provided by the Research Bodies. Describe how the overhead provided by SFI has supported the Centre award.

A condition of initial funding was that the Research Body leading the Centre would prepare a Collaborative Research Agreement describing the partnership between all academic Research Bodies part of the Research Centre award within 90 days of the start date of the award. Describe how the partnership between all of the participating Research bodies has worked with reference to any challenges that have arisen and have been overcome, in particular.

6. Research Programme (max. 40 pages exclusive of references and reports on US_Ireland and Spokes awards)

This section of the report must enable the review panel to assess the scientific excellence of the research that has been undertaken by the Research Centre from the start date of the award to the date of report submission.

The following must be addressed:

- What are the 3 most important breakthroughs that the Centre has made? Describe what the breakthrough is, why it is important, how it has been translated and who has benefited from it.
- How has the Centre achieved research excellence and leadership in its niche area, as measured through indicators such as publications in top tier journals, associated citations, representation and presentations at seminal conferences, editorships of top tier journals?
- Has the Centre exceeded its scientific KPI targets in:
 - Journal Publications;
 - Conference Publications;
 - Number of PhD and MSc/MEng graduates?
- How has the Centre succeeded in the training and education of a cohort of scientists and/or engineers who will take up employment in industry as a first destination?
- Has the Centre produced publications with industry as co-authors and/or patent applications with industry as co-inventors? If so, described how these have been regarded by the wider community, with reference to citations and industry downloads.

In providing your responses to the above points, consideration should be given to the outputs and impact arising from:

- Platform projects;
- Targeted projects with industry partners, and
- Outputs from associated projects funded through Horizon2020

US-Ireland Centre to Centre (C2C); For Centres that have secured US-Ireland C2C awards, please provide a separate report for each award under the headings provided in Appendix (a).

Spokes awards; For Centres that have secured Spokes awards, please provide a separate report for each award under the headings provided in Appendix (b)

Please note: the 40 page limit for the overall Research Centre research programme does not include the US-Ireland C2C or the Spokes awards. An additional 10 pages (max) are allowed for each US-Ireland C2C and each Spoke award for the Centre.

References (no page limit)

Provide a full list of all references. The reference list should include the following details: author(s), title of article, name of publication, date of publication, and other appropriate details (such as volume, pages).

7. Commercialisation Plan (max. 10 pages)

This section of the report must enable the review panel to assess the commercialisation activities of the Centre, from the start date of the award to the date of report submission.

The following must be addressed/ provided:

- Provide an outline of the Centre's IP principles and policies, providing examples of any technology transfer activities that have been undertaken during the last four years and their impact to date.
- Provide a list of technologies developed by the Centre that have led to new applications, contributed to product development and/or resulted in marketed products.
- Has the Centre spun out new spin out and/or start-up companies that have the potential to raise external, angel or venture funding?
- How has the Centre performed against its commercialisation relevant KPI targets?

8. Industry Cost Share (max. 10 pages exclusive of industry testimonials)

This section of the report must enable the review panel to assess the success of the Centre in achieving its industry cost share targets (Cash and in-kind)

The following must be addressed/provided:

- Provide an overview of industry cost share, cash and in-kind, both committed and received, from the start date of the award to the date of report submission.
- Describe the strategy used to achieve the cost share and how that strategy has evolved.
- Describe any challenges that have been overcome on this journey.
- Describe the benefits that industry partners have gained through collaborating with the Centre.
- Provide a number of industry partner testimonials which can be used by SFI for future Public Relations activities. Describe how working with Industry has informed the research being conducted by the Centre. Please refer specifically to platform research and basic oriented research activities where relevant.

9. Funding Diversification (max. 10 pages)

This section of the report must enable the review panel to assess the success of the Centre in achieving its "funding from non-exchequer, non-commercial" target.

The following must be addressed/provided:

- Provide an overview of non-exchequer, non-commercial funding which has been received to date, including but not limited to the following:
 - H2020 projects in which the Centre is co-ordinating and/or partnering;
 - ERC awards won by the Centre;
 - Funding leveraged from non-exchequer, non-industry sources outside of H2020
 - Funding from charity and philanthropic sources

Describe the strategy that the Centre has used to achieve "non-exchequer, non-commercial" targets and how that strategy has evolved. Describe any challenges that have been overcome on this journey.

- Provide examples of how H2020 call documents were influenced by the Centre.
- Provide examples of how the Centre has supported successful industry-led bids in H2020 calls.
- Describe how international funding has enhanced the Centre's outputs and reputation.
- Describe if and how international funding has attracted industry to the Centre's activities.

10. Impact (max. 10 pages)

This section of the report must enable the review panel to assess whether the Centre has delivered significant economic and societal impact, from the start date of the award to the date of report submission. Please consult the following guidance when preparing your response <http://www.sfi.ie/funding/award-management/research-impact/>

The following must be addressed/provided:

- Describe how the Centre has made progress against the impact statement provided in the original proposal.
- Describe if and how the roadmap towards impact has changed.
- Describe the impact of the Centre's activities, referring, but not limited, to the following:
 - leveraging of international funding through industry/collaborative research;
 - creation of high value jobs;
 - development and nurturing of businesses;
 - attraction of international scientists and talented people;
 - enhancement of the quality of life and health of Irish citizens;
 - production of a highly educated and relevant workforce in demand by industry and academia;
 - development of the country's international reputation.

11. Education and Public Engagement (max. 5 pages)

The objective of the Education and Public Engagement report is to capture the activities, processes and achievements of the Centre in engaging the non-academic public about its work (from the start date of the award to the date of report submission).

Please complete your report addressing the following detail for each activity within your EPE plan:

- Outline the Centre's Education and Public Engagement (EPE) objectives for this activity, including why the activity was selected, how the participant group was targeted, why they were targeted and how the participant group needs were identified to inform the activity;
- Outline how the objectives for the activity were either met, exceeded or not met and outline why;
- Outline challenges encountered, the causes and how they were overcome. In particular, discuss these in relation to new participant categories;
- Give a brief description how the Centre evaluated each activity, including your methodology, findings and describe how you disseminated your findings;
- Outline the key accomplishments and highlights from the Centre's EPE activities;

- Detail how the Centre has developed a whole Centre approach to public engagement including how it has enabled academic staff to co-create activity and/or participate in the wider public engagement programme of the Centre.

12. Communications (max. 5 pages)

Please provide an overview of key national and international communications/marketing actions undertaken to build the profile of the Research Centre as a world leader. You can include the following:

- Provide a brief outline of the Centre's communications objectives for the period and how they were achieved/not achieved;
- Provide an overview of engagement with key stakeholders (media, industry, government, etc.) to promote the work of the Centre;
- Provide an overview of media coverage (international and national) obtained during the period;
- Provide details of marketing/branding/advertising materials produced to promote the Centre;
- Provide an overview of the online promotion of the Centre, including social media platforms;
- Provide details of the Centre's most successful communications actions.

Appendix (A) - US-Ireland Centre-to-Centre Partnership Programme (max. 10 pages per project including list of publications)

Provide a detailed summary of each US-Ireland Centre-to-Centre(C2C) Partnership Award associated with the Research Centre. Do not exceed a page limit of 10 pages/per project, inclusive of publications. Refer to specific outputs that have arisen directly from the award and include funding acknowledgements for referenced outputs, where possible. Relevant publications should be discussed in the context of the research being described. SFI are primarily interested in the activity and progress of the Republic of Ireland research team. However, SFI are also interested in understanding the level of co-operation between the ROI, US and NI teams and the impact that this co-operation is having on the overall project.

The following information must be included in this section:

- Details for the lead Principal Investigator and Engineering Research Centre (United States).
- Details for the Lead Principal Investigator and their associated Centre (Northern Ireland).
- Information on the US-Ireland C2C partnership goals (what the work intends to accomplish).
- Information on the US-Ireland C2C partnership role in support of the Centre's strategic plan.
- Information on achievements of the partnership to date and the role of the US and NI partner(s).
- Information on the added value of the partnership, outlining the strategic importance of the collaboration to the Research Centre.
- Details of exchange visits between Republic of Ireland, Northern Ireland and the United States during the reporting period.
- A description of the research work carried out by the United States partner(s) to date
- A description of the research work carried out by the Northern Ireland partner(s) to date
- An outline of the fundamental research barriers and the methodologies used to address them.
- Project benchmarking against other relevant work in the field, referring to state of art.
- Information on the TRL of the US-Ireland C2C partnership.
- If relevant, details of contributions towards new ICT standards/specifications.
- A list of publications arising directly from the US-Ireland C2C partnership, clearly highlighting high-impact publications and publications co-authored with the US/NI partners, and industry partners if relevant.

Appendix (B)-Spokes Programme awards (max. 10 pages/per project including list of publications)

Provide a detailed summary of each Spokes Programme Award associated with the Research Centre. Do not exceed a page limit of 10 pages/per project, inclusive of publications

Provide a detailed summary of Spokes awards which have been awarded to the Research Centre through the SFI Fixed Spokes or Rolling Spokes programmes. Refer to specific outputs that have arisen directly from the Spokes award and include funding acknowledgements for referenced outputs, where possible. Relevant publications should be discussed in the context of the research being described.

- Provide information on the goals of the Spoke (what the work intends to accomplish).
- Provide information on the role of the Spoke in support of the Centre's strategic plan and describe what new capabilities have been built into the Centre as a result of the Spoke.
- Where relevant, describe how the Spoke has enabled existing Centres to link together and how such linkage has enabled the research programme to be delivered.
- Provide information on achievements to date and the role of the industry partner(s).
- Describe achievements in the previous year. If relevant, briefly outline achievements in previous years that have led to the present position.
- Outline benefits to industry partners from this project.
- Where relevant, describe how this Spoke has allowed SMEs to join the Centre who may not have otherwise had the financial means to do so.
- Outline the fundamental research barriers and the methodologies used to address them.
- Benchmark the project against other relevant work in the field and refer to state of the art.
- Provide information on the TRL of the Spoke
- If relevant, provide details of contributions towards new ICT standards/specifications.
- Provide a list of publications arising directly from the Spoke, clearly highlighting high-impact publications and publications co-authored with industry.

Appendix 4 - Phase 2 Proposal Template

There are two key documents which are required as part of the submission process for consideration of Phase 2 funding for the 7 x 2012 Research Centres; a progress report and a Proposal for Phase 2 funding. The template for the **Phase 2 Proposal** is provided here.

The Phase 2 Proposal document must be uploaded to SESAME using the file upload buttons located in the Programme Documents section of the SESAME application form, see Section 8 of the Call Document.

All text should be provided in Times New Roman font or similar, with minimum font size of 12, and at least single-line spacing as well as a minimum margin size of 2.5cm. Text in diagrams may be in any clearly legible font.

The overriding purpose of the Phase 2 Proposal is to provide sufficient information for an international review panel to make a funding recommendation (or not) for a Centre to be awarded a second phase of funding. The Phase 2 Proposal will be made available to the review panel during June 2017, at least 3 months prior to the site review. Each panel member will provide an independent written postal review, inclusive of scoring, of the proposal in advance of the site review.

The postal reviews of the Phase 2 Proposal will be circulated to the Centre Directors who will be invited to submit a written response to SFI. The applicant responses will be then sent to the review panel, who will use these responses to inform the site visit discussion and associated agenda.

The Phase 2 Proposal template is structured so as to provide information under a number of heading, all which must be addressed. The page limits of each section must not be exceeded.

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1. Research Centre (RC) Executive Summary (max. 5 pages)

Provide a summary overview of the proposal, including key aspects of the team composition, the research programme and the proposed economic and societal impact; a summarised budget must also be included. This summary should capture the pertinent aspects of the proposal.

2. Research Centre Leadership Team (max. 10 pages)

At the time of the original submission of the 2012 Research Centre proposals, a number of co-applicants and Funded Investigators (FIs) were approved for each Centre. Since then, a number of PIs and FIs have been removed or added to each Centre, following approval by the SFI post award team. Although a number of the Co-PIs in the Centre have been reviewed and approved before, the Phase 2 Proposal will involve a review of the entire Centre applicant team including old and new Co-PIs. Therefore, up to date CVs, and an update of research funding history for each of the existing co-PIs in the Research Centre and any additional Co-Applicants will be required as part of the submission process (refer to Section 8 of the call document).

The Progress Report, which must be submitted in parallel with the Phase 2 Proposal, includes a section in which the Centre must provide a description of the leadership team, i.e. names and responsibilities and a brief bio-sketch of the Centre's management team including the Director, Deputy Director(s), Co-PIs, FIs, senior managers, IP managers, etc. The Phase 2 Proposal must concentrate on changes or expansion of the team required to meet the future objectives of the Centre. This section of the proposal must address the following;

- An outline of the proposed leadership plan for Phase 2 of the Research Centre;
- A description of and justification for any changes which will be made to the leadership team;
- Description of a succession plan for the Director, and for other key management positions and co-PIs;
- An outline of plans to expand the pool of PIs, for example through the SFI Research Professorship and Future Research Leaders programmes. To improve the gender balance under the SFI Research Centres programme, include specific objectives related to gender equality perspectives, especially with a view to recruitment;
- Plans to add new Co-PIs and/or FIs to the Centre plus a description of the impact that the new PI/FI will have on the operations or research activities of the Centre. Include specific objectives related to gender equality perspectives, especially with a view to recruitment;
- Describe how the gender balance of the team from students, up to senior level is being addressed.

3. Governance and Management (max. 5 pages)

The progress report includes a detailed description of the existing Research Centre governance structures. The Phase 2 Proposal must provide an overview of how the governance structure will be changed or optimised during the second phase of funding, to meet and support the ambitions of the Centre.

4. Support from the Host Research Bodies (max. 5 pages)

As the Centres become more sustainable, the expectation is that they will become more integrated into the operations of the host and partner research bodies. A review of the governance structures of the Research Centres is also expected following the findings of the governance review advisory committee. One recommendation from this committee has been the implementation of a Service level agreement (SLA) between the Centre, SFI and the Host Research Body. The format and implementation of an SLA would be subject to consultation with key stakeholders. For the purposes of the proposal, please provide the following:

- Describe any additional infrastructures, facilities space and / or services that will need to be provided by the Host Research Body;
- Describe any additional support services that will be provided, for example IP/technology transfer services, HR, contracts and legal supports, by the Research Body;
- Describe how the overhead income will support the operation, sustainability and impact of the Centre;
- The Host Research Body should comment on how it will continue to support the Centre Director;
- Describe the reporting structure which has been / will be put in place within the Research Body.

In addition, a letter of support must be included from the Lead Applicant's Research Body (Host Research Body) and from the Research Body of the co-Applicants (co-PIs) and FIs, if from a different Research Body (see section 15 - Letters of support).

5. Strategy (max. 5 pages)

This section of the Phase 2 Proposal must clearly describe the long-term strategic direction, mission and vision of the Centre and should include the following:

- Describe how the Centre will engage with other national and international Research Centres and how it will become a leader in its research field, both nationally and internationally;
- Describe how the Centre is meeting the needs of industry (largely) through collaborative research activities;
- Describe how the Centre is building capacity and expertise in leveraging funding from national and international sources.

6. Research Programme (max. 30 pages exclusive of references)

The progress report includes a detailed description of the research programme carried out to date. The Phase 2 Proposal must provide detail on the future research direction as the Centre moves into its second phase. Any change in research direction must be highlighted and justified, and explanations provided on research areas that are no longer being pursued and why.

Outline at a high-level the key research objectives of the proposed research programme, identifying the critical novel discoveries/inventions/innovations that are to be sought by the Centre and why they are important.

Provide a detailed description of the Centre's Research Programme, with reference to the proposed Platform Research component of the Centre and each of the proposed Targeted Projects. The specific aims, objectives, milestones and deliverables of each should be described clearly and concisely. Consideration should be given to any sex/gender dimensions which may arise in the course of the research programme, where relevant.

Provide convincing evidence as to why the proposed research is relevant, timely and novel.

Provide a project plan, identifying any dependencies between the Platform Research and Targeted Projects, or the Targeted Projects with each other. Within the project plan include the following details:

- Provide a summary of the **objectives** of the proposed research;
- Describe the **milestones and deliverables** for each project along with delivery dates and key performance indicators (KPIs) used to measure progress;
- Describe the role of specific **PIs** and their teams with responsibility for delivering the project plan in the proposal, including the role of PIs towards delivering each milestone;
- Include an assessment of **risks** associated with the delivery of each Targeted Project and explain measures to mitigate and manage these risks.

Note: The project plan should be written in a way that facilitates evaluation by the postal and panel reviewers, and with due consideration to on-going annual assessment by SFI.

References (no page limit)

Provide a full list of all references. The reference list should include the following details: author(s), title of article, name of publication, date of publication, and other appropriate details (such as volume, pages).

7. Business Plan (max. 15 pages)

This 7 x 2012 Research Centres are currently funded under the condition that they maintain 30% industry cost share (of which 10% must be cash) assuming the SFI contribution is a maximum of 70%. The Centre budget is currently comprised of three parts: an SFI cash contribution (direct costs), an industry cash and an industry in-kind contribution. The Centre budget is direct costs only and does not include the SFI or industry contribution towards the overheads of the Research Body. Although not part of the Centre budget, the Centres must leverage significant funding from non-exchequer, non-commercial sources such as Horizon 2020. A model of the Phase 1 cost share model is shown in Figure a. In this model, for a €7M investment from SFI, the Centre is

currently expected to leverage at least €3M from industry, of which at least €1M must be cash. This is a condition of the Letter of Offer which is the official contract between SFI and the Host Research Body of the Centre. In the example shown below, the “non-exchequer, non-commercial sources (*ne-nc*)” KPI is typically matched with the SFI budget.



Figure a. Phase 1 - Cost Share model

Results to date have shown that the 7 x 2012 RCs are, on average, also exceeding their minimum 10% cash targets. The Centres are therefore expected to increase their levels of industry cash cost share and to maintain their leveraged *ne-nc* funding as they move into a second phase of funding.

The Phase 2 model shown in Figure b depicts an overall Centre budget which comprises a 33% contribution (direct costs) from SFI with the remaining 67% coming from both industry (cash plus in-kind) and *ne-nc* sources (cash only). Of the 67%, 20% must come from industry sources and 20% must come from *ne-nc* sources. The remaining 27% can come from either industry cash, industry in-kind or *ne-nc* (direct costs). Of the 20% that is required from industry, at least 16.5% must be from industry cash. The example shown in figure b shows that for a €7M investment from SFI, the Centre will be expected to leverage €4.25M cash from *ne-nc* sources and €4.25M from industry, of which at least €3.5M must be industry cash. The remaining €5.5M can be from either industry or *ne-nc* sources.

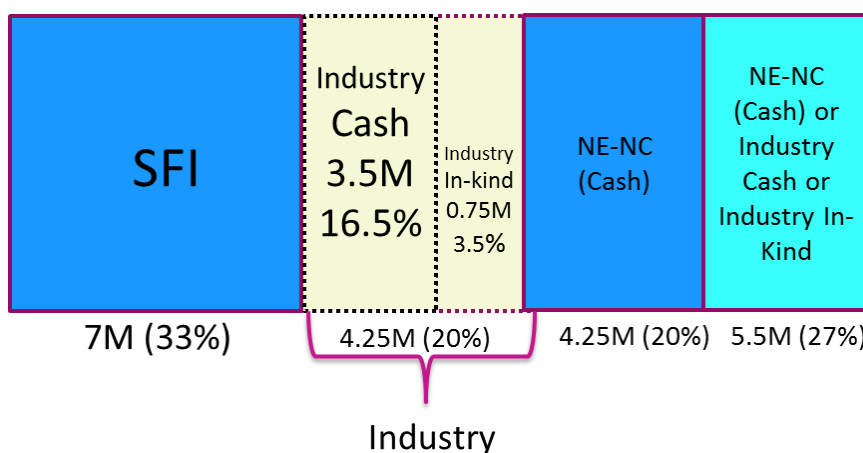


Figure b. Phase 2 - Cost Share model

A business plan must be provided which will describe how the Centre plans to scale towards the cost share model outlined in Figure b **by the end of the second phase of funding, i.e. 2025**. To ensure absolute clarity on this requirement, an example is shown in Figure c. If the SFI contribution is €7M per year, at the end of the Phase 2 funding period (years 7-12), the total SFI investment will be €42M. For this €42M, there must be a total amount of industry cash leveraged which is equal to €21M.

	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Total
SFI (33%)	7	7	7	7	7	7	42
CASH	1	2	3	4	5	6	21

Figure c. Phase 2-Cost Share model

The business plan should include details on the strategy for targeting significant new industry partnerships, re-engagement and upscaling of existing partnerships, the strategy for major wins in Horizon 2020 and its future equivalent (FP9) and other international sources of funding, including charity and philanthropic sources.

The following section details what can be counted towards Industry Cost Share.

Cash (direct costs) and in-kind from partially funded collaborative research

The majority of Targeted Projects in the Research Centres are **partially** funded collaborative research projects, where costs are shared by SFI and the industry partner. The cash (directs costs) and in-kind contributions from the industry partner can be counted towards the Industry cost share.

In the case of a partially funded Collaborative Research Project, the IP normally resides with the Research Body and the Industry party usually benefits by way of a licence.

Cash (direct costs) and in-kind from wholly funded collaborative research

In some cases, the industry partner stipulates full ownership of the foreground IP and is willing to pay the full cost of the project. Although the industry partner can have automatic rights to own the IP arising from such a project, a Collaborative Research Agreement (CRA) must still be negotiated and signed by the parties before the research project commences, and the agreement must include a clause describing how the results of the project will be disseminated. This is called a wholly funded collaborative research project. If such an agreement is in place and the Research Centre Director is satisfied that the contribution of the project towards the goals of the Research Centre is clearly justified, the cash paid (directs costs) and any in-kind contributions made by the industry partner can be counted towards the industry cost share.

In all cases, the Research Centre Director must be satisfied (or warrants) that any projected cash contributions from each industry partner are free and unencumbered and have not been used to secure a support grant from EI, IDA or any other agency.

A wholly funded Collaborative Research Project should not be confused with a contract research project. A contract research project involves a company paying a Research Performing Organisation (RPO) to deliver a

product or service with a definitive outcome. For this kind of project, a profit margin is normally built into the costs, VAT is applicable and there is no requirement for the RPO to disseminate the results of the project. Cash from contract research projects cannot be counted towards the industry cost share. Although SFI recognises that these are important activities in which the Research Centre can engage with industry partners, they are not viewed as Collaborative Research Projects in which the industry partner is making an intellectual contribution, the research results can be disseminated and new IP can be generated.

Membership Scheme

Research Centres may, at their discretion, choose to implement a membership scheme for industry partners engaging with the Centre. It is envisaged that a membership scheme would charge companies to participate in the activities of the Research Centre and contribute towards the running costs of the Research Centre. All funds raised through the membership scheme can be counted towards the industry cost share.

Cash Donations

Cash donations in the form of an unrestricted research grant from a company which is used to support the research of the Research Centre can be counted towards industry cost share.

Cash projections presented in the business plan must be provided in direct costs, i.e. must be net of any overhead paid to the Research Body.

In-kind contributions from both partially and wholly funded collaborative research projects can be counted towards the overall industry cost share.

Industry in-kind contributions include, but are not necessarily limited to, the following items:

- Industry scientists, engineers and technicians assigned to working on Platform Research or Targeted Projects in the Research Centre;
- Student or faculty placements with industry partners;
- Equipment;
- Software;
- Materials;
- Data.

Non-exchequer, non-commercial funding

Non-exchequer, non-commercial funding includes cash amounts (direct costs) received from international funding bodies such as Horizon 2020 and its future equivalent (FP9), Wellcome trust and the Bill and Melinda Gates foundation. Charitable donations and philanthropic sources which can be used to fund research activities within the Centre can also be included.

8. SFI Budget Request and Justification (max. 10 pages)

A high-level budget for the requested SFI contribution to the Research Centre must be provided in the table formats shown in Appendix A. There is no cap on the budget levels which can be requested. The scale of request will be considered by the review panel as part of their overall assessment, which will include consideration of value for money. Applicants must follow SFI's Grant Budget Policy. Budgets should be prepared on a project year basis (i.e., Year 1, Year 2, Year 3 etc.) at the application stage and should cover a period of 72 months (six years). The tables provided in Appendix A must be used to provide the following:

- A budget for the requested SFI contribution (direct costs) to the Research Centre budget separated into staff, equipment, materials and travel;
- A budget for the SFI contribution (direct costs) to the Research Centre Operations, Platform Research and Targeted projects;
- Projected (high-level) industry financial contributions to the Centre, both cash (direct costs) and in-kind (e.g. staff, equipment, other);
- A high-level breakdown of the projected cash contributions (direct costs) from non-exchequer, non-commercial sources.

The Operations component of the Centre budget is expected to fund some or all of the operational running costs of the Research Centre. Such costs may include, but are not necessarily limited to, personnel such as a Centre Manager, EU Grant Manager, Project Manager, Business Development personnel, Administrator, Communications, Education and Public Engagement Manager, IT technical support, as well as travel and related business expenses associated with these roles. Support for a senior position such as a CEO/Executive Director or COO (Chief Operating Officer) can also be requested but it is envisaged that SFI would support one such role. The Operations component of the Centre budget is capped at a maximum of **20%** of the SFI component of the centre Research Centre budget plus the projected industry cash cost share component.

A review of the governance structures of the Research Centres is expected following the findings of the Governance Review Advisory Committee. In anticipation of these changes, the Lead-Applicant can request a contribution towards the operation of a governance committee (fees plus travel costs). The Lead-Applicant can also request budget for a Director's discretionary fund. As part of the budget justification, a description of what the discretionary fund would be used for and how it would be allocated, is required.

Eligible costs include:

- Contributions to salaries/stipends of research staff hired specifically to carry out the research programme;
- Contributions towards salaries of operations staff (e.g. Executive Director or CEO, Centre Manager, EU Grants Manager, Administration staff);
- Materials and consumables, equipment, travel;
- Access to facilities and services not available to the applicant, including test-bed facilities for technology demonstration;
- SFI-approved access charges;

- Travel fellowships and travel costs associated with hosting senior international researchers in the proposed Research Centre;
- Directly related education and public engagement costs, including a contribution towards an EPE resource;
- Costs associated with the Research Centre Governance Committee (fees plus travel costs);
- A Director's discretionary fund.

Examples of ineligible costs include, but are not necessarily limited to:

- Contingency or miscellaneous costs;
- Entertainment costs;
- Technology transfer or patent costs;
- Legal Fees;
- Conference & workshop organisation costs;
- Journal subscriptions;
- Relocation expenses.

In addition to the direct costs, SFI also makes an indirect, or overhead, contribution to the Host Research Body, which is reflected as a percentage (currently 30%) of the "modified" total direct costs (i.e., total direct costs less the cost of equipment) of SFI's contribution. Overheads are payable as a contribution to the Research Body for the indirect costs of hosting SFI-funded research programmes and are intended to enable the Research Body to develop internationally competitive research infrastructure and support services, including contributions towards the costs of technology transfer and filing and maintenance of patents.

Note: In the original Research Centre proposal submission, letters of support from each industry partner outlining their intention to participate in the proposed Research Centre and their cash and in-kind contributions, were required. These are not required for the Phase 2 proposal. Instead 'projected' industry cost share must be provided. In section 11 of the proposal, case studies of the existing industry partners and their rationale for working with the Research Centres must be provided. The case studies must convince the review panel that the Centre has strength in its existing partnerships and has developed a strong enough track record to meet the increased targets proposed.

The following budget justification must be provided:

- Outline the required expertise for each requested researcher and justify the researcher's role in the research project;
- Include the salary scale (as per SFI Grants Team Member Budgeting Scale) for each team member. Clear and explicit justification is required for any request for an experienced post-doctoral researcher, i.e. one who will be appointed higher than Level 2A, Point 1 of the SFI team member budgeting scales;
- Justification should also be provided for requested equipment, consumables and travel;
- Where contributions to salary for administrative support roles are requested, clear rationale and justification must be provided and reference must be made to the relevant role description, HR

recruitment procedure and local Research Body salary scale. This information must be detailed in the budget justification. SFI will not contribute to the funding of any permanent core staff (e.g., funded by the HEA block grant). The following details also apply in cases where SFI contributions to Administrative Support salary are being considered:

- A description of the qualifications required for an individual to be hired, together with the expected roles and responsibilities of the post must be provided;
- Requests for non-research posts must be aligned to the relevant point on the Research Body scale;
- Appropriately detailed justification must be provided for senior administrative posts attracting substantial salaries;
- The Research Body must make provision for an open and transparent recruitment process.
- Access charges may be sought for use of infrastructure where SFI pre-approved access charge plans are in place or for use of other shared facilities or national test-beds, which are required as part of the proposed research. The requested access charges should be specified in the budget and justified in the budget justification section. The scientific rationale for undertaking such experiments should be outlined in the research description. Note: SFI funding may not be used to fund access to facilities, where access by the research community has already been provided for by alternate Exchequer funding;
- If funding is sought for use of overseas equipment/services, this should be clearly justified and the rationale for not carrying out this activity in Ireland must be provided.

9. Commercialisation Plan (max. 10 pages)

Provide a description of the Research Centre's plans and processes to transfer its existing technology into measurable IP (licenses, spin-outs).

10. Impact Statement (max. 15 pages)

In this section of the proposal, a new Impact statement should be prepared for the second 6-year term which clearly articulates the potential impact of the Centre over the longer term. It is expected that elements of this new statement will be an extension of the original impact statement and associated roadmap submitted as part of the original application for Research Centre funding, recognising that impact can be longer term, non-linear and unpredictable. Guidance can be found [here](#) and should be consulted with whilst preparing this statement. SFI regards clear and convincing impact statements as being fundamental components of competitive proposals.

When describing the potential economic Impact arising during the entire funding period, cross reference should be made to the business and commercialisation plans. The Centre should also consider and describe how a culture of entrepreneurship will be developed and supported within the Centre and how researchers will be encouraged, incentivised and rewarded for entrepreneurial activities, and how these activities in turn can underpin a variety of different impact indicators. Consideration should be given to sex / gender aspects as they relate to any potential economic and societal impact described and where relevant.

The Impact statement should describe the training and education activities proposed for the Centre. This should include both training of directly funded students (e.g., taught MSc and PhD courses) as well as wider

training and education activities in the HEI sector and the industry/commercial sector. Consideration should be given to sex/gender aspects as related to education and training activities, where relevant.

11. Industry Partner Overview

The progress report will have already described the 'benefits' to the industry partners because of engagement with the Research Centre. The proposal should focus on the needs of the industry partner as the Centre moves into its second phase. The Centre must provide a one-page case study for each industry partner involved with the Centre to date and likely to be involved going forward, describing what 'benefits' they will gain from the Centre both in the near and long term.

12. KPIs (max. 5 pages)

Projections of the KPI targets should be provided for the years 2019 – 2025 using the table provided in Appendix B. Narrative should be provided on how the KPI targets will scale as the Centre moves into Phase 2. Note: A new KPI for EPE activities, “% of team participating in EPE” is included.

13. Education and Public Engagement (max. 5 pages)

Articulate how the existing EPE strategy and plan will be expanded to support a greater engagement of non-specialist audiences with the work within the Centre. It might include:

- The vision for EPE in the centre including aims, target audiences and impacts;
- Reference to the growth in public engagement experience of staff;
- How EPE will be monitored and evaluated, including success indicators;
- The Host Research Body support for the EPE programme.

Consideration should be given to sex/gender aspects as related to education and public engagement activities, where relevant.

14. Communications (max. 5 pages)

A description of how the existing Communications plan will be expanded to build the profile of the Research Centre as a world leader.

15. Letters of Support

A letter of support from the **Research Body** of the Lead Applicant, each Co-Applicant and each Funded Investigator must be provided. These letters should comment on the infrastructure, services and support available to the proposed Research Centre. They should also name the Lead Applicant, Co-Applicant(s), and/or Funded Investigator(s) from their Research Body who are listed on the application and include an endorsement of their eligibility. The letter of support from the Lead Applicant's Research Body should also describe what services and supports will be made available to the proposed Research Centre Director.

Appendix A: Budget Tables

Provide a summary breakdown of the requested contribution to the Centre budget from SFI.

REQUESTED SFI CONTRIBUTION: RESEARCH CENTRE BUDGET							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Staff							-
Equipment							-
Materials							-
Travel							-
Total Direct Costs	-	-	-	-	-	-	-

Provide a budget summary for the Centre Operations, Platform Research and each Targeted Project in the Research Centre.

REQUESTED SFI CONTRIBUTION: OPERATIONS, PLATFORM, SPOKES BUDGET							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Operations							-
Platform							-
Targeted Project 1							-
Targeted Project 2							-
Targeted Project 3							-
Targeted Project 4							-
Targeted Project 5							-
Targeted Project 6							-
Targeted Project 7							-
Targeted Project 8							-
Targeted Project 9							-
*Targeted Project 10							-
Total Direct Costs	-	-	-	-	-	-	-

Total Centre Budget + Non-Industry Non-Exchequer Contributions:

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
	€	€	€	€	€	€	€
Industry Cash Contribution							-
Industry In-Kind Contribution							-
Requested SFI Contribution							-
Contribution from non-exchequer, non-commercial sources							-
Total Centre Budget	-	-	-	-	-	-	-

Appendix B: KPI Table

KPI	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Journal Publications						
Conference Publications						
# MSc/MEng Graduates						
# PhD Graduates						
Number of Trainee departures with industry as first destination						
% Trainee departures with industry as first destination						
# participations in major EU initiatives						
# coordinations in major EU initiatives						
# ERC awards granted						
Funding from non-exchequer, non commercial sources						
Cash in Bank						
% Industry Cost Share (cash)						
% Industry Cost Share (total)						
# spin out companies formed						
# EI commercialisation awards						
# licence agreements						
% of team participating in EPE activities						