Impact 2030: Opportunities, Challenges, and the New Funding Agency



Daniel Carey Interim Chair, Irish Research Council

In this article, Professor Carey provides an assessment of Impact 2030, Ireland's strategy for research and innovation. The establishment of a new competitive funding agency represents an opportunity to confirm key commitments and to address challenges facing the research system.

Launched in May 2022, Impact 2030 constitutes an ambitious statement of direction for Ireland in the domain of research and innovation. As the successor to Innovation 2020 (formulated in a time of economic crisis in 2015), the new Strategy prepared by the Department of Further and Higher Education, Research, Innovation and Science, responds to different circumstances and sets out plans across five pillars: the impact of research and innovation on economy, society and the environment; excellence; enterprise; talent; and our commitments to an all-island, EU, and global context.

One of the most significant features of the Strategy is the plan to amalgamate the Irish Research Council and Science Foundation Ireland in a new competitive funding agency. How do we get the balance right and make the most of the opportunity? Impact 2030 makes a welcome commitment to parity of esteem, stating the intention to place the Arts, Humanities and Social Sciences (AHSS) on an "equal and statutory footing" with STEM disciplines (Science, Technology, Engineering and Mathematics). This approach is essential, not merely to advance the cause of truly interdisciplinary research (as an aid to addressing grand challenges), but in recognition of the fact that strong interdisciplinary work cannot take place, by definition, without strong disciplines.

Impact 2030 places considerable emphasis on grand challenges, citing climate action and the digital transition specifically. This is part of a wider movement of course, signalled in the United Nations Sustainable Development Goals (SDGs) and in European research policy where Mariana Mazzucato's articulation of mission-based research has been highly influential.¹

At the same time, there is a tendency to treat grand challenges as shorthand, on the assumption that we already know what they are. But before 24 February 2022, to take a notable development, we were not aware that the Russian invasion of Ukraine would become a grand challenge. This example is instructive because it shows that the world

can be set on a different axis suddenly, and we need a range of resources to engage with new realities. In this instance, a knowledge of history stands out as crucial. In other words, our capacity to respond to crisis depends on the vitality of a distributed research base, including the Humanities, which in this case provides critical intellectual leadership.

Covid-19 similarly represented an unanticipated grand challenge. Impact 2030 references the pandemic on numerous occasions, in particular in relation to "virology and vaccine development [which] were vitally complemented by behavioural sciences initiatives" (p. 14). Yet the Covid crisis showed us how imperative it has been to draw on a much wider array of research expertise than these important areas alone, including education, politics, sociology and anthropology (in order to understand such things as vaccine acceptance and resistance, the spread of misinformation and the relative success and failure of different political systems), to name but a few. An all-of-society problem has called upon all of our expertise and research wherewithal. The lesson is not to narrow the basis of our national expertise.

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Another key question for the new agency is how to balance the priority accorded to basic or fundamental research vs applied or oriented research. SFI's mission has focused largely on the latter, the IRC's largely on the former, with a disparity of budgets between them. Impact 2030 usefully defines R&I as covering "the full spectrum of basic and applied research, experimental development and innovation" (p. 4).

At stake in this is how we support curiosity-driven, individual, PI-led projects, alongside centres in designated areas that aggregate capacity. Nor is applied research

confined to industry, but also encompasses civic society and social policy. In any case, we should appreciate the productive relationship between investigator-led research (without boundaries) and applied outcomes. Evidence appears in the fact that of the 42 European Innovation Council grants announced in January 2022 under their "Transition" scheme, 25 derived from ERC-funded, PI-led research.²

The terminology of impact tends to privilege the applied, and on the whole when Impact 2030 seeks to illustrate research achievement it does so in these terms, partly because we naturally reach for the measurable. How, on the other hand, do we measure changing people's lives (through a whole range of research contributions in STEM and AHSS)? The remit of the Strategy also includes innovation, which is typically predicated on an outcomes-oriented approach like commercialisation. But we can afford to take a wider view and to define innovation as breaking new ground and to see it as depending in part on creating a cultural context that encourages conversation, openness and imagination as much as the application of technique.

The dedication of one of the pillars of Impact 2030 to placing "Talent at the Heart of the Research and Innovation Ecosystem" (Pillar 4) is an important statement in itself. The new agency will have a key role in addressing this commitment which radiates through all aspects of research and teaching at third level. The aspiration to attract the best talent to Ireland (p. 42) has implications for the level of financial support provided to researchers. As with all students in the system, the crises in accommodation and cost of living are having a major impact both on recruitment and quality of life. Our system-wide approach to funding has tended to emphasise projects rather than people, with a resulting neglect of career progression and the consequences of embedded precarity. Investment to bring staff/student ratios in touch with international standards will help here. The pledge to improve EDI performance is extremely positive as is the effort to develop career pathways beyond academia. Across the system, we need investment in researchers at all career stages, as the IRC has done in building individual awards from early career stage through to Advanced grants. While early career is key, support for established researchers is equally significant or we risk losing them to other jurisdictions.

The important place of the new Technological Universities in the research landscape forms part of Impact 2030's strategic goals. The stress is on capacity-building and impact in a regional context (p. 27). There are various

modalities for achieving progress, with career paths and contracts forming the subject of a commissioned OECD report (September 2022).³ But there is clearly a role for funders too, which is already taking shape in the IRC. An unanswered question remains how ambitious Ireland intends to be. The research mandate for the TUs is very clear in the legislation, as described in the functions section of the TU Act, 2018: s9(1)(f) which stipulates that institutes shall "support a body of research that includes

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research relevant at regional, national and international levels and pursue excellence in the conduct of that research". The challenge for the TUs is to balance the requirement to maintain the strong historic access agenda of the IoTs alongside an enhanced research mission and need to expand to international horizons.

Consistent with Impact 2030's declaration of parity of esteem for AHSS and STEM, noted above, the new agency needs to ensure funding support for AHSS disciplines, which are among the highest ranked internationally in many of our institutions. Success in ERC competitions confirms the quality of research taking place in these domains which the IRC has done much to foster. While recognising the value of pursuing grand challenges, we cannot transform AHSS scholars into mere passengers or helpmeets in this campaign.

There is of course much more to Impact 2030 than the new funding agency, including the very significant identification of research for public policy and the role that universities (and funders) can play in a more integrated, responsive system, together with a new model for science/research advice to government. The Royal Irish Academy and IRC collaborated on a series

of webinars in 2021 and on an outline roadmap that proved valuable in identifying opportunities.⁴

But if there is an area an ongoing concern it remains the level of funding. No new influx appears to be planned. The target for 2030 is a modest uplift of 0.29% in GERD (gross [public and private] expenditure on R&D) as a % of GNI* (p. 61). The Strategy says that investment will rise "at least" to this

If there is an area an ongoing concern it remains the level of funding. No new influx appears to be planned. level (p. 3), which holds out some hope. Given that there are notable targets for increasing business expenditure on R&D and private funding (p. 61), it would appear that the burden of the modest overall rise over the eight years of the strategy will not fall on government. Indeed, since GNI* represents 75% of GDP we have arguably faced a decline in investment.

Another side of the story is the reliance on industry which contributes (according to estimates) 1.8% of the overall R&D figure under GNI*. This degree of dependence has knock on effects for the quantum of support available for blue-sky research which is typically the area maintained by government, for understandable reasons. In any event, figures for Ireland's R&D investment (whether by percentage of GDP or GNI*) place us in a lowly position in the EU league table.

There is widespread recognition, underlined by Impact 2030, of the potential for strategic change to galvanise research in Ireland. The new agency is a key part of the equation. We have a shared obligation to make the case for research, from which the country as a whole will benefit.

ENDNOTES

- https://research-and-innovation.ec.europa.eu/system/files/2019-07/ec_rtd_ mazzucato-report-issue2_072019.pdf.
- 2. https://erc.europa.eu/news/erc-funded-research-wins-most-new-eu-innovation-grants
- 3. https://www.oecd-ilibrary.org/docserver/2b7ee217-en.pdf?expires=1673820749&id=id &accname=guest&checksum=B270AD8870B81E95AC750459E54822E6
- 4. Mary Doyle, Sinéad Riordan, and Daniel Carey, 'Research for Public Policy: An Outline Roadmap'. https://www.ria.ie/sites/default/files/research-for-public-polciy-report-2021_1.pdf

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