

SFI Terms of Reference for the 2-year Progress Review of the 2016 SFI Research Centres

October 2019



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1. Background

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

A key objective of Science Foundation Ireland's Agenda 2020 strategy is to develop a network of world-leading, large-scale SFI Research Centres that will provide major economic impact for Ireland. There are currently 16 SFI Research Centres, and these are focused on strategic areas of importance to Ireland with a focus on delivering scientific excellence with economic and societal impact. The Centres link scientists and engineers in partnerships across academia and industry to address crucial research questions; foster the development of new and existing Irish-based technology companies; attract industry that could make an important contribution to Ireland and its economy; and expand educational and career opportunities in Ireland in science and engineering. More information on the SFI Research Centres can be found here (https://www.sfi.ie/sfi-research-centres/).





Under the conditions of funding provided by SFI to the Centre network, the SFI Research Centres undergo progress reviews every two years. A review panel of six to eight distinguished scientists, engineers and individuals with significant commercialisation and translational/applied experiences will be convened to evaluate each of the 2016 SFI Research Centres. One member of each panel will also hold specialist Education and Public Engagement (EPE) expertise.

This Terms of Reference document for the 2-year progress reviews has been developed to provide guidance to the Site Review Panel who will review the progress on the SFI Research Centre award. This document will also provide guidance to the SFI Research Centre Directors, SFI Research Centre teams (co-PIs, FIs, operations staff), Research Office staff, Vice-Presidents/Deans of Research, University Presidents/Provosts, and relevant SFI staff in order to prepare for the site visits.



2. Objectives of the Progress Review

The purpose of the 2-year progress review is for SFI to have accurate and in-depth assessment of the progress of the SFI Research Centre, and to determine whether the Centre is advancing towards its objectives. The scientific and impact evaluations from expert reviewers will inform the future direction of the SFI Research Centre, and will provide recommendations on alterations to Centre activities, teams and/or budgets where necessary. Major Centre deficiencies or significant failure to meet industry cost-share targets may have implications for continued funding.

Specifically, the purpose of the 2-year progress review of the SFI Research Centre is to evaluate:

- I. Centre strategy
- II. Research/scientific programme
- III. Education and Public Engagement programme
- IV. Team and governance
- V. Institutional support
- VI. Budget and expenditure
- VII. Outputs, including progress on KPIs
- VIII. Impacts and path to impact



3. Organisation of the Progress Review

The Site Review Panel will comprise of six to eight distinguished scientists, engineers and individuals with significant commercialisation and translational/applied experiences, with one of the panel holding specialist Education and Public Engagement (EPE) expertise. Representatives from SFI will also participate in the review (namely the Director of the Science for the Economy Directorate, Head of SFI Research Centres, relevant Scientific Programme Manager, Head of Education and Public Engagement). Other members of staff of SFI or other agencies may attend the review as observers.

SFI and the Site Review Panel will perform a site visit lasting one and a half days, followed by a further half day for the panel to write their report. A review panel briefing will also be held the evening prior to Day 1 of the site visit. During the site visit, the following personnel must be in attendance:

- SFI Research Centre Director(s);
- SFI Research Centre Operations Team;
- Principal Investigators;
- Funded Investigators and technical collaborators (if space permits; collaborators, may participate in Q&A sessions where relevant, but may not give presentations);
- SFI Research Centre postdoctoral researchers and PhD/MSc students (in particular for the poster session and for the Centre personnel discussions);
- Chair of the SFI Research Centre Governance Committee for the opening address;
- Vice Presidents/Deans for Research (or equivalent) from the host Research Body should be present on Day 2 of the review at a minimum. VPDoRs from additional Research Bodies may also attend in addition, and the choice of which Research Bodies are represented is up to the Centre. <u>NB</u>: If a VPDoR is also a PI/FI in the Centre, he/she will not be permitted to represent the institution at the review. In this case, the VPDoR must nominate a suitable replacement from their Research Body to attend the meeting in their place;
- Industry Partners (for the industry discussions).

The site visit will be divided into two sessions:

- Day 1: Focus on Science
- Day 2: Focus on Impact

On the evening before the site review, SFI and the Panel will meet for a briefing, during which the review process and the programme for the site review will be discussed. On Day 1, the Centre Director, Governance Committee Chair and SFI Research Centre staff will make formal presentations followed by Q&A sessions. The focus of Day 2 is on EPE, KPIs, impact, institutional support and industry involvement.

Each SFI Research Centre site review will have a bespoke agenda where the content to be presented by Centre staff is informed by the activities and progress of the Centre in question. As a starting point, a template for the review Agenda is outlined in Section 4.

In advance of the site review the KPI results until the end of H1 2019 will have been received and fully validated by SFI. These data will be provided in the briefing documentation to the review panel. The Centres will be permitted to present more recent outputs at the site review.



In advance of the site review, a financial audit is carried out by members of the SFI Finance team. This comprises a review of the financial budget for the core SFI grant plus a review of the actual and committed Industry Cost share achieved for the SFI Research Centre.

In preparation for the site visit the following is requested:

• <u>A suitable seminar room or meeting room will be required for two full days</u>

This is required to comfortably accommodate the panel of up to eight international experts, up to five members of SFI, and part of the Centre team (Centre Director, Centre Manager, all co-PIs and all FIs, if space permits). It is preferable to have a room with a large U-shaped table set-up rather than student-style desks if possible.

[From previous experience, a U-shaped arrangement of the tables has worked well, at which the Director, Manager, co-PIs and the SFI Research Centre Scientific Programme Manager, SFI Head of Research Centres and SFI Director sit, with additional seating around the room for other attendees.] All members of the SFI Research Centre team are invited to be present for the site visit (including all Funded Investigators and technical collaborators). For various sessions throughout the review, the Panel will be working at times in closed session and will be using laptops. As such, extension leads, and international adaptors should be available in the room to allow for the use of 13+ laptops. Internet access should also be available.

<u>A mid-sized breakout room</u>

This is required to comfortably accommodate the panel of up to eight international experts, and up to five members of SFI. Extension leads, and international adaptors should be available in the room to allow for the use of 13+ laptops. Internet access should also be available.

• <u>Catering</u>

Please arrange for tea/coffee/snacks to be available in the seminar/meeting room at all times throughout the review. Additional snacks should be provided at scheduled breaks according to the final agenda and also a buffet style lunch including vegetarian options should be provided on both days. Water should also be available throughout the day.

Information and deadlines in advance of site review

The following draft and final material should be emailed to the relevant Scientific Programme Manager by the deadlines indicated:

- Draft agenda four weeks before site review;
- Draft presentation slides and final agenda three weeks before site review;
- List of posters, poster presenters, and a map showing the layout of the poster session two weeks before review;
- Final presentation slides one week before review;

In addition, the Scientific Programme Manager will send the key questions/comments gathered from the panel members' pre-review reports to the Centre three weeks before the site review. The Centre will then have an opportunity to send written responses to these questions. <u>These responses must be emailed to the Scientific Programme Manager at least one week before the site review</u>. Reviewers' questions/comments can be further addressed during the course of the site review.



• Additional information

The panel will have access to a secure web link where they can download the original application, progress report, presentation slides and any other relevant documentation for the review. During the course of the site visit the panel can request additional information from the Centre to aid them in their review, such as lists of publications (primary and secondary) or more specific information. This additional information will need to be provided as soon as possible, and it should be emailed to the relevant Scientific Programme Manager. Information pertinent to the review process will be supplied to the panel in advance of the site visit.

It should also be noted that due to the scale of these reviews, timings of presentations should be strictly adhered to according to the final schedule. 50% of the time must be allocated to presentations and 50% of the time must be allocated to Q&A. The panel may need to cut presentations short if the Centre presenters exceed the time allotted.



4. Agenda Template

The template for the 2-year progress review agenda is outlined below. The times indicated are for guidance purposes only and modifications may be made. Each Centre will be contacted by their SFI Scientific Programme Manager to work through and agree the final agenda, which should be finalised no later than 3 weeks before the date of the review.

Presentations should only be delivered by Centre personnel.

The progress review will run over two full days, plus a write-up session for the panel on the second day:

Day 0: Panel Briefing

17.00-18.30 Briefing

SFI and the Panel will meet to discuss the review process and the programme for the site visit.

18.30-20.00 Private panel dinner

Day 1: Focus on Science

- 8.00-8.05 Welcome by SFI Scientific Programme Manager
- 8.05-8.15 Welcome from President of the host Research Body and the Vice President/Dean of Research
- 8.15-8.20 Welcome from Governance Chair
- 8.20-8.40 Introduction to the SFI Research Centre Delivered by the Centre Director(s)
- 8.40-9.00 **Q&A**

9.00-10.30 **Research Programme 1**

Over the course of this day, presentations should go into detail on the research programme and progress made in platform projects, targeted projects, spokes, US-Ireland Centre-to-Centre awards, and any other relevant activities under the research programme.

Please include, where appropriate, references to data management practices, research methodology and training that supports research integrity.

Each researcher who presents during Day 1 must also cover EPE activities that they and their team undertook.

9.00-9.15 **Presentation title – Presenter name**

9.15-9.30 **Q&A**



Continue in this format, showing each presentation name, who is presenting it, the start/end times of the presentation, and the start/end times of the Q&A session of equal length.

10.30-10.45 Coffee break

10.45-12.30 Research Programme 2

Show each presentation name, who is presenting it, the start/end times of the presentation, and the start/end times of the Q&A session of equal length.

12.30-13.00 Private panel discussion

13.00-14.30 Lunch and poster session

Posters should be presented by Centre PhD students and other junior staff. Up to two FIs may also present posters, with the approval of the relevant Scientific Programme Manager. No co-PIs should be present at the poster session.

- 14.30-16.00 **Research Programme 3** Show each presentation name, who is presenting it, the start/end times of the presentation, and the start/end times of the Q&A session of equal length.
- 16.00-17.00 Private panel discussion

17.00-17.30 **Co-PI/Director private discussion**

During this discussion, or throughout the course of Day 1, the panel may request additional information where they deem it necessary for their review. This information should then be provided as printed material to the panel during Day 2.

Day 2: Focus on Impact

8.00-9.00 Education and Public Engagement (EPE)

This session should be led by both the EPE officer/manager and the Centre Director.

- Details of how the EPE plan is developed and delivered both with and by the Centre's research community. This should include an indication of the numbers of staff involved in EPE activities.
- The achievements against the EPE plans, in terms of outputs and outcomes.
- Progress against expected impacts of EPE activity.
- How the Centre's communications plan supports public engagement and enhances the profile of the Centre.

8.00-8.30 **Presentation – Presenter name**

Please note that more than one presentation can be made. In this case each presentation should each be listed in the agenda.

8.30-9.00 **Q&A**



9.00-10.00 Impact

Presentation(s) on the Centre's impact and path to impact. This session should include a discussion of:

- Key Performances Indicators (KPIs) results versus targets.
- EU Horizon 2020 and other sources of leveraged funding.
- Industry engagement and commercialisation outputs.
- Key impacts achieved by the Centre.
- Centre progress towards impact objectives.

9.00-9.30 **Presentation – Presenter name**

Please note that more than one presentation can be made. In this case each presentation should each be listed in the agenda.

9.30-10.00 **Q&A**

10.00-10.30 Institutional support discussion

This session is an opportunity for a discussion of institutional support that the Research Centre has received from the host Research Body and partner Research Bodies involved in the Centre. <u>No presentations should be made during this session</u>. The VPDoR of the host Research Body must be present for this discussion. Other VPDoRs may also be invited to attend the session at the discretion of the Research Centre.

10.30-10.45 Coffee break

10.45-12.30 Industry partner discussions

A number of discussions should be held between a selection of the industry partners and the panel. <u>No presentations should be made during this session</u>. Industry partners should be chosen that represent different areas of activity, as well as different types of industry partner (e.g. MNCs and SMEs). These discussions will focus on their involvement in Centre activities, and how the Centre is meeting the needs of industry partners.

- The panel will meet industry partners one at a time, and each discussion should last approximately 20 minutes.
- Centre staff or representatives will not be present during this session.
- 12.30-13.00 Private panel discussion
- 13.00-13.30 Co-PI/Director private discussion
- 13.30-14.00 Private panel lunch

14.00-18.00 **Private panel session - report writing** The panel will write the progress review report in this closed session (see panel report section for further details).



5. Briefing Documents

The progress review panel will be sent the following documents:

Key documents for the review

- Original proposal and anonymised postal reviews
- Research Centre Progress Report
- EPE Operational Plan 2019
- SFI Research Centre Key Performance Indicators (H1 2018 H1 2019) Progress Against Targets (Centres will be permitted to present more recent outputs at the site review)
- Site review Terms of Reference
- SFI 2-year advance report briefing presentation

Other documentation (to be provided if requested by reviewer)

- 2018 Annual Report
- SFI Research Centre publications to date (primary and secondary attributions to the Centre)
- SFI Research Centre funding diversification
- Spoke award proposal/s (if relevant)
- US-Ireland Centre-to-Centre proposal/s (if relevant)
- SFI Research Centres call document (for reference)
- SFI Research Centres management and governance requirements
- EPE KPI criteria
- List of industry partners and status of collaborative research agreements
- Other area relevant specific government documents e.g. National IP Protocol, National Policy Statement on Ensuring Research Integrity in Ireland, etc.

The panel will be asked to complete a brief pre-site review report in advance of the review. This report is similar in structure to the final consensus panel report, and will be shared with other panellists and SFI. The structure of the final panel report is contained in the following section.



6. Panel Report

The panel report will include the following sections to reflect the objectives of the review. Each section will include a narrative and a score indicating the degree of progress. The narrative should include recommendations for alterations to future Centre activities where weaknesses or risks are identified. SFI may request that a score of a 2 or lower in any section is accompanied by further recommendations for alterations, including potential reductions in Centre budgets.

I. RESEARCH/SCIENTIFIC PROGRAMME

Please assess the scientific excellence of the SFI Research Centre's research programme, and the scientific work that has been undertaken so far. Take into consideration the key documents for the review and the Centre's presentations at the site visit.

As part of your response, consider the following questions:

- Based on the approved proposal and work plan, has the team delivered on its objectives so far?
- Are the original stated goals still relevant, and if not, has the team shifted its direction to accommodate the changes in science, industry, or technology?
- Are there components of the research programme that should be removed or expanded?
- Is the Centre achieving research excellence and leadership in its area?
- Has the Centre met or exceeded its academic KPI targets?
- Has the Centre been effective in attracting industry partners, and are its collaborations with industry producing high-quality work?
- Are projects with industry driving the overall strategic research agenda of the Centre?
- Is the Centre managing its research budget effectively?

In providing your responses to the above points, consideration should be given to:

- Platform projects;
- Targeted projects with industry partners;
- Additional Spokes awards (where relevant);
- US-Ireland Centre to Centre awards (where relevant);

Select the description that best matches your assessment of the SFI Research Centre's research/scientific programme from the following list:

Score	Description	
5.0	Outstanding with no deficiencies.	
4.5	Outstanding in many regards with no serious deficiencies.	
4.0	Strong with no serious deficiencies.	



3.5	Strong in many regards with some deficiencies.	
3.0	Moderate with some deficiencies.	
2.5	Moderate in many regards with many deficiencies.	
2.0	Weak with many deficiencies.	
1.5	Weak in many regards with many critical deficiencies.	
1.0	Wholly inadequate with many critical deficiencies.	

II. EDUCATION AND PUBLIC ENGAGEMENT

Please comment on the SFI Research Centre's EPE programme and progress to date, taking into consideration key documents for the review and the Centre's presentations at the site visit.

As part of your response, consider the following questions:

- Is the purpose/vision for EPE activities clear?
- Is there evidence of a logic modelling approach to the EPE plan?
- How is the Centre performing against their EPE operational plan?
- Are there components of the EPE activities that should be removed or expanded?
- Is there a Centre-wide culture of responsibility for EPE? How is the Centre engaging all its research community in delivering the public engagement plan?
- Is there evidence of applying learning or evaluation from EPE activity to research strands?
- Is there evidence of EPE experience in the team? If there are gaps, what partnerships are proposed to ensure engagement expertise?
- What components are being used to engage with the public?
- Is it clear how the EPE programme is evaluated and leads to impact?

Select the description that best matches your assessment of the SFI Research Centre's EPE programme from the following list:

Score	Score Description	
5.0	Outstanding with no deficiencies.	
4.5	Outstanding in many regards with no serious deficiencies.	
4.0	Strong with no serious deficiencies.	



3.5	Strong in many regards with some deficiencies.	
3.0	Moderate with some deficiencies.	
2.5	Moderate in many regards with many deficiencies.	
2.0	Weak with many deficiencies.	
1.5	Weak in many regards with many critical deficiencies.	
1.0	Wholly inadequate with many critical deficiencies.	

III. EXECUTION, TEAM AND BUDGET

Please comment on the ability of the SFI Research Centre to effectively manage and execute its activities. This includes the effectiveness of the management team, quality and commitment of investigators, robust governance, transparent and effective management of budget and expenditure, as well as access to sufficient facilities, equipment and support from the Centre's partner institutions. Take into consideration key documents for the review and the Centre's presentations at the site visit.

As part of your response, consider the following questions:

- Is there an operationally effective management structure and organisation in place?
- Is the Centre director leading the Centre team effectively?
- Is the Centre truly operating as a national centre?
- Are the co-PIs engaged and working as a team?
- Has the Centre effectively attracted, recruited and trained key personnel?
- What is the Centre's strategy for improving gender balance within the team?
- Are budgets appropriately distributed across the Centres activities?
- Are budgets assigned to personnel and teams fitting for the Centre's workplan?
- Is expenditure on track, or is there a significant over/underspend in certain areas?
- Is the Centre being effectively supported by the involved Research Bodies?
- Are there any infrastructural issues (space, refurbishment, equipment, support services, etc.) that need to be addressed?

Select the description that best matches your assessment of the SFI Research Centre's execution, team and budget from the following list:

Score	Description	
5.0	Outstanding with no deficiencies.	



4.5	Outstanding in many regards with no serious deficiencies.	
4.0	Strong with no serious deficiencies.	
3.5	Strong in many regards with some deficiencies.	
3.0	Moderate with some deficiencies.	
2.5	Moderate in many regards with many deficiencies.	
2.0	Weak with many deficiencies.	
1.5	Weak in many regards with many critical deficiencies.	
1.0	Wholly inadequate with many critical deficiencies.	

IV. IMPACT

Please comment on the outputs and impact being made by the SFI Research Centre, taking into consideration key documents for the review and the Centre's presentations at the site visit.

As part of your response, consider the following questions, and include an assessment of the Centre's progress against their KPI targets:

- Is the Centre on track to achieving the proposed impacts outlined in the implementation plan within the impact statement in their original proposal?
- Is the Centre successful in attracting funding from non-exchequer, non-commercial sources, such as EU Horizon 2020?
- Is the Centre taking a leading role internationally, such as through prominent international collaborations?
- Has the Centre been effective in attracting cash and/or in-kind contributions to the project from industry partners?
- How are industry collaborators facilitating an increase in impact from the research and EPE programmes?
- How would you rate the team's outputs, in terms of commercialisation activity e.g. invention disclosures, patent applications, licensing agreements and spinout creation? Have all routes to commercialisation been considered?
- Is the Centre's EPE programme being used to support impact?
- Has the Centre successfully demonstrated impact in any of the following areas:
 - $\circ \quad \text{Societal impacts and international engagement}$
 - o Impacts on public policy, services and regulation
 - Health and wellbeing impacts
 - Environmental impacts



- Impacts on professional services
- Impacts on human capacity
- Should the Centre alter their strategy with regard to achieving these and other impacts?

We encourage you to consult with SFI's detailed guidance on 'Types of Impact', which can be found at the link: <u>http://www.sfi.ie/funding/award-management/research-impact/</u>

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

Select the description that best matches your assessment of the SFI Research Centre's impact from the following list:

Score	Description
5.0	Outstanding with no deficiencies.
4.5	Outstanding in many regards with no serious deficiencies.
4.0	Strong with no serious deficiencies.
3.5	Strong in many regards with some deficiencies.
3.0	Moderate with some deficiencies.
2.5	Moderate in many regards with many deficiencies.
2.0	Weak with many deficiencies.
1.5	Weak in many regards with many critical deficiencies.
1.0	Wholly inadequate with many critical deficiencies.

V. EXECUTIVE SUMMARY AND RECOMMENDATIONS

Please provide a summary and set of recommendations for the SFI Research Centre taking into consideration key documents for the review and the Centre's presentations at the site visit.

As part of your executive summary, please provide narrative for each of the following points:

- Overview.
- Strengths and weaknesses of the Centre's performance during the reporting period.



- Significant issues raised during the review.
- Recommendations.

Select the description that best matches your assessment of the Research Centre's overall performance during the reporting period from the following list:

Score	Description
5.0	Outstanding with no deficiencies.
4.5	Outstanding in many regards with no serious deficiencies.
4.0	Strong with no serious deficiencies.
3.5	Strong in many regards with some deficiencies.
3.0	Moderate with some deficiencies.
2.5	Moderate in many regards with many deficiencies.
2.0	Weak with many deficiencies.
1.5	Weak in many regards with many critical deficiencies.
1.0	Wholly inadequate with many critical deficiencies.

REVIEWER FEEDBACK FOR SFI

SFI greatly welcomes the feedback of expert reviewers on the site review process, briefings provided, documents received, or any other aspect of your experience as reviewers. We take this feedback into account to continuously improve our internal process as well as the SFI Research Centres programme.



7. Financial Review Procedure

The SFI Finance team will arrange to meet with both the SFI Research Centre Manager and Research Accountant of the host Research Body, <u>in advance of the site review</u>. Any issues that arise during the financial review may be raised with the scientific review panel if required.

During the review, the SFI Finance team will analyse the following for each Centre to date:

- A Master schedule of Collaborative Research Agreements made with all Industry partners to date, showing the following:
 - Cash amounts committed for each calendar year of the agreement and in total over the contract.
 - In-Kind amounts committed for each calendar year of the agreement and in total over the contract.
- The individual Collaborative Research Agreements.
- The *Consolidated Industry Partner Cost Share Reports* for the Centre for each 6-month period up to the end of June 2018.
- The *Individual Industry Cost Share reports* signed by the Industry partner (for each 12-month period up to the end of June 2018.

The above reports will be checked in detail by SFI Finance to ensure the following:

- The reports are compiled correctly and reflect all active and completed Platform and Targeted projects for each RC.
- That the cash amounts received and in-kind amounts received have been accurately reported and can be traced to the Research Body bank account.
- The values placed on the In-Kind Contributions are fair and reasonable, have been signed as 'received' by the Centre and the Research Bodies in the period under review and can be traced to the *Individual Industry Cost Share reports* where applicable.
- That overheads received from Industry partners which have been diverted directly to the Centre activity have been correctly accounted for.



8. SFI Research Centre Communications Review

The SFI Communications team will meet with the Centre Communications manager and Centre Manager to discuss and review the Centre's strategic communications activities and branding. <u>This is anticipated to take place within one month after the site review has completed</u>.

This will include a discussion and review of:

- Details of the Centre's communications activities over the reporting period,
- Details of the Centre's communications resources (e.g. staffing, budget etc.),
- How the Centre's strategic communications plan/activities are supporting the Centres goals,
- The implementation of IUA-SFI branding for the Centre as per agreed guidelines,
- Any support required by the Centre on communications training or skills,
- How the Centre is evaluating its communications activities and an overview of relevant key statistics.



9. Follow-up to Site Review Process

When the panel report has been completed, a covering letter highlighting the pertinent points of the review and financial review, along with final recommendations, will be prepared by SFI. Following approval, the outcome of the progress review and the financial review, covering letter and panel report are delivered to the SFI Research Centre Director, Governance Chair, Centre Manager and Vice-President/Dean of Research of the Host Institution(s). The Centre Director, as lead investigator, is given 6 weeks in which to submit a response to the reviewers' comments and recommendations. A feedback meeting between the Centre Director, Centre Manager and SFI will take place once this response is submitted to facilitate further discussion on the outcomes and recommendations from the progress review.