

## SFI Research Centres Annual Report Template

December 2017

## **Purpose of the Annual Report**

The objective of the Research Centre Annual Report is to capture the vision, plans, activities, achievements and progress towards the Centre's overall goals in all aspects of the Centre's operations during the previous year.

The Annual Report will be used by SFI:

- To monitor progress against the aims, deliverables and impact as articulated in the Research Centre's funded proposal.
- To support publicity for the Research Centre, through case studies and marketing collateral
  that demonstrate the broad impact of each Centre and their collective socio-economic
  contributions, helping to attract collaborators and industry, and demonstrating the return on
  public fund investment.
- To gather data and the associated narrative to prepare and supplement reports in response
  to requests from SFI stakeholders including Government Departments, sister agencies, and
  the SFI Board.

#### **Deadline**

Annual Reports are due on the last working day of March (<u>Friday 30th March 2018</u>), and will cover the period 1<sup>st</sup> January-31<sup>st</sup> December of the previous year (2017). The Annual Report will be uploaded as a PDF document to SESAME by the Centre Director and it is the responsibility of the Centre Director to ensure the accuracy of the report.

#### **Structure**

The Annual Report must be structured to provide information under the headings given below. Each Section and Sub-Section <u>must</u> be addressed. Additional relevant information may also be provided where it is necessary to fully describe the activities or impact of the Research Centre. Furthermore, the report must not exceed the page limits of the various sections as described below. The report is submitted via SESAME using the procedure outlined in the Appendix of this document.

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## 1 Executive Summary (max. 1 page)

The Executive Summary should be readable by a broad audience and should not rely on expert knowledge of the research areas being explored by the Centre.

- **1.1** Outline the vision and goals of the Research Centre, with reference to those described in the funded proposal, as well as the broad impact of the Centre.
- **1.2** Comment on how the vision is translated into strategy and how the Centre is performing against this strategy. It should include any significant accomplishments during the previous year and reference interactions with industry partners.
- **1.3** Identify any key risks to the Centre, and summarise the action being taken to manage or address these risks.

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

- **2.1** List the names and responsibilities and provide a brief bio-sketch of the Research Centre's management team including the Director, Deputy Director(s), co-lead Applicants, Funded Investigators, senior managers, IP managers, etc. Include an organisation chart for the Centre outlining the person's name and responsibilities associated with each role.
- **2.2** Describe the Research Centre's organisational strategy and underlying rationale.
- **2.3** Describe the internal methods for assessing the quality and impact of projects.
- **2.4** Describe and explain any changes to the leadership team in the reporting period and the impact (if any) that such changes have had on the Research Centre.
- 2.5 Describe and explain the breakdown of gender representation within the Research Centre, with reference to level of seniority (Director and co-lead Applicants, Funded Investigators, postdoctoral researchers and students). Describe any action undertaken to redress gender under-representation within the Research Centre, particularly at the senior level.

## 3 Strategy (max. 5 pages)

Describe the Research Centre's overall strategy under the following headings:

- **3.1** Clearly articulate the long-term direction of the Research Centre and benchmark the Research Centre against other, similar research entities around the world.
- **3.2** Outline clearly how the Centre aligns with national priorities (the Centres must remain up-to-date with these priorities as they evolve).
- **3.3** Outline the industry sectors with which the Research Centre is aligned and give a description of how the industry partners contribute to the Research Centre's strategic plan and research strands.
- **3.4** Describe the strategy for engaging with those sectors, including the strategy for the development of relationships with existing industry partners, bringing in new partners, and other activities in this area, and for engaging with indigenous SMEs. Refer to any problems or issues encountered in this area.
- **3.5** Where appropriate, identify research and industry road-maps and where on these road-maps the Research Centre aims to deliver impact. The strategy should encompass both the long-term research and commercial objectives of the Research Centre.
- **3.6** Clearly identify any significant changes to the strategy since the previous annual report and the reasons for such changes.

# 4 Research Activities (max. 50 pages - exclusive of publications and reports on US-Ireland C2C and Spokes awards)

This section of the report must enable the report reviewer to assess the scientific excellence of and impact arising from the research that has been undertaken by the Research Centre during the reporting period.

#### 4.1 Overview of Research Activities

Platform projects, Targeted Projects with industry partners and outputs from associated projects funded through Horizon2020 should be considered in this section.

- 4.1.1 Describe the 3 most important breakthroughs that the Centre has made during the reporting period, clearly outlining what the breakthrough is, why it is important, how it has been translated and who has benefited from it (impact).
- 4.1.2 Describe how the Centre has 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.
- 4.1.3 Describe the Research Centre's research activities with reference to milestones. This should include a summary of the research programmes/strands that have been developed to realise the strategy described in Section 3. The Metrics Report should be referenced here.
- 4.1.4 Clearly state, with details, if the Centre has exceeded its in-year and cumulative scientific KPI targets in:
  - Journal Publications;
  - o Conference Publications;
  - o Number of PhD and MSc/MEng graduates
- 4.1.5 Describe how the Centre has 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.
- 4.1.6 Provide a full list of all publications produced during the reporting period <u>clearly</u> <u>denoting the relevant Platform or Targeted Project</u>. The 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). Please note the page limit of this section is exclusive of this publication list.
- 4.1.7 Highlight the Centre's top five publications; include surrounding narrative that clearly explains, in non-scientific language, why these papers are important.
- 4.1.8 Give an overview of the development of industry collaborations during the reporting period.
- 4.1.9 Highlight any publications the Centre has produced with industry as co-authors and/or patent applications with industry as co-inventors and described how these have been regarded by the wider community, with reference to citations and industry downloads.

#### 4.2 Impact

Given the scale of the investment, 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. Research Centres are encouraged to consult with SFI's information and guidance on reporting on the impact arising from its funding, which can be found on the SFI website under Research Impact.

- 4.2.1 The Research Centre must clearly outline progress being made against the Impact statement submitted as part of their original proposal. Examples should be provided of impact arising from the Research Centre's activities within the reporting period, with cross reference being made to specific metrics (outputs) attained. Surrounding narrative should also be provided to add context and associate with different types of impact (or the journey towards). 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 results attained should be cross referenced against KPI targets, since these can be used as "indicators" of different kinds of impact.
- 4.2.2 The Research Centre should also describe if and how the roadmap towards impact has changed.

To assist the Research Centres in reporting on the impact arising from their award, you will be prompted to select from 11 Impact declarations or statements when uploading the Annual Report to SESAME. At least one declaration must be selected but awardees are encouraged to rank up to 5 declarations, starting with the number 1 as being the most relevant. Awardees are then asked to provide more details justifying the declarations selected by pulling in all relevant impacts from their Centre profile. To assist you, the impacts on the profile are categorised with shortened version of the 11 categories. The Impact declarations, listed below, will help SFI to quantify the types of impacts arising from awards made under various SFI programmes.

#### Impact Statements / Declarations on SESAME

- The research conducted through my award has enabled me to leverage international funding through industry/collaborative research [Economic and Commercial, International]
- The research conducted through my award has resulted in the start or expansion of a company which has resulted in the creation of high value jobs [Economic and Commercial]
- The research conducted through my award has attracted developing and nurturing businesses [Economic and Commercial]
- The research conducted through my award has attracted international scientists and talented people [Human Capacity; International Engagement]
- The research conducted through my award has resulted in a new policy being implemented and/or an improvement to the delivery of a public service [Public Policy and Services]
- The research conducted through my award has enhanced the quality of life and health of Irish citizens [Health & Wellbeing, Societal Impact]
- The research conducted through my award has contributed to environmental conservation and/or enhanced the sustainable relationship between society, industry and the environment [Environmental Impact]
- The research conducted through my award has increased the knowledge, appreciation and understanding of science, engineering and technology amongst the general public. [Societal Impact]

- The research conducted through my award has developed the country's international reputation [International Engagement]
- The research conducted through my award has resulted in the creation of employment through directly influencing and inspiring the future workforce and/or the production of a highly educated and relevant workforce in demand by industry and academia [Human Capacity, Economic and Commercial]
- The research conducted through my award has not realised any impacts as of yet or has impacted in other areas not reflected in the choices provided, for example by enhancing the creative outputs of Irish citizens.

#### 4.3 Platform Research

Provide a detailed summary of each research platform. Research relating to the Research Centre award should be clearly differentiated from that relating to other current or previous awards. Refer to specific outputs that have arisen directly from the Research Centre award and include funding acknowledgements for referenced outputs, where possible. Relevant publications should be discussed in the context of the research being described.

- 4.3.1 Provide information on the platform's goals (what the work aims to accomplish).
- 4.3.2 Provide information on the platform's role in support of the Research Centre's strategic plan.
- 4.3.3 Provide information on achievements to date, the role of the industry partner(s) and benefits gained from the industry partners.
- 4.3.4 Describe achievements in the previous year (i.e. briefly outline achievements in previous years that have led to the present position).
- 4.3.5 Outline the fundamental research barriers and the methodologies used to address them.
- 4.3.6 Benchmark the project against other relevant work in the field and refer to state of art.
- 4.3.7 Describe the infrastructure available to the Centre and any significant changes to this over the previous year and/or planned changes for the next year.
- 4.3.8 Provide information on the Technology Readiness Level (TRL) of the platform research projects. (More detailed information on TRLs can be found at the following link <sup>1</sup>).
- 4.3.9 If relevant, please provide details of contributions towards new ICT standards/specifications.

<sup>&</sup>lt;sup>1</sup> http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014 2015/annexes/h2020-wp1415-annex-g-trl en.pdf

#### 4.4 Targeted Projects

Provide a detailed summary of each Targeted Project. Research relating to the Research Centre award should be clearly differentiated from that relating to other current or previous awards. Refer to specific outputs that have arisen directly from the Research Centre award and include funding acknowledgements for referenced outputs, where possible. Relevant publications should be discussed in the context of the research being described.

- 4.4.1 Provide information on the goals of each Targeted Project (what the work aims to accomplish).
- 4.4.2 Provide information on the role of each Targeted Project in support of the Centre's strategic plan.
- 4.4.3 Provide information on achievements to date, the role of the industry partner(s) and benefits gained from the industry partners.
- 4.4.4 Describe achievements in the previous year (i.e. briefly outline achievements in previous years that have led to the present position).
- 4.4.5 Outline the fundamental research barriers and the methodologies used to address them.
- 4.4.6 Benchmark the project against other relevant work in the field and refer to state of art.
- 4.4.7 Provide information on the Technology Readiness Level (TRL) of the Targeted Projects. (More detailed information on TRLs can be found at the following link <sup>2</sup>).
- 4.4.8 If relevant, provide details of contributions towards new ICT standards/specifications.

<sup>&</sup>lt;sup>2</sup> http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014 2015/annexes/h2020-wp1415-annex-g-trl en.pdf

#### 4.5 Spokes Programme Awards (max 10 pages per project)

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

- 4.5.1 For multi-centre Spokes awards, each SFI Research Centre involved in the award should report on the Spokes award in their respective annual reports addressing each of the points below. In addition, the Spoke Leader is required to provide a maximum 1-page introductory overview of the project detailing the multi-centre approach to the project, how the award has enabled existing Centres to link together and how such linkage has enabled the research programme to be delivered. This one-page overview should be incorporated into each of the relevant Research Centres' summary of the Spokes award and appended to the Centres' annual reports. Provide information on the goals of the Spoke (what the work intends to accomplish).
- 4.5.2 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.
- 4.5.3 Provide information on achievements to date and the role of the industry partner(s).
- 4.5.4 Describe achievements in the previous year. If relevant, briefly outline achievements in previous years that have led to the present position.
- 4.5.5 Outline benefits to industry partners from this project.
- 4.5.6 Where relevant, describe how this Spoke has allowed SMEs to join the Centre who may not have otherwise had the financial means to do so.
- 4.5.7 Outline the fundamental research barriers and the methodologies used to address them.
- 4.5.8 Benchmark the project against other relevant work in the field and refer to state of the art.
- 4.5.9 Provide information on the Technology Readiness Level of the Spoke.
- 4.5.10 If relevant, provide details of contributions towards new ICT standards/specifications.
- 4.5.11 Provide a list of publications arising directly from the Spoke, clearly highlighting high-impact publications and publications co-authored with industry.

#### 4.6 US-Ireland Centre-to-Centre Partnerships (max 10 pages per project)

Provide a detailed summary of each US-Ireland Centre-to-Centre 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 should be discussed in the context of the research being described. SFI are primarily interested in the activity and progress of the Republic of Ireland research team. However, SFI are also interested in understanding the level of co-operation between the ROI, US and NI teams and the impact that this co-operation is having on the overall project. The following information must be included in this section:

- 4.6.1 Details of the lead Principal Investigator and Engineering Research Centre (United States).
- 4.6.2 Details of the Lead Principal Investigator and their associated Centre (Northern Ireland).
- 4.6.3 Information on the US-Ireland C2C partnership goals (what the work intends to accomplish).
- 4.6.4 Information on the US-Ireland C2C partnership role in support of the Centre's strategic plan.
- 4.6.5 Information on achievements of the partnership to date and the role of the US and NI partner(s).
- 4.6.6 Information on the added value of the partnership, outlining the strategic importance of the collaboration to the Research Centre.
- 4.6.7 Details of exchange visits between Republic of Ireland, Northern Ireland and the United States during the reporting period.
- 4.6.8 A description of the research work carried out by the United States partner(s) to date.
- 4.6.9 A description of the research work carried out by the Northern Ireland partner(s) to date.
- 4.6.10 An outline of the fundamental research barriers and the methodologies used to address them.
- 4.6.11 Project benchmarking against other relevant work in the field, referring to state of art.
- 4.6.12 Information on the Technology Readiness Level of the US-Ireland C2C partnership.
- 4.6.13 If relevant, details of contributions towards new ICT standards/specifications.
- 4.6.14 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.
- 4.6.15 A copy of the NSF/NIH report from the US partner when it becomes available (the availability of this report may not align with the SFI reporting deadline but it should be emailed to the relevant SFI Scientific Programme Manager and USIreland@sfi.ie when received from the US partner).

#### 4.7 Research Integrity

SFI places high importance on ensuring research integrity and endorses the <u>National Policy Statement</u> on <u>Ensuring Research Integrity in Ireland</u>. All institutions and SFI award holders are expected to abide by the aforementioned Irish Policy on Research Integrity and the <u>European Code of Conduct for Research Integrity</u>. Given that SFI has recently signed up to a 3 year pilot providing advanced on line training in Research Integrity (to commence in 2018), the Research Centres should provide relevant information on their participation in this and other relevant training provisions.

- 4.7.1 Please provide details of training undertaken by the team in good research practice including by not limited to Research Integrity and Ethics; Good Laboratory Practice (GLP); Intellectual Property; Health and Safety; and Data Management. Please provide details under the following headings:
  - Training/course name
  - Attended by
  - Date of training
  - Course Provider/ Facilitator
  - Summary of training

#### 4.8 Future Plans and Roadmap

4.8.1 Describe the Research Centre's plans for the next year and how these fit within the roadmap towards the achievement of the Centre's strategic goals.

## 5 Technology Transfer (max. 15 pages)

This section should provide a summary of the technology transfer activities of the Research Centre in the previous year and related plans for the following year. The commercialisation outputs in the Metrics Report should be referenced here.

- **5.1** Describe the Research Centre's plans and processes to transfer its existing technology into measurable IP.
- **5.2** Outline the Research Centre's IP principles and policies.
- **5.3** Give examples of any technology transfer over the last three years and their impact to date.
- **5.4** List the technologies developed in the Research Centre that have led to applications, product development and/or marketed products.

## 6 Industry Cost Share (max. 5 pages)

Details on the industry committed cost share are compiled on a monthly basis from the monthly industry contracts updates. The KPIs "cash in bank", "cost share (cash)" and "cost share (total)" are drawn from the financial reports which are submitted to SFI twice a year. There is no need to supply this level of detail in the annual report. Therefore, in this section:

**6.1** Please provide a narrative on the challenges you have faced or are facing in securing the minimum industry cost share targets (if relevant). Please include a narrative on projections for cost share going forward.

## 7 Funding Diversification (max. 5 pages)

**7.1** Describe the Research Centre's strategy to leverage non-commercial / non-exchequer funding and the progress made by the Centre in relation to this strategy in the previous year. The funding diversification outputs in the Metrics Report should be referenced here.

## 8 Education and Public Engagement (max 12 pages)

The objective of the Education and Public Engagement report is to capture the plans, activities, progress and achievements of the Centre during the year.

- **8.1** Please complete your report addressing the following detail for <u>each</u> activity within your EPE plan.
  - 8.1.1 Please outline the Research Centre's Education and Public Engagement (EPE) Objectives for this activity, including why this participant group was targeted. In particular, discuss how underrepresented groups, highlighted in the Centre EPE 2017 plan, were catered for within this activity.
  - 8.1.2 For underrepresented groups please highlight the participant category (women, socio-economic disadvantage and/or adults, in particular the 30 to 55-year-old age group), the number of participants engaged and the number of events/activities delivered.
  - 8.1.3 Please outline how the objectives for the activity were either met, exceeded or not met and outline why.
  - 8.1.4 Please outline challenges encountered, the causes and how they were overcome. In particular, discuss these in relation to new participant categories.
  - 8.1.5 Please highlight any recommendations to help prevent similar challenges in future projects/activities.
  - 8.1.6 Please give a brief description how you evaluated each activity, including your methodology, findings and detail how you disseminated your findings. How have you used these findings to inform future plans/activities.
  - 8.1.7 Please outline your plans for this activity for the following year (e.g. to finish programme, to scale the programme etc.).
- **8.2** Please outline the key accomplishments and highlights in the Research Centres EPE activities.
- **8.3** Detail areas identified for development going forward, i.e. specific gaps in population engagement, resource development.

## 9 Communications (max. 10 pages)

Please provide an overview of key national and international communications/marketing actions undertaken by the Research Centre during the year, including the following:

- **9.1** Provide a brief outline of the Research Centre's communications objectives for the period and how they were achieved/not achieved.
- **9.2** Provide an overview of engagement with key stakeholders (media, industry, government, etc.) to promote the work of the Research Centre.
- **9.3** Provide an overview of media coverage (international and national) obtained during the period.
- **9.4** Provide details of marketing/branding/advertising materials produced to promote the Centre.
- **9.5** Provide an overview of the online promotion of your Centre including social media platforms.
- **9.6** Provide details of your most successful communications actions.
- **9.7** Provide details of how the Centre has complied with SFI communications and branding requirements.
- **9.8** Please provide an outline/overview of key plans for next year.

## 10 Information to be provided by the 2016 Research Centres only

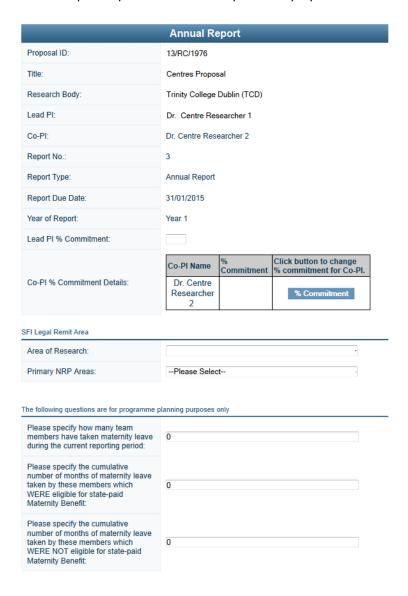
- **10.1** Describe the progress that has been made to date in terms of hiring the operations and management staff and any other key hires that have taken place to support the Research Centre.
- **10.2** Please provide brief details of any research or support staff that are now associated with the Research Centre.
- **10.3** Please provide an overview of current or planned governance structures.
- **10.4** Provide details of space and facilities that have been secured for the Research Centre and include any plans for further allocations.
- **10.5** Provide an update on progress made on the inter-institutional agreements between the Research Bodies and host institution.
- **10.6** Provide an update on the development of the collaborative research framework which sets out the mechanism under which industry partners engage.

## 11 Metrics Report

The Metrics Report should be run on SESAME for the reporting time period and appended to the Annual Report. Details on the Metrics Report are documented in the companion document entitled "Research Centres Metrics Report Guidelines" on the SFI website under Research Centres Award Management.

## **Appendix: SESAME Report Submission**

- 1. Login to your SFI workbench on SESAME.
- 2. Click the Active Awards tab (on the home page of your workbench) and locate the Research Centre report that requires preparation.
- 3. Click the Open Report button. The report is displayed as shown in the screenshots below.



4. The initial section requires the % Commitment of the lead PI and Co-PIs. This section includes a button labelled % Commitment adjacent to each Co-PI. Click on this button if you wish to add or update the % Commitment for the Co-PI. The following screen will appear:



Update or enter a value and then click Save. The following screen appears:



Click the Close button to exit the screen and return to the Annual Report screen. You will have to click Save Draft to see the new % Commitment value appear within the report itself.

- 5. Select the Area of Research and NRP Area using the drop-down menu for each.
- 6. Complete the section relating to maternity leave of team members.
- 7. You will then be prompted to select from 11 impact statements as described in Section 4 of this document:

Strategic Impact		
You must rank at least one statement Please add, under each statement de	t, in order of priority, the most relevant statements which relate to the re but we would encourage you to rank up to 5 statements, starting with t tails justifying the statement made. These impact statements help SFI to go this section, please refer to the guidance relating to <u>Research Impact</u> s of Impact referenced.	he number 1 (being the most relevant). quantify the types of impacts arising from
The research conducted through my award has enabled me to leverage international funding through industry/collaborative research:	•	
The research conducted through my award has resulted in the start or expansion of a company which has resulted in the creation of high value jobs:	•	
The research conducted through my award has attracted developing and nurturing businesses:	•	
The research conducted through my award has attracted international scientists and talented people:	•	
The research conducted through my award has resulted in a new policy being implemented and/or an improvement to the delivery of a public service:	•	
The research conducted through my award has enhanced the quality of life and health of Irish citizens:	•	
The research conducted through my award has improved the environment and/or the sustainable relationship between society, industry and the environment:	•	
The research conducted through my award has increased the knowledge, appreciation and understanding of science, engineering and technology amongst the general public. The research conducted through my award has developed the country's international reputation:	•	
The research conducted through my award has resulted in the creation of employment through directly influencing and inspiring the future workforce and/or the production of a highly educated and relevant workforce in demand by industry and academia:	•	
The research conducted through my award has impacted in other areas not reflected in the choices provided, for example by enhancing the creative output of Irish citizens:		
The research conducted through my award has not yet realised any significant Impact:		

Awardees are then asked to provide more details justifying the declarations selected by pulling in all relevant impacts from their Research Profile. To assist you the impacts on the profile are categorised with shortened version of the 11 categories. It is mandatory to add at least one Impact transaction has been added in support of the ranked statements.

Please add impacts	n support of all ranked statements above.			
Once you have attributed an impact, please click Save Draft on the report				
Add from Profile	Create New			

8. Upload the report document and click on **Submit** to submit the completed report to SFI.

