



Consultation
Science Foundation Ireland
Statement of Strategy 2020-2025

Please complete this consultation paper on behalf of your organisation:

Name: Dr Joseph Ryan and Dr Jennifer Brennan

Organisation: THEA - Technological Higher Education Association

Email: joseph.ryan@thea.ie, jennifer.brennan@thea.ie

Submissions will be subject to the Freedom of Information Acts and SFI may publish the responses it receives.

THEA would like to thank SFI for the opportunity to comment on the draft SFI Statement of Strategy, *Ambition 2025*. We have been pleased to observe the strong level of engagement between SFI and the technological higher education sector during the preparation of the strategy. During a period when research, innovation and engagement (RIE) in the sector is foreseen to grow substantially, it is important that the sector's potential to engage and trajectory of growth are taken into account in all relevant national RIE strategies. As the largest national funder of scientific research, the openness of SFI to supporting excellent researchers and research teams from the sector will be essential to supporting this growth. It is very positive that the sector (eight of 12 institutions) is now involved in ten of the 17 SFI Research Centres and that several institutions will participate in the new Centres for Research Training, but it will be important that this strong engagement is mirrored across all SFI-funded programmes.

SFI are to be congratulated on the level of ambition in the draft Strategy. It is well situated in the current international RIE policy environment but also sufficiently forward-looking to address the future economic and societal challenges that Ireland will face. As suggested, the questions posed by SFI have been used to outline some specific comments on the text. THEA would be happy to provide clarification on any of the points should this be required.

Q1: How does *Ambition 2025* align with your organisation's strategy? How will SFI's objectives and strategic initiatives under *Ambition 2025* synergise with those of your own organisation?

THEA aims to support the technological higher education (THE) sector to scale, broaden and deepen their activities in RIE, including securing research funding from national sources to

complement that obtained from Europe (over one-quarter of the sector's HERD is financed by Europe, compared to 15% for the seven IUA universities). The entire THE sector has been on a growth trajectory, with HERD increasing almost three-fold between 2006 and 2016.¹ This applies equally to institutions seeking or who obtained technological university (TU) designation under the TU Act 2018, and those not currently preparing an application for designation.² A particular area of focus is on increasing the number of postgraduate research students. The TU legislation requires applicants to achieve the metric of having 4% research students among their student population, growing to 7% within 10 years of designation.³ The opportunity to participate in programmes such as the CRT will be increasingly important to the sector to help them achieve this. A second important metric underpinned by the legislation is the requirement to have substantial research activity in three areas (ISCED narrow field⁴) increasing to five areas within five years of designation. Expansion of access to national funding streams, particularly to those offered by SFI, will be essential to achieving both these metrics. It is very positive that many of the foreseen strategic initiatives and objectives in *Ambition 2025* should assist institutions from the THE sector to achieve these metrics, assuming they will be successful in winning funding from the resulting funding calls. However, considering the importance of **regional development** in recent government policies and strategies such as *Project Ireland 2040*, *Future Jobs Ireland 2019* and the *Mid-term Review of Innovation 2020*, THEA considers that the regional development/engagement aspects of *Ambition 2025* could be improved to align it more strongly with the national regional development agenda. This is articulated in more detail in the answer to Question 3 below.

Q2: Please comment on the details in the draft SFI Statement of Strategy 2025. E.g.

- **Will the six high-level goals deliver SFI's vision and mission?**
- **Is there an additional high-level goal which SFI needs to consider?**

The six high-level goals are comprehensive and broad. It is clear that they build on the existing/past achievements of SFI and are well-informed by potential future directions in research and innovation. The goals are well-designed towards achieving the stated vision of SFI.

Q3: Does your organisation have any observations on the included objectives and strategic initiatives in the six goals? Are there further objectives or initiatives which SFI should consider including in any of the six goals?

¹ Higher Education Research & Development Survey 2016-2017, DBEI 2019, available at <https://dbei.gov.ie/en/Publications/HERD-2016-2017.html>

² Technological University Dublin was established in January 2019. An application for the Munster Technological University (merging Cork IT and IT Tralee) has been positively received by the HEA and Dept. of Education & Skills – a final decision will be made in early 2020. Applications from the Technological University of the South East (Waterford IT and Carlow IT) and the Connacht-Ulster Alliance (Galway-Mayo IT, IT Sligo and Letterkenny IT) are in preparation. Athlone IT, Limerick IT, Dundalk IT and Dun Laoghaire Institute of Art, Design and Technology are not currently preparing applications for TU designation.

³ The average % of research students in the seven IUA universities is 6.9%, varying from 3.9 to 9.9%. Calculation is based on the 2017-2018 academic year and includes all part- and full-time enrolments. Data obtained from <https://hea.ie/statistics-archive/>.

⁴ For example, ISCED 051 Biological Sciences, ISCED 053 Physical Sciences, and ISCED 061 Information and Communications Technologies.

Considering the importance of **regional development** in national policy and strategy as described under Q1 above, THEA suggests that a new objective “Drive Regional Impact” or similar should be added under Pillar 3 – Make a Difference. This new objective would complement objectives and initiatives elsewhere in the strategy which are targeted at engagement with regional SMEs and groups (Objective 7), societal impact (Objective 8) and increasing regional involvement and engagement (Objective 2). Additional objectives and initiatives could be added to link *Ambition 2025* with funding calls targeted at regional development, including the recently-launched Regional Technology Cluster Fund⁵ exclusively for the THE sector, and the Regional Enterprise Development Fund.

Please see the table below for additional comments on the draft objectives and strategic initiatives:

Objective	Comment on Strategic Initiative
1. Supply Ireland’s knowledge economy with excellent creative thinkers, innovators and disruptors	It would be appropriate for the goal of introducing a world-leading PhD (research) training framework in all SFI-funded programmes to link with relevant national policy and guidelines in this area, i.e. the <i>National Doctoral Framework</i> and <i>Ireland’s Framework of Good Practice for Research Degree Programmes</i> , published by QQI in July 2019. The forthcoming stock-take of structured research training provision in HEIs to be carried out by the National Doctoral Framework Advisory Forum will be helpful during the implementation of this strategic initiative.
4. Supply Ireland’s knowledge economy with excellent ground-breaking research and technology	The intent to develop all-island Research Centres will present an exciting opportunity for the sector, particularly for Institutes/TUs located near the border with existing cross-border centres/programmes supported by INTERREG e.g. Border & Regions Airways Training Hub https://www.breath-copd.org/ , SeaMonitor telemetric marine array https://www.seupb.eu/sites/default/files/styles/INTERREGVA/SeaMonitor_PR.pdf .
5. Be intentional in SFI’s decision making to meet Ireland’s future skills and knowledge needs	The proposed national database capturing the outputs and activities of researchers based in Ireland is an interesting idea. Perhaps it could form one aspect of a national grant management system and could make use of researcher identifiers such as ORCID. This objective could also be linked to the National Open Research Action Plan identified in the <i>National Framework on the Transition to an Open Research Environment</i> .
7. Refocus on impact	Implementation of the strategic initiative to improve engagement between SMEs and entrepreneurs with SFI-funded researchers/centres must include opportunities for both a) researchers who have not previously collaborated with SMEs to do so and b) allow researchers with a track record of SME engagement (often supported by funding from Enterprise Ireland) to build on their experience. A “ready-made” pool of entrepreneurs and new companies could be found among the participants in the New Frontiers programme (https://www.newfrontiers.ie/) operated by the THE sector. The goal to take advantage of State Aid exemptions is very welcome, but perhaps this could be expanded to SFI offering programmes for SME collaboration, applying for new EC-approved State Aid schemes? The KTI State Aid Working Group has identified that other Member States have far higher numbers of approved State Aid schemes, which could place Ireland at a strategic disadvantage in terms of supporting entrepreneurs and indigenous SMEs.
8. Drive societal impact	A link to the UN Sustainable Development Goals would be additive to this section. This Strategic Initiative somewhat separates societal impact from economic impact, when they are often intertwined. This is exemplified in the quadruple helix model

⁵ <https://www.enterprise-ireland.com/en/funding-supports/Regional-Technology-Cluster-Fund/RTCF/>

	of innovation involving higher education, public sector, business and society. A good example of this is the Sustainable Energy Communities project, where sustainable energy researchers at IT Sligo have mentored and advised over 80 community organisations and enterprises, over 40 private sector companies and over 30 public sector organisations on sustainable energy solutions and have identified over €25M in annual savings. See https://www.itsligo.ie/research/contract-research-unit/working-with-us/sustainable-energy-communities-sec-programme/ . A recognition of the relationship between societal and economic impact would strengthen this objective.
10. Become a future-focused funder	It is unclear whether the strategic initiative to “predict the ethical and moral implications of future innovations” will be performed by SFI itself or delivered via funding calls/funded projects.
12. Drive a step-change in engagement between all stakeholders and science	Considering the challenge of “fake science” such as natural cancer cures or science deniers such as anti-vaxxers, climate change deniers etc., could SFI’s EPE programme include activities targeted at educating the public in how to identify accurate scientific information and how to use it appropriately?
14. Champion the alignment of the national research and innovation system	The strategic initiative to support the establishment of a ‘One Voice’ group is very welcome, but if it to truly reflect the broader research and innovation ecosystem, it will have to be established outside of the auspices of any individual funding agency. Avoiding duplication in funding calls and grant management systems is a very worthy strategic initiative. SFI could consider adding to this by stating the goal to champion a national grants management system, which could also be relevant to the national database mentioned under Objective 5.

Q4: Does your organisation have any other observations or feedback for SFI to consider as it finalises *Ambition 2025*?

While THEA broadly welcomes *Ambition 2025* and the objectives and strategic initiatives within it, as is often said, “The devil is in the detail”. It is essential that the resulting calls for funding and associated SFI policies enable researchers from the THE sector to apply for SFI funding. In the past, SFI Calls have set eligibility conditions (particularly around a stringent definition of an “internationally peer-reviewed grant”) which inadvertently prevented THE sector researchers from applying. THEA understands that SFI must apply the highest of standards to the evaluation of proposals and that only the most excellent proposals and researchers are funded, but it is important that researchers from across the entirety of Ireland have the opportunity to compete. This is reflected in Objective 2 of *Ambition 2025*, but could be complemented by an adjustment of SFI policies and rules to facilitate more opportunities for THE sector researchers:

- The SFI Policy on PhD Equivalence could be amended to allow researchers without a PhD but with an equivalent level of experience and competence to apply for funding. A cohort of talented researchers without PhDs exist within the THE sector,⁶ many with substantial industry experience and track records of academic-industry collaboration. The current SFI PhD equivalence policy does not permit them to apply for SFI funding. SFI could adopt the equivalence policy used in Horizon 2020, where researchers with a minimum of four years full-time research experience are considered eligible to apply for funding on an equivalent basis to PhD holders.⁷

⁶ Examples available upon request.

⁷ See page 5 of http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl-msca-if-2018-20_en.pdf

- SFI's rules on eligible leave (as used in the recent Frontiers for the Future call) could be expanded to include full-time teaching posts so these individuals can be considered as "Emerging Investigators". Individuals appointed to lecturing posts (Assistant Lecturer is the mandatory entry point) in THE sector institutions are allocated 18 contact teaching hours per week and are required to complete a qualification in teaching and learning before they can be progressed to Lecturer grade, typically after three years. This large workload means that they effectively take a three-year break from research. Being eligible to apply as an Emerging Investigator in relevant SFI Calls would help these researchers to compete against those with an uninterrupted research record. This change would also assist university staff who have found it necessary to focus on teaching for a period.

Q5: What changes in the national research and innovation system by 2025 would enable your organisation to view *Ambition 2025* as a success?

THEA foresees that by 2025, the THE sector will have increased in impact and relevance to the national and international research, innovation and engagement ecosystem, representing at least 20% of Irish higher education expenditure on research and development, compared to 12% in 2017.¹ The new approaches and calls resulting from *Ambition 2025* will have supported this expansion of RIE activity in the THE sector, with an increasing number of sector researchers participating in and leading SFI-funded programmes and Centres. This will contribute to sustained and enhanced engagement in EU RIE funding streams and will have increased the capacity of the THE sector to secure funding from enterprise and philanthropic sources. A key element of success for THEA will be the emergence of a more "joined-up" national system of RIE supports, with substantially improved cooperation between the relevant government departments and agencies, funding streams which complement each other more fully than is the case today, and a "one-stop-shop" national IT system where researchers can apply for and manage research grants and can disseminate the outcomes of their projects, including their publications and research data. If these changes could be brought about, there is no doubt that the impact of the national RIE system on regions, society, enterprise and individuals will be increased to well beyond that achieved today.