SCIENCE FOUNDATION IRELAND

SFI Research Centres Phase 2 Programme 2018 (ADAPT, CONNECT, CÚRAM, iCRAG and Lero)

Call for Submission of Proposals

Key Dates

Call announcement	**2nd July 2018**
Deadline for Abstract submission	**30th August 2018, 13:00h Dublin Local Time**
Deadline for submission of proposals	**30th November 2018, 13:00h Dublin Local Time**
Site Reviews	**Q1/Q2 2019**
Funding Decision	**Q4 2019**

Terms of Reference

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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

> **The 2018 call for proposals for Research Centre Phase 2 funding is <u>only</u> open to the 5 x 2013 Research Centres (ADAPT, CONNECT, CÚRAM, iCRAG and Lero)**

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 2020[1] 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. Innovation 2020[2], Ireland's five-year strategy on research and development, science and technology, and the recently launched National Development Plan 2018-2027[3] (Project Ireland 2040), which is the overarching policy and planning framework for the social, economic and cultural development of Ireland from 2018 to 2040, commit to further development and scaling of the network of SFI Research Centres.

SFI Research Centres help link scientists and engineers in partnerships across academia and industry to: (1) develop internationally leading research and respond dynamically to emerging opportunities; (2) foster the development of new and existing Ireland-based companies to create innovative products leading to job creation; (3) attract industry that could make an important contribution to Ireland and its economy; and (4) through the integration of research, education and public engagement, expand educational and career opportunities in, and public understanding of, science and engineering research. The SFI Research Centres aim to exploit opportunities in science, engineering, and technology where the complexity of the research agenda requires the advantages of scope, scale, dynamism, synergy, duration, equipment, and facilities that a Centre can provide. The consolidation of research activities across higher education institutes in SFI Research Centres aims to create a critical mass of internationally leading researchers in strategic areas which become a key attractant to industry, laying the foundation for effective and productive academic and industrial partnerships. Additionally, SFI Research Centres are expected to be excellent, relevant, sustainable, and to serve as international beacons for attracting talent and leveraging non-Exchequer funding with particular emphasis on industry and EU Framework Programmes.

17 SFI Research Centres have been funded to date, including 5 which were established as a result of the 2013 SFI Research Centres call – these are referred to throughout the call document as the 5 x 2013 Research Centres and were awarded funding to run from January 2015 to December 2020. In this current call, they now have the opportunity to apply for a second phase of funding (Phase 2) for the period January 2021 to December 2026.

SFI Research Centres funded through the Phase 2 programme will be expected to contribute significantly to achieving SFI's goal, in partnership with its sister agencies and departments, of developing a dynamic research centre ecosystem that can evolve to meet the changing needs of industry and society. As such, Centres funded for a second term are expected to integrate with other SFI- and non-SFI-funded Centres, where appropriate, to maximise capabilities, outputs and industry offerings.

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[1] SFI Agenda 2020
[2] Innovation 2020
[3] National Development Plan 2018-2027 (Project Ireland 2040)

2 Programme Details

2.1 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 State[4]. SFI funds in the research areas of science, technology, engineering and mathematics (STEM). As outlined in Agenda 2020[1] the Foundation is committed to continuing its focus on funding excellent science that will deliver strongly on impact, thus realising significant benefits for the Irish economy and Irish society. Innovation 2020[2] is Ireland's five-year strategy on research and development, science and technology. This strategy sets out the roadmap for continuing progress towards the goal of making Ireland a Global Innovation Leader, driving a strong sustainable economy and a better society, underpinned by excellent research that is defined within six designated enterprise themes (ICT; Health and Medical; Food; Energy; Manufacturing and Materials; Services and Business Processes).

Proposals must either be aligned to one of the 14 Refreshed Priority Areas 2018-2023[5] that are positioned within six enterprise themes (ICT, Health and Medical, Food, Energy, Climate Action and Sustainability, Manufacturing and Materials, Services and Business Processes), or to any other area under SFI's legal remit where there is convincing evidence that there will be significant potential for economic and/or societal impact.

2.2 Research Centre Programme Objectives

The SFI Research Centres Programme aligned with SFI's overall ambition to create a dynamic research system involving researchers from academia and industry working together and in collaboration with other key stakeholders, with the ultimate goal of supporting economic and societal development in Ireland.
The specific objectives of the Research Centres 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, heath & medical, food, energy, and services & business processes) outlined in Innovation 2020[2].

- 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.

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[4] About SFI - What-we-do
[5] Refreshed Priority Areas 2018-2023

- To engage the general public and equip them with the tools to confidently understand and debate science, technology and engineering research in Ireland.
- To support Ireland's ambition to be among the most entrepreneurial countries in the world.
- To improve gender balance at all levels of the SFI Research Centres.

2.3 Research Centre Phase 2 Programme Expectations

As the Research Centres move into a second phase of funding (described as Phase 2 throughout the call document), the programme objectives will largely remain the same, however, there will be additional expectations for Phase 2 Centres and there will be a greater emphasis on industry cost share and leveraging of non-exchequer, non-commercial funding.

The additional expectations of the Research Centres Phase 2 programme are:

- To move towards a sustainable model with diverse sources of funding.
- To promote engagement with a diverse range of stakeholders, such as governmental, charitable and philanthropic stakeholders, to ensure that the research remains relevant and supports a wide range of economic and societal impacts.
- To develop research collaborations with other centres of excellence both nationally and internationally.
- To become more tightly integrated into the operations of the Host Research Bodies as the Centre evolves towards sustainability.
- To provide sustained funding of centres that can address major research challenges and drive challenge-based Disruptive Technology Initiatives to ensure that the Irish public gains substantial societal and economic benefits from high-risk, high-reward scientific research and innovation.
- To ensure that Education and Public Engagement (EPE) is strategic and embedded within the research culture of the Centre.

There are two key documents which are required as part of the submission process: Progress Report and a Proposal for Phase 2 funding. The review process will involve a detailed "look back" at the overall progress of the 5 x 2013 Research Centres from the start date of their award up until the time of submission (November 30th 2018) against the original objectives in addition to a review of the proposal for continued funding.

3 Definitions

Lead Applicant	The Lead Applicant is defined as the Scientific and Technical lead for the proposed Research Centre and must be the Research Centre Director on the Research Centre Phase 2 proposal. The Lead Applicant will have overall responsibility for delivery of the objectives of the SFI Research Centre. 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. 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. **The Lead Applicant must be the existing Research Centre Director. If there will be a change in Director, SFI must be informed at least 3 months in advance of the submission deadline.**

Co-Applicant	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. 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.
SFI Funded Investigator (FI)	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.
Official Collaborator	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 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 Phase 2 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-policies-and-guidance/eligibility-related-information/
Host Research Body	The Research Body of the Lead Applicant
'Research Centre' or 'Centre' or 'RC' or '2013 RCs'	In the context of this call document, 'Research Centre' or 'Centre' or '2013 RC' or 'RC' means one of the five research centres which were established as a result of the 2013 SFI Research Centres call. These are as follows: 1. ADAPT - Centre for Digital Content Technology 2. CONNECT - Centre for Future Networks and Communications 3. CÚRAM - Centre for Research in Medical Devices 4. iCRAG - Irish Centre for Research in Applied Geosciences 5. Lero - The Irish Software Research Centre

4 Eligibility

4.1 General Eligibility

> **This call for proposals is only open to the 5 x 2013 Research Centres, namely ADAPT, CONNECT, CÚRAM, iCRAG and Lero.**
> **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 5 x 2013 Research Centres are considering a name change for rebranding purposes, they should contact SFI at least three months in advance of the submission deadline.

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 Conditions[6]. An overview of eligibility criteria of Lead Applicant, Co-Applicants and Funded Investigators is provided in Table 1, together with guidance on investigator involvement in other Research Centres (what is permitted) – please refer to Sections 4.2-4.4 for eligibility criteria full details and descriptions.

Summary of eligibility criteria*			
Applicant type	**Senior Author Publications**	**PhD Duration**	**Involvement in other RCs – what is permitted**
Lead Applicant (Director)	≥ 10	≥ 8 years	- Not eligible to serve as Director or Co-PI in other RCs - Eligible to serve as an FI in other RCs subject to assessment of current workload and commitments - Minimum time commitment 40% to RC award
Co-Applicant (Co-PI)	≥ 10	≥ 8 years	- Not eligible to serve as a Director in other RCs - Eligible to serve as co-PI in 1 additional RC - Eligible to serve as an FI in other Centres subject to assessment of current workload and commitments
Funded Investigator (FI)	≥ 3	≥ 3 years	- Eligible to serve as Director in 1 additional Centre - Eligible to serve as Co-PI in up to 2 additional Centres but overall time commitment will be assessed

Table 1. Overview of eligibility criteria of Lead Applicant, Co-Applicants and Funded Investigators
* See sections 4.2-4.4 for eligibility criteria full details and descriptions

4.2 Eligibility criteria of the Lead Applicant and Co-Applicants

> **It is assumed that the Lead Applicant will be the existing Research Centre Director. If this is not the case, SFI must be informed at least 3 months in advance of the full proposal submission deadline.**

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

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equal accountability for the delivery of the proposed research objectives of the proposed Phase 2 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.

Up to date **CVs for all 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. The uploading of CVs will be carried out in SESAME (see Section 8- Submission).

All Lead and Co-Applicants must meet the following eligibility criteria:

Employment Status
Lead and Co-Applicants must be:
   a) Members of the academic staff of an eligible Research Body (permanent or with a contract that covers the period of the grant), or
   b) 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
   c) 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.

Mentorship
   • 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.

PhD Duration
   • The Lead Applicant and Co-Applicants must hold a PhD or equivalent for at least **8 years** by the full proposal 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.[7]

Publication Record
   • 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.
   • *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.*

Funding History
   • 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.

Other SFI awards

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[7] Applicants holding an equivalent qualification may be eligible but must seek approval from SFI in advance of submitting a proposal. See SFI Policy on PhD equivalence for further details.

- 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, subject to meeting the requirements outlined Table 1. However, their level of commitment to both Centres needs to be justified.
- Co-Applicants who are currently under evaluation in other SFI programmes, are eligible to apply for funding under this programme.
- Co-PIs of currently funded Research Centres are eligible to apply as a Co-Applicant, Funded Investigator or Official Collaborator, subject to the requirements outlined in Table 1.
- Co-Applicants may be located at a different SFI-eligible Research Body than the Lead Applicant. In this case, the grant will be administered through the Research Body of the Lead Applicant. A Co-Applicant, where applicable, must comply with the same eligibility and evaluation criteria as the Lead Applicant.

Note:
Investigators can serve as Co-Principal Investigator in a maximum of two Research Centres. Approval for an Investigator to engage as a Co-Principal Investigator in two Research Centres, either existing or prospective, will only be granted in exceptional cases and will be evaluated on an on-going basis during the lifetime of the Research Centre.

In all cases where Lead or Co-Applicants are already in receipt of significant SFI research funding (e.g. recipients of SFI Research Professorship, PI, IvP or Investigators awards, strand leaders or co-PIs on Strategic Partnerships or Research Centres), the evaluation process will examine the commitment and work load of the Lead/Co-Applicant in determining the suitability of such an arrangement. Such applicants must include strong justification for their role in the applicant group

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4.3   Eligibility criteria for SFI Research Centre Funded Investigators (FIs)

CVs are not required for FIs, but if the Phase 2 Centre is funded, more detail on new FIs will be requested at a later stage. It is expected that each Research Body will ensure that the FI eligibility criteria are met for all FIs included in the application for Phase 2 funding. FIs must satisfy the eligibility criteria by the closing date for submissions of the proposal as defined in the call document. A high level 'Proposed Funded Investigators' table should be included as part of the application (details in Appendix G of this call document).

All FIs must meet the following criteria:

- FIs must hold a PhD or equivalent for at least 3 years by the submission deadline.
- FIs must be senior author on 3 internationally peer reviewed articles. Only original research publications, and not review articles are acceptable.
- 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:
- Winning of at least one competitively awarded, internationally peer reviewed research grant.
- 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.

4.4 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.[8] 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 of proposal template) 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 in the region of €750M on scientific research, training and development. As with all public spending, it is necessary to demonstrate and articulate the potential impact and benefits of scientific research. 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. For the SFI Research Centres Phase 2 Programme, proposals will not only need to demonstrate scientific excellence, but must also clearly articulate the potential for economic and societal impact arising from the Centre. Applicants should be aware that proposals which do not demonstrate the potential to deliver impact, or which have not successfully articulated how this impact can be delivered, will not be funded through this programme, regardless of scientific excellence.

5.1 What is meant by Impact?

Impact can be described as the demonstrable contribution that excellent research makes to the economy and society. Impact embraces the diverse ways in which research-related knowledge and skills benefit individuals, organisations and nations. SFI classifies the impacts of scientific research according to 8 pillars which are underpinned by 3 thematic areas and these are summarised in Figure 1 below.

Figure 1. SFI Impact Classification

> **Applicants are encouraged to consult, Agenda 2020, Innovation 2020 and the Project Ireland 2040 strategy documents before writing their impact statement. For more information and guidance on how to successfully articulate impact, detailed information is available on the SFI website. A webinar is also available. Applicants are advised to refer to this information in advance of preparing the Impact sections of the Phase 2 proposal (progress report and proposal).**

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[8] *Please note that Research Bodies that have been approved specifically for SFI non-research programmes are not eligible to apply for funding under the Research Centres Phase 2 Programme*

5.2   Measuring and Assessing Impact

Reviewers will be asked to assess the progress on the impact objectives to date (progress report) and the potential impact and the likelihood of the delivery of that impact, as described in the Impact Statement (proposal). The relevant impact review criteria are:

- *The Impact being made by the Research Centre to date.*

- *The potential for the proposed Centre to deliver direct, measurable economic and societal impact.*

5.3   Progress against Impact and Impact Statement for Phase 2

For the Phase 2 proposal submission, applicants must 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).

In **Section 7 of the Phase 2 Proposal template,** 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[9] 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.

The main stages of the Phase 2 Proposal review process are:
1.   Postal Review
2.   Industry Cost-Share Review
3.   Site Review
4.   Oversight Panel Review

For the postal and site reviews, a separate panel of international, scientific experts will be convened for each Research Centre. 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. Typically, each individual review panel will be comprised of 6-8 distinguished scientists, engineers and individuals, some of whom have significant commercialisation and/or translational/applied/education and public engagement (EPE) experience. Expert panel members engaged by SFI are required to abide by the SFI Reviewer Code of Conduct.[10] Selection of reviewers is at the sole and exclusive discretion of SFI. Decisions resulting from the evaluation will be provided to the applicants, including relevant review comments, following the conclusion of the SFI review process. SFI shall not be liable for the release of information concerning proposals to third parties by those individuals involved in the merit review process.

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[9] http://www.sfi.ie/funding/award-management/research-impact/
[10] http://www.sfi.ie/resources/Reviewer-Code-of-Conduct_March-2017.pdf

Conflict of interest rules are applied rigorously and apply to both reviewers and applicants. Reviewers engaged by SFI are required to adhere to SFI's conflict of interest policy and immediately declare to SFI where a conflict of interest exists or arises so that an alternative reviewer may be appointed. International peer reviewers will not provide comments or scores on any application on which they have a conflict of interest.

Reviewers must adhere to high standards of integrity during the peer review process. They must not compromise the intellectual property integrity of the application and may not appropriate and use as their own, or disclose to any third party, ideas, concepts or data contained in the applications they review.

Each review 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 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 and the site review will afford the opportunity for the Lead Applicant (and Co-Applicants) to provide a rebuttal/response to the comments made*.*

In advance of each site review, SFI will conduct a review of the industry cost share results for each Centre. The Cost Share review is based on: 1] the pipeline of activity in terms of cash and in-kind commitments from industry partners, and 2] the actual cash received (cash in bank) and in-kind amounts delivered. The cash and in-kind figures (both committed and received) are verified through an audit process which is carried out by the SFI Finance Team.

The site review will take place in Q1/Q2 2018 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. In addition to making a funding decision, the site review report provides narrative and scores on the Centre's progress to date and their proposal for Phase 2 funding, as per the review criteria of the postal review. The Site Review Panel arrives at their funding decision

recommendation with reference to the following weightings: **40% on Progress, 20% on the Industry Cost Share results and 40% on the Phase 2 proposal.**

An Oversight Panel will be convened to carry out the final stage of the review process, that is, to ensure parity of practice across the site review panels and to agree a final ranked list of fundable Research Centres. The Oversight Panel will include 5-7 individuals from large-scale Research Performing Organisations, companies, international funding agencies or similar who were not involved in individual postal/site reviews. The Oversight Panel will rank the "fundable" Research Centres and will have the authority to overturn the recommendation of the Site Review Panel, where warranted.

Should circumstances arise, 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.

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7 Funding

The Centres may request funding from SFI (direct costs) over six years from January 2021 – December 2026. There is no limit to the amount of funding that can be requested for Phase 2. However, 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 and also with consideration to the Centres track record to date in securing industry and non-exchequer, non-commercial (NE-NC) funding.

The Centre Budget for Phase 2 Research Centres is defined as comprising four parts:
1) **SFI cash contribution (direct costs)**
2) **Industry cash contribution**
3) **Industry in-kind contribution**
4) **Funding from NE-NC sources (cash only)**

SFI will contribute a maximum of 33% of the Centre Budget of the Research Centre and successful Research Centres will be required to achieve and maintain a minimum 67% of leveraged funding from industry (cash plus in-kind) and NE-NC sources (cash only). 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 in accordance to the Phase 2 funding model (see Section 7.4 for further details). Failure to maintain the industry and NE-NC cost share as described above on an on-going basis may result in a reduction in or termination of SFI's contribution to the Centre Budget.

SFI expects Research Centres to comprise a mixture of large and small companies and Centres are given the flexibility to achieve the relative mix of cash and in-kind contributions in whatever fashion is most appropriate for the Centre, and the industrial areas and industry partners to which it will be most closely aligned.

For information related to intellectual property rights available to companies providing cost share contributions, refer to section 9.

The Centre budget is structured in a number of tiers as outlined in the following sections.

7.1 Operations Budget

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 only one such role. The Operations component of the Centre Budget is capped at a maximum of **20%** of the SFI and projected industry cash cost share contributions to the Centre Budget.

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. Such requests must be strongly justified and within the allowable limits of the Operations component of the Centre Budget (total operations component of the budget is capped at a maximum of 20% of the SFI and projected industry cash cost share contributions).

7.2   Platform Research

The Platform Research component of the Centre Budget is expected to fund core research activities or technologies that are necessary or valuable to the mission of the Research Centre. It is anticipated that the results of platform research will be of value to and accessible by some or all industry partners to the Research Centre, on a non-exclusive basis.

The Platform Research budget may fund core equipment or infrastructure that is common across a number of Targeted Projects (Spokes), as well as a core team of research staff, including Postdoctoral Researchers/Fellows and students (Ph.D. and Masters), as are required to develop science and technology in the key areas of the Research Centre.

Please note that the requirement from the Phase 1 2013 Call that '*Centres must cap the Platform Research component of the Centre Budget at a maximum of 30% of the Centre Budget'* is not a requirement for the 2018 Research Centres Phase 2 Call. Applicants may define an appropriate split between Platform Research and Targeted Projects.

7.3   Targeted Projects (Spokes)

Each Research Centre Spoke will contain one or more thematically related Targeted Projects. Each Targeted Project will have at least one, and perhaps a number of industry partners. Industry partners are expected to make both a material contribution to the Targeted Project (in terms of cash and in-kind contributions described above), as well as an intellectual contribution to the goals, objectives, deliverables and execution of the Targeted Project. Applicants and industry partners are encouraged to review the '*IP Protocol Resource Guide*' document[11] (available on the [SFI website](#)) when considering industry cost share levels. Targeted Projects in Research Centre proposals may be new projects with industry partners with whom the Centre already collaborates, or may be new projects with new industry partners.

The total budget allocation to the Centre Spokes is flexible and will depend on the funds allocated to other aspects of the Centre Budget, as discussed above. For each Targeted Project, suitable contracts and IP agreements between the Research Body, or Bodies, and the Industry Partner(s) must be concluded and signed within 180 days of the official start date of the Centre, as per the Letter of Offer.

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[11] http://www.sfi.ie/resources/The-National-IP-Protocal-2016.pdf

7.4 Phase 2 Cost Share Model - Industry funding and funding from NE-NC sources

Centres funded for a second term will become more sustainable, transitioning from a funding model whereby SFI funds up a maximum of 70% of the total Centre Budget in Phase 1 to a maximum SFI budget of 33% in Phase 2. The Phase 2 model shown in Figure 2 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). 20% of the total Centre Budget 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 sources (direct costs only). Of the 20% that is required from industry, at least 16.5% of the total Centre Budget must be from industry cash.
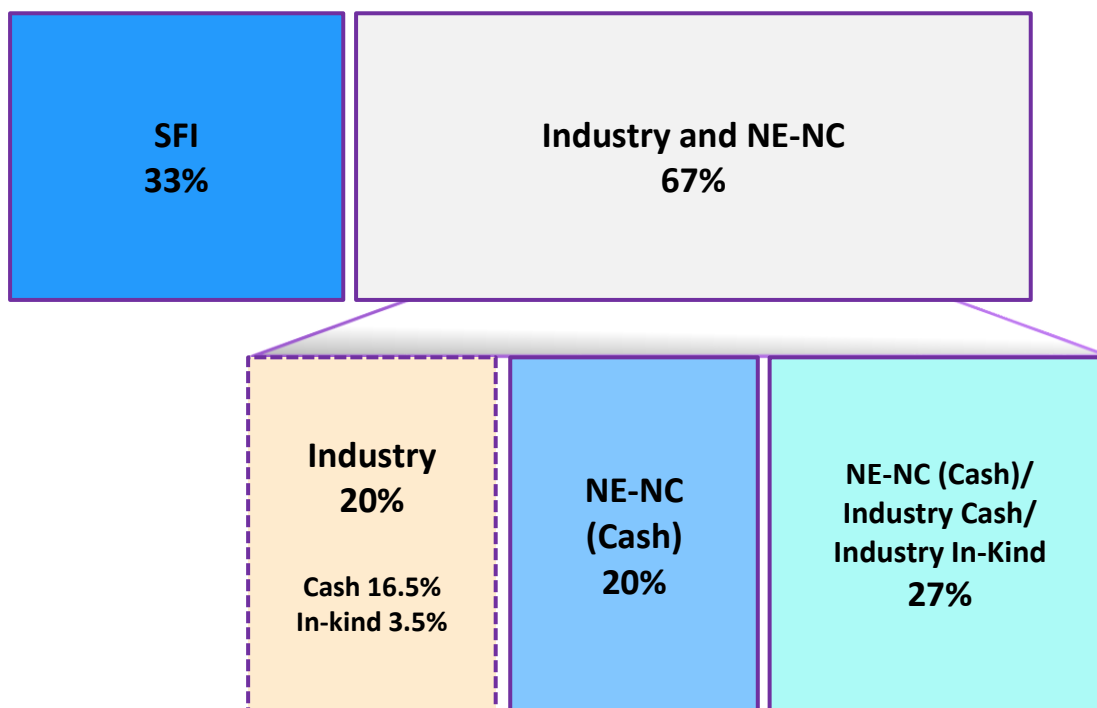
Figure 2. Phase 2 - Cost Share model

7.4.1 Industry Cost Share

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 partner 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

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.

Further details on SFI's policy with respect to industry in-kind contributions may be found on the SFI website.

Industry funding that has already been earmarked against an Irish Exchequer enterprise support (such as supports provided by IDA Ireland, Enterprise Ireland or the Irish Research Council) or International support programmes may not be counted as a qualifying contribution to the Centre Budget.

Contributions, whether in cash or in kind from Irish Exchequer sources such as other funding agencies, Government Departments or other Agencies of the State <u>cannot</u> be counted as an industry contribution. Likewise, funding from charities, not-for-profit organisations or philanthropic donations, while welcomed and encouraged, cannot be counted as an industry contribution. Such contributions should be accounted for within the NE-NC cost-share component.

7.4.2 Funding from NE-NC sources (direct costs)

NE-NC funding received from international funding bodies such as EU Framework Programmes, Wellcome trust and the Bill and Melinda Gates foundation can be counted towards the NE-NC cost share. In addition, charitable donations and philanthropic sources which can be used to fund research activities within the Centre can also be included.

7.5 Eligible Costs

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.

7.6 Overheads

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.

SFI will ask Research Bodies to clearly describe how they will support the proposed Phase 2 Research Centre, both as a partner and as a recipient of overhead funding.

8   Submission

8.1   General

> **For the 5 x 2013 Research Centres Phase 2 Programme (2018 Call) full proposal 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 a minimum of 6 weeks in advance of the full proposal submission deadline.

Please note that access to SESAME is controlled by staff at the research office of the Applicants' host Research Body. Please follow internal organisational process to request this access. If Lead/Co-Applicants are not registered with SESAME, then they will need to register through their respective Research Body before the application can proceed.

SFI's grants and awards management system, SESAME, is accessed using the Internet; no additional software needs to be installed. You can access SESAME online from any location. The configuration of some browsers and internet infrastructure (popup blockers, firewalls, etc.) can restrict an individual's access to the internet and as a result to the SESAME system. If you are having any such difficulties, please contact your organisation's internal IT support team.

> **The SESAME system is accessed using the following Internet address:**
> **https://grants.sfi.ie**

Please see the SESAME Researcher User Guide for more detailed information

SESAME enables:

- Individual researchers to apply online for SFI grants.
- Host Research Bodies to review and authorise all applications.

> **Once submitted by the host Research Body to SFI through SESAME, an application cannot be withdrawn and subsequently modified for resubmission in the same call, regardless of the date of**

8.2   ORCID ID

ORCID provides a unique identifier for all researchers, which can then be linked to their different research works across different platforms.[12] 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.

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[12] http://orcid.org/

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.**

8.3   Application Process

Lead Applicants from each of the 5 x 2013 RCs are invited to submit the following documentation:
- Abstract
- Full proposal

Note that only one application from each of the 5 x 2013 RCs is permitted.

- **The abstract should be submitted *via* email to centres@sfi.ie (see Appendix A for template), by 30th August 2018, 13.00h Dublin local time.**

- **Full proposals must be submitted online through SESAME to SFI by the Research Office of the Lead Applicant's research body <u>before the call deadline</u>, 30th November 2018, 13.00h Dublin local time.**

> **Applicants are strongly advised to familiarise themselves with the [SESAME Researcher User Guide](#) before they submit their full proposal to SESAME. Applicants should closely follow the instructions provided below.**

Full proposal submission requirements:
- **All text in uploaded PDFs** 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.
- Uploads in SESAME must be submitted in **Adobe or Microsoft PDF format only**
- The number of pages in uploads <u>must not</u> exceed the specifications for any given section. **Applications that do not comply with these requirements will be deemed ineligible and will be returned without review**.
- Unsolicited appendices or other unsolicited documentation are not permitted. **Applications that include such unsolicited documentation will be returned without review.**
- 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.**

8.4   Full Proposal Submission

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 C
- **Phase 2 Proposal** using the template provided in Appendix F

Full Proposals must be received by SFI through SESAME no later than **13:00h (Dublin local time) on 30th November 2018**.

Step 1:
Acknowledgement of Eligibility Criteria
Applicants will be asked to confirm that they have read and understood the eligibility criteria for the 2018 Research Centres Phase 2 Programme Call. The application cannot proceed until this acknowledgement is confirmed.

Step 2:
Full Proposal Information Entry
The Lead-Applicant will be able to edit this information as outlined below:

8.4.1   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.

Primary Priority Area
Select one of 14 Refreshed Priority Areas 2018-2023 which best aligns with the RC's activities. (This field replaces 'NRP area' field)

Secondary Priority Area
Select one of 14 Refreshed Priority Areas 2018-2023 which best aligns with the RC's activities. (This field replaces 'NRP area' field)

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.

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.

Ethical Issues

All Applicants are required to answer questions related to ethical issues and will be guided to answer two questions initially:

1. "*Does your research involve the use of animals*?"
2. "*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](#).

Ethical Issues:

<u>All applicants</u>, 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.

8.4.2 Lead Applicant Details

It is assumed that the Lead Applicant will be the existing Research Centre Director. If this is not the case, SFI must be informed at least <u>3 months</u> in advance of the full proposal 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. 7 pages)

A CV of the Lead Applicant, using the template provided in Appendix B, 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. In addition, the Lead Applicant must provide a statement on current commitments and workload in Section 3 of the CV template. 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.

8.4.3   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:

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. 7 pages)

A CV for each Co-Applicant, using the template provided in Appendix B, 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. In addition, the Co-Applicant must provide a statement on current commitments and workload in Section 3 of the CV template. The CV must be uploaded in pdf format.

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.

8.4.4 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.

Please note that CVs for Funded Investigators and academic/industry collaborators are <u>not required</u> as part of this Call. CVs for FIs will be requested at a later stage if the application is successful to ensure that the FI eligibility criteria are met.

> **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. The Research Body Letters of Support should contain a description of the institutional policy regarding management of such conflicts.**

8.4.5 Main Body of Proposal

Keywords (max. 15)
List a number of descriptors (max. 15) that best characterise the subject of the 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 C**
2. **Phase 2 Proposal using the template provided in Appendix F**

> **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 (€).**

8.4.6 Research Funding History

The Lead-Applicant and all Co-Applicants must list any prior research funding that has been received since the award of their PhD or equivalent qualification. **Research funding may be added directly to**

the application or added from the applicant's profile (see the SESAME Researcher User Guide)[13]. 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. 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.

8.4.7 SESAME Budget Information

The budget section on SESAME is to be completed

Note that a detailed budget justification and budget tables are to be included as part of the Phase 2 Proposal PDF (using templates provided). For further details on the funding and budget justification see section 7 of the call document and section 13 of the proposal template.

8.4.8 Excluded reviewers

Up to three individuals may be excluded from acting as reviewers of proposals for reasons of competition. In addition, for planning purposes, such information will be requested outside of SESAME as part of the abstract submission step. The excluded reviewers (maximum of 3 individuals) named in the abstract must match those included in the full proposal submission on SESAME.

8.4.9 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 Conditions (GT&Cs).[14] Submission must only be made by an authorised Research Body representative.

In particular, the Research Body is approving:
 Eligibility of the Lead Applicant, each Co-Applicant and Funded Investigator;
- That the Lead Applicant, each Co-Applicant and Funded Investigator 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.

8.4.10 View Proposal Prior to Submission

The PDF of the Full Proposal submission (through SESAME) should be reviewed prior to submission to enable validation of an application. The responsibility lies with the Lead Applicant in this regard. The Lead Applicant and Host Research Body will receive a notification from SESAME periodically when the status of their proposal changes. Alternatively, the status of a proposal (e.g., where a proposal is under review at SFI) is displayed in SESAME.

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[13] http://www.sfi.ie/funding/award-management-system/1-SFI_SESAME_User_Guide_-_Researcher-v_6_12.pdf
[14] http://www.sfi.ie/funding/sfi-policies-and-guidance/sfi-general-terms-and-conditions/SFI-2017-Grant-Terms-Conditions-V3-.pdf

8.4.11 Declaration

It should be noted that submission of an application represents an agreement to SFI's Grant General Terms and Conditions (GT&Cs).[14] Applications that fail to comply with SFI's Grant General Terms and Conditions, or with requirements outlined in this call document, will not be eligible and will be withdrawn without review.

8.4.12 Deadlines

The abstract should be submitted *via* email to centres@sfi.ie, by 30th August 2018, 13.00h Dublin local time.

Full proposals must be submitted online through SESAME to SFI by the Research Office of the Lead Applicant's research body before the call deadline.

Full proposals must be received by SFI no later than 13:00h (Dublin time) on 30th November 2018.

After the submission deadline, applications will not be accepted by SESAME and therefore, they will not be reviewed by SFI.

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9   SFI Policies and Positions

In addition to complying with the GT&Cs, applicants are expected to be familiar and consult with SFI policies/positions and with all relevant national policies when preparing their application to any SFI programme. The following is a non-exclusive list of relevant policies; it should be noted that these are reviewed and updated from time to time:

Clinical Trials

Research programmes that include clinical trials as part of the study (see Section 5.6) 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).

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 HRPA's position on the use of animals in research.

Research Integrity

SFI places paramount importance on ensuring that the highest standards of research integrity underpin all aspects of the research that it supports. To this end, SFI endorses the **National Policy Statement on Ensuring Research Integrity in Ireland**[17]; that is, all institutions and SFI award holders are expected to abide by this policy statement and the **European Code of Conduct for Research Integrity**.[18]

Good research practices are based on fundamental principles of research integrity. As such applicants should consider how they will support good research practices in training, supervision and mentoring, research protocols, data practices and management, collaborative working and publication /

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[15] http://www.sfi.ie/funding/sfi-policies-and-guidance/ethical-and-scientific-issues/
[16] http://www.sfi.ie/resources/SFI-Policy-on-the-Use-of-Animals-in-Research_June_2016.pdf
[17] http://www.iua.ie/wp-content/uploads/2014/06/National-Policy-Statement-on-Ensuring-Research-Integrity-in-Ireland-2014.pdf
[18] http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf

dissemination, and outline these supports in a short statement (max. 1 page), submitted as part of their Phase 2 proposal (Appendix J).

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**.[11] 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,**[20] applicants are advised to demonstrate that they have considered any potential sex/gender aspects in their proposed research programme.

The strategy also sets out a target for 30% of SFI's portfolio of award holders to be female and for research teams to be composed of at least 40% of each gender by 2020. As such, applicants should consider how these targets can be achieved at all levels of the Research Centre.

Appeals Process

This policy establishes procedures and responsibilities for the appeal of the declination of a proposal by SFI.[21]

State Aid

All SFI funding granted under this call will be subject to, and must be compliant with, State Aid law. As such, proposals must be designed to ensure that any funding received from SFI does not, directly or indirectly, give rise to the granting of State Aid. Potential applicants are referred to the 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)**.[22] If in any doubt as to the interpretation or application of this guidance, potential applicants are advised to seek independent legal advice.

Child Protection

Where relevant, applicants and Research Bodies are required to comply with the provisions of the **Children First Act 2015**,[23] and the **National Guidance for the Protection and Welfare of Children 2017**.[24] It is the responsibility of the Research Body to ensure that they are compliant with all applicable law.

Data Protection Policy

The General Data Protection Regulation[25] is a legal framework that sets out guidelines for the collection and processing of personal information of individuals within the European Union.[26]

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[19] http://hea.ie/assets/uploads/2017/04/national_framework_for_doctoral_education_0.pdf
[20] http://www.sfi.ie/resources/SFI-Gender-Strategy-2016-2020.pdf
[21] http://www.sfi.ie/funding/sfi-policies-and-guidance/other/
[22] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0627(01)&from=EN
[23] http://www.irishstatutebook.ie/eli/2015/act/36/enacted/en/pdf
[24] http://www.tusla.ie/uploads/content/Children_First_National_Guidance_2017.pdf
[25] https://www.dataprotection.ie/docs/GDPR/1623.htm
[26] https://www.eugdpr.org/

Applicants are advised that they must be compliant with this regulation if they collect or process personal data.

SFI may collect, use and disclose personal data provided in the application and/or otherwise obtained under, or in connection with, the application for processing the submission, for the performance of its statutory powers and functions, and for the general activities of SFI. Further details regarding SFI's collection, use and disclosure of personal data, and the rights of individuals with respect to any personal data held by SFI, are available in the **SFI Privacy Statement**.[27]

During peer-review procedures, information may be sent to external experts in countries outside of the European Economic Area, including countries that are not recognised by the European Commission as having adequate data protection laws. By submitting an application to SFI, the Research Body and members of the Research Team are agreeing that they consent to the processing and transfer of personal information in this way.

During the application process or at any time thereafter, SFI may contact the Research Body, the Principal Investigator, or any member of the Research Team with regard to funding opportunities, activities or events organised by SFI or other relevant bodies, or for the purposes of monitoring and evaluation (including, but not limited to, the collection of scientific data or data relating to the application process). SFI may choose to authorise a third party to contact the Research Body, the Principal Investigator or any member of the Research Team on its behalf.

Conflict of Interest

SFI recognises that applicants may have a prior relationship with an industry partner engaged in an application for funding to SFI (e.g., industry consultancy role, founder of an academic spin-out 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 SFI and their Research Body and that any such situations are managed by the Research Body in accordance with the principles and mandates laid out in the National Intellectual Property Guidelines.[28]

Potential conflicts of interest with respect to industry collaborators/partners named in the Research Centres application must be declared and the Research Body Letters of Support must contain a brief description of the institutional policy regarding management of such conflicts.

Open access

Where a research publication arises in whole or in part from SFI funded research (i.e. where one or other of the researchers concerned receives SFI funds in support of their endeavours), the **SFI Open Access Availability of Published Research Policy**[29] should be adhered to. SFI monitors compliance with this policy through its Annual Stocktake of Research Outputs.

Data Management

Good data governance and stewardship are key components of good research practice. Applicants are required to submit a Data Management Plan to accompany their Phase 2 proposal and it is suggested that they consult with Science Europe's new framework for discipline-specific research data management (http://scieur.org/guidance-rdmps) in advance of doing this although SFI will not be prescriptive in this regard – see Appendix K for further details.

Science Foundation Ireland is part of an initiative for the voluntary international alignment of research data management policies https://www.scienceeurope.org/policy/policy-areas/research-data/rdm-initiative/. This initiative is being led by Science Europe and the Netherlands Organisation for Scientific

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[27] http://www.sfi.ie/privacy/
[28] http://www.sfi.ie/resources/The-National-IP-Protocal-2016.pdf
[29] http://www.sfi.ie/resources/open-access-dec-10.pdf

Research (NWO) and is exploring ways to establish core research data management requirements and identify trusted repositories where researchers can store their data for sharing.

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.

10 Progress Reporting Requirements

The Research Centre must continue to follow the reporting requirements set out by SFI[30].

11 Further Information

Frequently asked questions (FAQs) are available on the call webpage of the SFI website. For all additional queries please contact: centres@sfi.ie

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[30] http://www.sfi.ie/funding/award-management/research-centres-award-management/

Appendix A: SFI Research Centres Phase 2 Abstract Sheet

PROGRAMME NAME: SFI Research Centres Phase 2 Programme 2018	CLOSING DATE FOR RECEIPT OF ABSTRACTS 30th August 2018, 13:00h Dublin, local time
TITLE OF PROPOSAL Research Centre Acronym_Phase 2 *(e.g. ADAPT_Phase 2)*	
NAME OF HOST INSTITUTION	**FULL NAME OF LEAD APPLICANT**
CO-APPLICANTS (CURRENT AND PROSPECTIVE) *Include name and Research Body for each Co-Applicant*	
FUNDED INVESTIGATORS (CURRENT AND PROSPECTIVE) *Include name and Research Body for each Funded Investigator*	
EXCLUDED REVIEWERS (UP TO THREE INDIVIDUALS MAY BE EXCLUDED FROM ACTING AS REVIEWERS) *Include name and institution*	
SCIENTIFIC ABSTRACT (MAXIMUM 2 PAGES, MINIMUM FONT SIZE 12, TIMES NEW ROMAN OR SIMILAR) *Overview of vision and research themes/strands for the Phase 2 proposal.*	

Note:
- There is no page limit on the abstract cover sheet sections except for the scientific abstract section. The total length will depend on numbers of co-applicants and FIs, current and prospective.
- There is a **2-page limit on the scientific abstract section**

Appendix B: Applicant CV Template

Max. 7 pages

To be used for the Research Centres Phase 2 2018 call.

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

Minimum Font Size 12, Times New Roman or similar.

Three sections should be completed for each Lead/Co-Applicant CV:
1. **Applicant Details (max. 3 pages)**
2. **Publication Details (max. 3 pages)**
3. **Time Commitment Statement and Conflict of Interest Declaration (max. 1 page)**

CV length – maximum 7 pages total

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 **<u>up to five</u>** 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 **<u>specific role was played by the applicant</u>**, 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 **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. **<u>Note that publications where the applicant claims joint-first authorship will only be accepted as senior-author publications where the article clearly verifies this</u>**.*

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 <u>relevant to this application</u> may also be listed.

SECTION 3 – Time Commitment Statement and Conflict of Interest (CoI) declaration (max 1 page)

- **Max 1 page**; include as Section 3 of the CV
- Where Lead or Co-Applicants are already in receipt of significant SFI research funding (e.g. recipients of SFI Research Professorship, PI, IvP or Investigators awards, strand leaders or co-PIs on Strategic Partnerships or Research Centres), the evaluation process will examine the commitment and work load of the Lead/Co-Applicant in determining the suitability of such an arrangement. The time commitment and workload statement of the CV should describe such commitments and include strong justification for their role in the applicant group.
- Where relevant, a declaration on potential conflicts of interest with respect to industry collaborators/partners named in the Research Centres should be provided. See Section 9, SFI Policies and Positions of the call document for further details.

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 other than those indicated or other unsolicited documentation are not permitted.

Viewing the PDF of your application prior to submission allows you to verify content.

There is no system validation on multiple upload file fields as the number of documents required may vary for each application.

It is the responsibility of the Lead Applicant to ensure that all documentation is included and that page lengths are not exceeded

Appendix C: 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 5 x 2013 Research Centres; a Progress Report and a proposal for Phase 2 funding. The template for the **Progress Report** is provided in this Appendix C.

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. 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 postal reviews of the Progress Report will be circulated to the Centre Directors and the Centre will be afforded the opportunity to respond to the postal reviews during the site visit.

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

> **Within the** <u>**Progress Report**</u> **document include:**
> - **The completed Progress Report template (sections 1-12)**
> - **Additional documents/appendices:**
>   - **US-Ireland Centre-to-Centre Partnership Award, where relevant (template in Appendix D)**
>   - **Spokes Programme Awards, where relevant (template in Appendix E)**
>   - **KPI results table up to end H1 2018, as validated by SFI. Include at the end of the progress report document**

> **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 other than those indicated or other unsolicited documentation are not permitted.**
> **The currency to be used is the Euro (€).**

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 (Phase 1).

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 the Research Centre with regard to academic collaboration, industry partnership and operating as a collective, than it would have done if a number of individual awards had been made (i.e. the added value and synergy enabled by a Centre award).

This section should address the following, but is not limited to:

- 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 provided economic impacts for Ireland e.g. how has the Centre increased industry and commercial investment in R&D? Attracted large Foreign Direct Investments in corporate R&D laboratories?

- Describe commercialisation and technology transfer achievements.

- How has the Centre leveraged funding from NE-NC sources?

- Describe achievements relating to Education and Public Engagement.

- 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 benefited the Irish research system and their own (company) interests?

In this section, please reference the Centres performance in meeting/exceeding targets set against its minimum and ambitious KPIs.

Also, please reference what 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?

Note: The KPI results up to end H1 2018, as validated by SFI, should be included as an Appendix to the progress report. Please include this at the end of the progress report document. Reference can be made to outputs in H2 2018, where relevant, within the Progress Report document. The validated H2 2018 KPI results will be provided to the review panels in advance of the site visits.

2. Summary of 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 2013 call.

Questions to be addressed should include, but are not limited to:

- Have the overall 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, 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 team cohesiveness and added value of the RC team.
- 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)

A brief description of the existing Centre governance and management structure should be provided and the following points should be addressed in this section:

- 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 overseas good laboratory practices and research integrity.
- Describe how the Centre manages, implements and evaluates mentorship across all levels of the organisation.
- Describe the governance and management structure with respect to composition (gender balance etc.).

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.
- 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.
- Describe how the Research Bodies have implemented measures for redressing gender imbalance.

A condition of initial funding was that the Research Body leading the Centre would prepare an Inter-Institutional 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. As such a description should be provided on 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 C2C 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 original research programme aims should be referenced where applicable and any changes in direction highlighted.

In this section, consideration should be given to the outputs and impact arising from:

- o Platform projects;
- o Targeted projects with industry partners.

The following must be addressed:

- What are the 3 most important research 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 produced publications with industry as co-authors and/or patent applications with industry as co-inventors? If so, describe how these have been regarded by the wider community, with reference to citations and industry downloads.
- Consideration should be given to outputs and impacts from associated projects funded through Horizon 2020 and other NE-NC funding sources.

Note:

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

Spokes awards: For Centres that have secured Spokes awards, please provide a separate report for each award under the headings provided in Appendix E.

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 for research programme section 6 (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, with reference to their original objectives, 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? Provide details of their innovation pathway as appropriate.
- How has the Centre performed against its commercialisation relevant KPI targets?
- How has the Centre developed a broader entrepreneurial culture throughout the partnering RPOs?

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.
- 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.

In addition, as part of section 8:
- Provide a number of **industry partner testimonials*** which can be used by SFI for future Public Relations activities. The testimonials should address the following:
  - The benefit to the company of the collaboration – statement of why they are involved (provide specific details - new products/services, increase in jobs, access to expertise, training, recruitment, etc.)
  - The benefit to Ireland resulting from the collaboration – new activities being conducted in Ireland by the company, new investment in Ireland, new spin-offs in Ireland, etc.
  - The testimonial should not simply be a reference to a good working relationship with the Centre. It should reference a benefit to working with the Centre, for example "*Through engagement with the Centre, we have employed an additional 20 people in our Irish site*". SFI is cognisant of concerns around confidentiality of industry partners and in respect of this, you are asked to provide a number of industry testimonials, these are not required for all industry partners. **Testimonials from new potential industry partners to further 'endorse' the planned research for the Phase 2 proposal are <u>not</u> allowed**

*Testimonials will be published and will be used by SFI for future Public Relation activities and potentially other things such as the SFI annual report, flyers, brochures etc. Most importantly, the testimonials will be used to demonstrate the benefit of the government investment in Research Centres, to our own department, the Department of Business, Enterprise and Innovation (DBEI), as well as other departments where necessary. SFI is often asked for soundbites which demonstrate the benefit that industry is getting from the state investment into SFI Research Centres. As these testimonials will be published, the industry partner must agree that they can be used and the name of the industry partner needs to be referenced in the testimonial. A signed testimonial on industry letter headed paper is not required but the industry partner must be aware that the testimonials will be published. The name of the person in the company is not necessarily required but the company name is. The testimonial should be in the form of a quote provided by the company.

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" (NE-NC) target.

The following must be addressed/provided:

- Provide an overview of NE-NC 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 NE-NC targets and how that strategy has evolved. Describe any challenges that have been overcome on this journey. Applicants are invited to consider, but not limited to, the following in addressing this section:
  - The European Research Area (ERA) and providing examples of how the Centre has helped create opportunities for funding or influenced policy development.
  - Examples of how the Centre has worked with Irish or international business to contribute to the development of Horizon 2020 work programmes.
  - How international funding has enhanced the Centre's outputs and reputation.
  - 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/ - further details are provided in Section 5 of the call document.

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, including how the Centre's activities have informed the research roadmaps of industry.
  - 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.
    - For example, 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?
  - Development of the country's international reputation.
  - If relevant, provide details of contributions towards new ICT standards/specifications.

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 the report addressing the following detail for the Centre's EPE plan:

- Outline the overall strategy and objectives for the EPE plan.
- Outline core activities within the plan to deliver these objectives, 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 the challenges encountered, the causes and how they were overcome, giving supporting examples.
- Give a brief description how the Centre evaluates activities, with supporting examples, including details on methodology, findings and how the findings informed the programme further.
- Outline key accomplishments and highlights from the EPE plan.
- 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)

Provide an overview of key national and international communications/marketing actions undertaken to build the profile of the Research Centre as a world leader. The following can be included:

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

Appendix D: US-Ireland Centre-to-Centre Partnership Programme Awards

Max. 10 pages per award including list of publications

> **Do not exceed a page limit of 10 pages per C2C partnership award, <u>inclusive</u> of publications**

Provide a detailed summary of each US-Ireland Centre-to-Centre (C2C) Partnership Award associated with the Research Centre. Refer to specific outputs that have arisen directly from the award and include funding acknowledgements for referenced outputs, where possible. Relevant publications/outputs should be discussed in the context of the research being described.

Within the detailed summary, the following information must be included:

Investigator details
- Details for the lead Principal Investigator of the C2C partnership within the Centre (RoI).
- Details for the lead Principal Investigator and Engineering Research Centre (United States, US).
- Details for the lead Principal Investigator and their associated Centre (Northern Ireland, NI).

C2C Partnership award overview
- 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 the added value of the partnership, outlining the strategic importance of the collaboration to the Research Centre.

Progress and outputs
- Information on achievements of the partnership to date and the role of the US and NI partner(s).
- A description of the research work carried out by the RoI partner(s) to date.
- A description of the research work carried out by the US partner(s) to date.
- A description of the research work carried out by the NI partner(s) to date.
- Details of exchange visits between RoI, NI and the US during the reporting period.
- 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.

Note: SFI is primarily interested in the activity and progress of the RoI 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.

Appendix E: Spokes Programme Awards

Max. 10 pages/per Spokes Programme award including list of publications

> **Do not exceed a page limit of 10 pages per Spokes Programme Award, <u>inclusive</u> of publications**

Provide a detailed summary of <u>each</u> Spokes Programme Award that has 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 described.

- Provide information on the goals of the Spoke (i.e. 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 the achievements to date.
- Describe the role of the industry partner(s).
- Outline the benefits to industry partners from this project.
- 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 details of publications and other outputs arising directly from the Spokes award, clearly highlighting high-impact publications and publications co-authored with industry.

Appendix F: Phase 2 Proposal Template

The template for the **Phase 2 Proposal** is provided in this Appendix F.

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. 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. Each Centre will be afforded the opportunity to respond to these postal reviews during the site visits.

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

> **Within the <u>Proposal document</u> include the following:**
>
> - **The completed proposal template (sections 1-13)**
>
> **Additional documents/appendices:**
>
>   o **Investigator details - tables (templates in Appendix G)**
>
>   o **Budget tables (templates in Appendix H)**
>
>   o **KPI table (template in Appendix I)**
>
>   o **Good Research Practice statement (template in Appendix J)**
>
>   o **Data Management Plan (template in Appendix K)**
>
>   o **Research Body Letters of Support (guidance in section 14 of proposal template)**

> **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 other than those indicated or other unsolicited documentation are not permitted.**
> **The currency to be used is the Euro (€).**

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, inclusive of the Centre's vision for Phase 2, and how the Centre plans to evolve with respect to the current state of the art. Key problems and challenges in the research area should be considered, along with of the limits of current practice and of the relevant seminal and recent work in this space.

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

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.

- 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.

- An outline of plans to expand the pool of PIs, for example through the SFI Research Professorship and Future Research Leaders programmes. This should include a description of the impact that the new PI/FI will have on the operations or research activities of the Centre.

- 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, with reference to the targets set out in SFI's Gender Strategy.

Note that a statement on current workloads/time commitments should be provided by the Lead- and each Co-Applicant in section 3 of the CV template (Appendix B).

Note in Appendix G, there is a template for Funded Investigator details which should be completed and included as an appendix to the proposal. A high-level summary table on the applicant group and gender breakdown should also be included in this appendix using the table format provided.

3.   Governance and Management (max. 5 pages)

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.

Within this section, the anticipated composition of the Governance Committee should be described and how it will evolve in Phase 2 to oversee the strategy of the Centre.

The success of the Research Centres programme is dependent on the partnership between Science Foundation Ireland, the Research Centre and the host and participating Research Bodies. The Research Centres Partnership Agreement (RCPA) defines the partnership between Science Foundation Ireland, the SFI Research Centres and the host Research Bodies, detailing the roles, responsibilities and expectations of SFI, the Research Centres, their Governance Chairs, and the Research Bodies. The RCPA is expected to be published Q3 2018 and should be considered when preparing this section of the proposal.

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.

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;

- Describe how the host Research Body will continue to support the Centre Director;

- Describe the reporting structure which has been / will be put in place within the Research Body.

- Describe how the Research Body plans to support the Centre in redressing gender imbalance during Phase 2. This can include reference to initiatives described in applications for Athena SWAN accreditation.

When preparing this section, consideration should be given to the RCPA (described in Section 3).

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 (see Section 14 - 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 will meet 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. 40 pages exclusive of references)

The Phase 2 Proposal must provide detail on the future research direction as the Centre moves into its second phase. **Note: Any change in research direction from Phase 1 must be highlighted and justified within this section, and explanations provided on research areas that are no longer being pursued and why.**

In this section the following must be included*:*
- An outline, at a high-level, of 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.
- 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. SFI acknowledges that the aims, objectives and milestones of each Targeted Projects may not be known. If they are not known, please provide a high-level overview of the type of Targeted Project that will form the basis of your business plan.

- Convincing evidence as to why the proposed research is relevant, timely and novel.
- **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. (SFI acknowledges that this may not be possible at the project level given the fact that Targeted Projects may not yet be defined. However, based on the Centre's experience to date, a high-level risk management plan <u>must</u> be provided).
  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.
- Describe a few exemplar projects (e.g. one example project for each research theme) so that the quality of the research proposed can be further assessed by the review panel.

Note: A Good Research Practice statement (max 1 page) and Data Management Plan (max 2 pages) are to be submitted as an appendix to the proposal document. See Appendices J and K for templates/guidance.

References relating to the research programme (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.   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 aspects 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 has observed that impact statements which are clearly articulated and present a convincing case are key components of competitive proposals.

The impact statement should be as specific as possible and should provide information that external reviewers will find helpful in assessing the potential impact of the proposed research activity. Appropriate plans, milestones, and deliverables associated with delivering the potential impact may also be included. Plans to utilise appropriate SFI and other funding sources to assist with achieving impact should be included if relevant. However, considering that impact is a key review criterion, applicants are advised to make full use of the space provided to make a strong, unambiguous, and realistic impact case with appropriate emphasis and an objective view on how long it may require for the potential impact(s) to be fully realised.

The impact statement should be written primarily in lay, non-technical language. It should be as specific and comprehensive as possible, and it should describe potential economic and societal impacts by answering the following overarching questions:

- Who will benefit from this research? (academic partner(s), industry partner(s), public, policy makers, other stakeholders)?
- What plans will you put in place to increase the chances of economic and societal impacts from the proposed research?
- When will there be a benefit from this research? (i.e., over what timeframe might the expected benefits of the proposed research programme be realised)

- What is the competitive "edge" of the proposed Research Centre? (e.g. novelty, innovation, ability to create synergistic opportunities, ability to become world leading)
- How will stakeholders benefit from this research?
- Where will the benefit of this research be realised? (e.g., Ireland, Europe, market sectors)

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. Entrepreneurship is recognised as a powerful driver of economic growth and job creation. The **National Policy Statement on Entrepreneurship**[31] in Ireland published in 2014, sets out a number of strategic objectives to support Ireland's ambition to be among the most entrepreneurial countries in the world. SFI Research Centres can play a significant role in this ambition.

Additionally, the impact statement should describe the training and education activities proposed for the Centre. This should include both the training of students directly funded through the Centre (e.g., taught MSc and PhD courses) as well as the wider training and education activities of the centre in the HEI and industry/commercial sectors.

> **Applicants are encouraged to consult, Agenda 2020, Innovation 2020 and the Project Ireland 2040 strategy documents, in addition to the Small Advanced Economies Initiative - "Broadening the Scope of Impact" document before writing their impact statement.**
>
> **For more information and guidance on how to successfully articulate impact, detailed information is available on the SFI website. A webinar is also available. Applicants are advised to refer to this information in advance of preparing the Impact sections of the Phase 2 proposal (progress report and proposal).**

8.   Business Plan (max. 25 pages)
This business plan section is divided into two parts:
  8.1   Cost share (Industry and NE-NC funding)
  8.2   Commercialisation

8.1 Cost-share
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 NE-NC sources (cash only)**. Of this 67%, a minimum 20% of funding must come from industry and a minimum 20% of funding from NE-NC sources. The remaining 27% can come from industry (cash or in-kind) or NE-NC sources. **There is a minimum requirement of 16.5% of industry cash funding.**

The cost share model for Phase 2 funding has been described in detail in Section 7.4 of the call document.

The cost share section of the business plan must describe plans to scale towards the cost share model outlined in Section 7.4 by the end of the second phase of funding, i.e. December 2026. The plan should include details of 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.

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[31] https://dbei.gov.ie/en/Publications/National-Policy-Statement-on-Entrepreneurship-in-Ireland-2014.html

8.1.1 Industry cost-share

For details on industry funding which can be counted towards industry cost share, see Section 7.4.1 of the call document.

The following must be addressed/provided within the business plan (industry cost-share section):

- Describe the strategy which will be adopted to achieve the cost share and how that strategy has evolved from Phase 1.
- Described how the projected cost share will be achieved.
- How will activities such as acquisition of new partner companies and projects, licensing of IP, development of spin-outs, etc. be enabled and what resources will be required to do so?
- Describe the key performance indicators and targets related to the execution of the business development plan.
- Provide an overview of plans to achieve industry cost share, cash and in-kind.
- A risk analysis of the business plan towards meeting the required cost-share.

8.1.2 Non-exchequer, non-commercial funding

This section of the business plan must enable the review panel to assess the plans and ultimate success of the Centre in achieving its cost share funding requirements from NE-NC sources for Phase 2. NE-NC funding includes cash amounts (direct costs) received from:

- EU Framework programming
- Other international funding bodies such as Wellcome Trust and the Bill and Melinda Gates Foundation
- Charitable donations
- Philanthropic sources

Applicants are invited to consider, but not limited to, the following within the NE-NC funding section of the business plan:

- EU Framework programme funding

    - Influencing future European funding programmes.
    - Plans to coordinate multi-national collaborative research projects.
    - Plans to ensure high participation rates of PI/FIs.
    - Training/mentoring of staff for European funding proposals.
    - Plans for engagement with industry to help secure European funding.

- Other international funding bodies

    - Describe the Centre's strategic approach to leveraging funding from NE-NC sources outside of the EU Framework programme.

- Charitable donations and Philanthropic sources

    - Describe the Centre's strategic approach to leverage funding from charities, not-for-profit organisations or philanthropic sources.

8.2 Commercialisation

The commercialisation section of the business plan should describe the Research Centre's commercialisation plans, processes and overall strategy during Phase 2, inclusive but not limited to the following:

- To spin out new, high-technology start-up companies that have the potential to grow and raise external angel or venture funding.

- To transfer technology, through licences, to Irish based companies, both indigenous and FDI, ranging from Small and Medium Enterprises (SMEs) to large Multinational Companies (MNCs).
- To transfer knowledge, expertise and know-how to MNCs and SMEs based in Ireland.
- To further support an entrepreneurial culture within Irish Research Performing Organisations.

9.   Industry Partner Engagement

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 Industry Partner Engagement section will comprise of 2 parts:
9.1   Industry engagement overview (**max. 2 pages**)
9.2   Industry partner case studies (**max. 1 page** per case study, no limit on # of case studies)

9.1   Industry engagement overview (**max. 2 pages**)
Provide an overview of the industry engagement strategy including engagement with partners currently involved in the Centre and plans for engagement into Phase 2.

9.2   Industry partner case studies (**max. 1 page per case study**)
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. The case studies must come from the **existing industry partners** who have already worked with the Centre and who are likely to continue working with the Centre in Phase 2. **Case studies from new potential industry partners in the Phase 2 Proposal are <u>not</u> allowed.** The case studies will not be published without prior permission being granted to SFI by the Centre and the industry partner.

The case studies will be used by the review panel to assess the strength of the existing industry partnerships with the Centre. They must give the panel confidence that the collaborations with existing partners will continue because of success demonstrated to date. It would be our expectation that the Centre Director or Manager would work with the industry partner to develop these case studies. The industry partner needs to be aware that the case studies will be shared with the international review panel.

The case study must be one page long and should provide the following

- Name of company
- Primary contact person within the company
- Location of company (or subsidiary) involved in the collaboration
- Size of company (overall and in Ireland)
- When did the collaboration begin?
- How did the company become involved in the Centre?
- Why did the company decide to work with this Centre, as opposed to other competitive Centres in Ireland or abroad?
- What is the level of investment (Cash and in-Kind)?
- Scope of the collaboration: what research work is involved and what are the contributions made by both partners?
- Scale: Number of people supporting the collaboration in the Centre and in the company (specifically mention any new jobs/roles created in the company because of the collaboration, has it developed over the years, etc.)
- Outputs and Impact: Evidence of specific outcomes from the collaborations - joint publications, products brought to market, invention disclosures, patents, licenses, additional jobs created in Ireland, further investment in Ireland, joint EU funding obtained, training initiatives, recruitment by company from Research Centre, international component, etc.

- Has the collaboration led to other research projects and/or supported further investment by the company in Ireland (specific number of jobs, level of investment, etc.)?
- Has the collaboration with the Centre grown and will it continue?

10. KPIs (max. 5 pages)

Projections of the KPI targets should be provided for the years 2021 – 2026 using the table provided in Appendix I. This KPI table should be included as an appendix to the proposal document.

Narrative should be provided on how the KPI targets will scale as the Centre moves into Phase 2.

An overview of the Centres strategic approach towards meeting the proposed KPIs should be included.

Note that the KPI for EPE activities, "% of team participating in EPE" is included.

Note also that the cost share targets should be referenced but that these will have been described in detail in the business plan section.

A KPI for Gender for Research Centres is currently in formulation, likely to be in place by H1 2019 and consideration should be given to such.

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

There is an expectation that a more strategic approach to EPE in Phase 2 is adopted, including the development of logic models for activities. In this section, articulate how the existing EPE strategy and plan will be evolved from Phase 1 and expanded to support a greater engagement of non-specialist audiences with the work within the Centre. It might include:

- A logic model for the EPE Phase 2 programme.
- 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.
- Details on host Research Body support for the EPE programme.

12. 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 should be provided in this section.

13. SFI Budget Request and Justification (max. 10 pages*)

page limit of 10 pages excludes the budget tables which should be included as an appendix to the proposal document using the budget table templates provided in Appendix H.

There is no cap on the budget levels which can be requested. However, 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).

A high-level budget for the requested SFI contribution to the Research Centre must be provided in the table formats shown in Appendix H. **Theses tables should be included as an appendix to the proposal** document 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 NE-NC sources.

The following budget justification must be provided:

A high-level overview of the research and operational staff required to run the Centre is required. SFI acknowledges that, as Targeted Projects are not yet defined, it is difficult to say exactly how many research staff are required. However, based on experience gained through the first four years of operation, a description of the types of researchers required and their salary level should be possible. If the Centre is funded for Phase 2, a more detailed review of the budget will follow. Increases in the total amount requested will not be permitted following the funding decision, but a detailed budget allocation across years and categories will be requested.

- Outline the required expertise for each requested researcher and justify the researcher's role in the research project. This must be provided for core research staff working on Platform Research Projects, it does not have to be provided for researchers working on Targeted Projects. However, based on experience gained through the first four years of operation, an estimate of the numbers of researchers required and their combined expertise should be possible.
- Include the salary scale (as per the 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. This must be provided for core research staff working on Platform Research Projects, it does not have to be provided for researchers working on Targeted Projects. However, based on experience gained through the first four years of operation, an estimate of the numbers of researchers required and their salary levels should be possible.
- Justification should also be provided for requested equipment, consumables and travel.
- Where contributions to salary for administrative support roles, inclusive of the Operations Team, 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.

> **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 <u>not</u> required for the Phase 2 proposal. Instead 'projected' industry cost share must be provided, together with projected cost-share from NE-NC sources.**
>
> **In section 9.2 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.**

14.   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.**

Each letter must include the following:

- The names of the Lead Applicant, Co-Applicant(s), and/or Funded Investigator(s) from their Research Body who are listed on the application.

- An endorsement of the eligibility of the Lead/Co-Applicants and FIs from their Research Body.

- A description of how the overhead income will support the operation, sustainability and impact of the Centre.

- A description of the infrastructures, facilities space and / or services that will need to be provided by the Research Body.

- A description of any additional support services that will be provided, for example IP/technology transfer services, HR, contracts and legal supports, by the Research Body.

- A description of the reporting structure which has been / will be put in place within the Research Body.

- Plans to redress gender imbalance in the Centre during Phase 2. This can include reference to initiatives described in applications for Athena SWAN accreditation.

- A brief description of the institutional policies regarding management of conflicts of interests in industry partners.

- Reference should be made to the RCPA – see section 3 of the proposal template for further details.

- In addition, the host Research Body Letter of Support should describe what services and supports will be made available to the proposed Research Centre Director.

Appendix G: Investigator Details

A) **Provide a summary table of #s PIs and FIs (Phase 1 and Phase 2)**

	# PIs (total)	# FIs (total)	# female PIs and FIs (total)	# male PIs and FIs (total)
Phase 1				
Phase 2				

B) **Provide a summary table with FI details (current and prospective)**

CVs are not required for FIs, but a high level 'Proposed Funded Investigators' table should be included as part of the application

Summary table with FI details (current and prospective)

Name	Involved in Phase 1 as PI/FI (Y/N)*	Research Body	Position	Year of PhD	# senior author publications	ORCID ID link	# PhDs	# Masters students	Funding History (1 example per FI which demonstrates eligibility)

*If N (i.e. if a FI is not currently a FI in the RC) – please provide the following information:

- o Research Body
- o Position
- o Year of PhD
- o Number of senior author publications (original research articles only, peer reviewed)
- o Number of PhD students graduated to-date
- o Number of Masters students (research only) graduated to-date
- o Funding history (provide details of 1 example of eligible funding). Please include grant ID where relevant
- o FI eligibility criteria outlined in Section 4.3 of the call document

Appendix H: Budget Tables

Budget figures in each table should be presented in euro (€)

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).

A high-level budget for the requested SFI contribution to the Research Centre must be provided in the table formats shown in below. Theses tables should be included as an appendix to the proposal document to provide the following:

Requested SFI Contribution – budget summary
- Provide a summary breakdown of the requested SFI contribution (direct costs) to the Research Centre budget separated into staff, equipment, materials and travel.

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	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Requested SFI Contribution – budget summary for Operations, Platform and Spokes
- Provide a budget summary of the requested SFI contribution (direct costs) 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 Summary

- Provide a summary of the total Centre Budget inclusive of the following:
  - o Requested SFI contribution (direct costs)
  - o Projected (high-level) industry financial contributions to the Centre, both cash (direct costs) and in-kind (e.g. staff, equipment, other)
  - o A high-level breakdown of the projected cash contributions (direct costs) from non-exchequer, non-commercial sources

TOTAL CENTRE BUDGET SUMMARY							
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Total**
Requested SFI Contribution							
Industry Cash Contribution							-
Industry In-Kind Contribution							-
Contribution from Non-Exchequer, Non-Commercial sources							-
Total Centre Budget	-	-	-	-	-	-	-

Appendix I: KPI Table

KPI	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Journal Publications						
Conference Publications						
# MSc/MEng Graduates						
# PhD Graduates						
# 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						

Appendix J: Good Research Practice Statement

Max. 1 page

Please submit a Good Research Practice Statement (max. 1 page) as part of your Phase 2 Proposal. This should be included as an appendix to the proposal document.

Good research practices are founded on the fundamental principles of research integrity. As such, applicants should consider how they will support good research practices in their centre through training, supervision and mentoring, research protocols, data practices and management (cross reference can be made to the Data Management Plan), collaborative working and publication/dissemination, and outline these supports in a short statement (max. 1 page) as part of their Phase 2 proposal.

Please consult with the National Policy Statement on Ensuring Research Integrity in Ireland[32] and the European Code of Conduct for Research Integrity[33] when preparing this statement.

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[32] http://www.iua.ie/wp-content/uploads/2014/06/National-Policy-Statement-on-Ensuring-Research-Integrity-in-Ireland-2014.pdf
[33] http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-of-conduct_en.pdf

Appendix K: Data Management Plan

Max. 2 pages

Please provided a Data Management Plan (max. 2 pages) as part of your Phase 2 proposal with consideration to the guidance below. This plan should be included as an appendix to the proposal document.

Core requirements for research data management

Good data management is fundamental to all stages of the research process and a plan to support it is best established at the outset.

Good data management is a key component in ensuring that data is accessible and reusable; it supports high quality research and safeguards good research practices.

Ultimately, good data management supports the long-term preservation of data.

The following is a non-exhaustive list to consider when preparing your Data Management Plan (DMP). These points have been adapted from **Science Europe working guidelines**.[34]

1. Data description and collection/ reuse of existing data
2. Documentation and data quality
3. Storage and back-up
4. Ethics and legal compliance, codes of conducts
5. Data sharing and long-term preservation

When preparing your DMP, you may not necessarily have to consider each of the above topics in detail. Furthermore, it may be helpful to refer to relevant policies made available by your Research Body or to domain specific protocols broadly accepted by researchers in their field/community.

Finally, you may wish to consult with the **FAIR**[35] principles of data management.

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[34] http://www.scienceeurope.org/wp-content/uploads/2018/01/SE_Guidance_Document_RDMPs.pdf
[35] https://www.go-fair.org/fair-principles/

Appendix L: Research Centres Phase 2 Programme Full Proposal Checklist

SECTION	DESCRIPTION	REQUIREMENTS
Proposal Summary (SESAME fields)	Proposal Title	**Up to 30 words (RC title_Phase 2)**
	Duration	6 years
	Total Funding Request Amount (in euro)	Requested SFI contribution to award only
	Priority area (Primary and Secondary)	**Select**
	Research Area (Primary and Secondary)	**Select**
	Justification of alignment with SFI's Legal Remit	Max 250 words
Lead and co-Applicant Details	Lead Applicant CV – use template provided	Max 7 pages
	Lead Applicant required fields completed	Enter details
	All Co-Applicants registered on SESAME and added to the application page	Enter details
	Lead and Co-Applicants' ORCID IDs linked in Research Profiles	Enter details
	Co-Applicants' required fields completed	Enter details
	Co-Applicants' CVs uploaded to application page	Max 7 pages per CV
	Lead and Co-Applicants' Research Funding section completed on application page	Enter details
	Funded Investigators, industry partners and collaborators added to Collaborator section on application page	Enter details
	Excluded Reviewers	Up to 3 individuals
Main Body of Full Proposal (SESAME fields)	Proposal Keywords	Max 15 words
	Lay Summary	Max 100 words
	Technical Summary	Max 200 words
Programme Application Document *Progress Report* *(submit as single PDF document to SESAME)*	Summary of Achievements	Max 10 pages
	Progress against Original Objectives	Max 5 pages
	Research Centre Leadership Team	Max 10 pages
	Governance and Management	Max 5 pages
	Support from host Research Body and other participating Research Bodies	Max 5 pages
	Research Programme (exclusive of references and reports on US-Ireland and Spokes awards)	Max 40 pages
	References	No page limit
	Commercialisation Plan	Max 10 pages
	Industry Cost Share (exclusive of testimonials - no limit to number of testimonials included)	Max 10 pages
	Industry Testimonials	No page limit
	Funding Diversification	Max 10 pages
	Impact	Max 10 pages
	Education and Public Engagement	Max 5 pages
	Communications	Max 5 pages
	Appendix (D): US-Ireland Centre-to-Centre Programme (per project)	Max 10 pages per project
	Appendix (E): Spokes Programme (per project)	Max 10 pages per project
	KPI table (validated up to H1 2018)	N/A
Programme Application Document *Phase 2 Proposal* *(submit as single PDF document to SESAME)*	Research Centre Executive Summary	Max 5 pages
	Research Centre Leadership Team	Max 10 pages
	Governance and Management	Max 5 pages
	Support from the host Research Bodies	Max 5 pages
	Strategy	Max 5 pages
	Research Programme (exclusive of references)	Max 40 pages
	References	No page limit
	Impact Statement	Max 15 pages
	Business Plan (cost share and commercialisation plans)	Max 25 pages
	Industry Partner Engagement: Overview	Max 2 pages for overview

	Industry Partner Engagement: Case studies	**Max 1 page per case study**
	KPIs	Max 5 pages (excluding KPI table)
	Education and Public Engagement	Max 5 pages
	Communications	Max 5 pages
	SFI Budget Request and Justification	Max 10 pages (excluding budget tables)
	Appendix G Investigator Details tables	Not specified
	Appendix H: Budget Tables	N/A
	Appendix I: KPI Table	N/A
	Appendix J: Good Research Practice Statement	Max 1 page
	Appendix K: Data Management Plan	Max 2 pages
	Research Bodies Letters of Support from all Research Bodies involved in the proposal (see section 14 of proposal template for guidance)	Not specified
Declaration	Agreement to SFI Terms and Conditions	**Tick box to agree**