

Impact 2030: Government's Vision for the Future of Research and Innovation

In this article, Professor Nolan reflects on two milestone developments in the Irish research world in 2022: the publication of Impact 2030, a new national strategy for research and innovation, and the decision to amalgamate the Irish Research Council and Science Foundation Ireland. These ambitious moves offer opportunities for a step change in Ireland's approach to research and a necessary transition to a sustainable way of living.



Prof Philip Nolan
Director General,
Science Foundation
Ireland

Introduction

2022 saw two very significant developments that will do much to strengthen and develop research and innovation in Ireland, with the potential to yield great benefits for our environment, our society, and our economy.

The first was the formulation and publication of a new national strategy for research and innovation, Impact 2030. The second was the government decision to amalgamate the Irish Research Council (IRC) and Science Foundation Ireland (SFI) to create a new national research funding agency, which is due to be established in early 2024. These two developments, taken together, are an opportunity to transform, simplify, and enhance our national supports for research and innovation, and ensure a flourishing ecosystem.

Impact 2030 takes a long and holistic view of the power of research to secure liveable futures for people and the planet. It sets out a vision where 'research and innovation make a real and positive impact across society, the economy and the environment'. This emphasis is vital. The ultimate objective of our research and scholarship must be the transition to a sustainable way of living with and on our planet, and to being an inclusive, equitable, healthy, peaceful, and democratic society, with space for diverse and plural expressions of human culture. Our scientific and technological questions and solutions, and modes of economic activity, must be informed and guided by these central challenges.

Integrating research

These are the primary concerns of politicians and the general public alike. When given time to reflect and take the long view, such as in the recent public consultation on research, *Creating Our Future*, people place great faith in the capacity of research and its application to address what they see as the grand challenges: the climate and biodiversity crises; digital and technological transformation and the meaning of being human in a digital world; and living and ageing equitably, inclusively, and well. Furthermore, people see the value and necessity of fundamental and curiosity-driven research. They value knowledge as an end in itself; understand that basic research adds to our store of knowledge, talent, expertise, and creativity; and appreciate that the fundamental insights and discoveries of today contribute, unpredictably and unforeseeably, over years or decades, to the innovative applications, technologies, policies, services, ways of being, culture, and art of tomorrow.

It is in this context that the focus in Impact 2030 on research talent, and supporting talent across all career stages, is most welcome. A research funding agency does not simply fund research: it funds people to do research, and creates a supportive environment in which they can thrive. Talent, expertise, and the capacity to create and innovate are the most important outcomes and impacts of research funding.

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This is not to diminish the importance of applied research, development, and innovation. Quite the opposite – there is much to be done right now, and enormous capacity in the system is applied to urgent, real-world problems. The point is that fundamental and applied research are interdependent. Our capacity to innovate now is based on decades of investment in basic research and talented people. And conversely, applied, engaged, and enterprise-based research often reveals or directs us to new and important fundamental questions, as well as resolving the immediate problem.

It is appropriate, therefore, that Impact 2030 highlights the importance of building research and innovation capacity in enterprise, particularly small and medium-sized enterprises (SMEs), and in the public sector and civil society, and the importance of supporting engaged and partnership research and knowledge exchange.

Impact 2030 also emphasises how research can contribute to ‘a shared island and an innovative Europe’, recognises the importance of the global connectedness of our research activities and community, and commits to an increased investment in research and innovation ‘rising to at least 2.5% of the domestic economy before end 2030’.

Grand challenges

This is an ambitious strategy, one which directs us towards the grand challenges of real consequence to our society and environment. These

grand challenges are complex and multifaceted, and can only be addressed through multidisciplinary, interdisciplinary, and transdisciplinary approaches. However, our capacity to work *across* disciplines requires first that we have deep strengths, capacity, and expertise *within* disciplines, and then mobilise and work to common purpose, bringing together different ways of thinking, discovering, and creating. This interplay of perspectives is the root of real innovation.

 **Fundamental and applied research are interdependent.**

This is the thinking behind the government decision to establish 'a new national research funder that will drive interdisciplinary research, underpinned by excellence in all disciplines, and that will maximise its impact on grand challenges'. This new agency is to be formed through the amalgamation of IRC and SFI. Each of these two funders has its own particular history, mission, activities, and governance, and each has contributed greatly to the transformation of Irish research over recent decades.

There is a lot to be gained by uniting our efforts in one agency. It will be important in the amalgamation that nothing is lost, that the new agency brings together all that is good in the mission, culture, programmes, and activities of the existing funders, and that the new whole is greater than the sum of its antecedent parts. Given the professionalism and commitment of those involved, there is no doubt that this will be the outcome.

The 'ecosystem' analogy is often used to describe our research and innovation system, but only rarely do we reflect on its implications. Key to the resilience of an ecosystem are its diversity, interdependencies at different scales, and adaptability. Ecosystems respond best to interventions that are simple, holistic, sustained, appropriate to context, and supportive of diversity. It is with this in mind that we should seize the opportunity presented by Impact 2030 and the formation of a new national research agency to bring about a sustainable step change in our national capacity for research, innovation, and creativity.

Research and innovation make a real and positive impact across society, the economy, and the environment.