

**Submission to the Interdepartmental Committee
on Science, Technology and Innovation**

Joe Cogan

Liam Downey

Michael Fitzgibbon

Dermot O'Doherty

23 March 2015

Submission from a group of former science policy advisors

(see Appendix for details)

The consultation paper on a new strategy for science, technology and innovation is very timely, and in particular the aspirations and objectives for the national innovation system in Ireland are most welcome. The paper identifies many of the challenges, opportunities and threats which must be addressed to maintain and strengthen this system. Among the important points in the paper are:

- Innovation is the main driver of economic growth
- GBAORD (Exchequer allocations to research and development) is declining and currently is below both OECD and EU (27) averages and less than half the level in Finland. R&D in the business sector (BERD) remains below the EU average also and well below the leading countries.

While highlighting many positive developments over the last 15 years the document signals an awareness of inherent problems in the system, such as:

- The decision was taken in 1999 to make a radical change in the level of public funding of research, through both the PRTL and the establishment of SFI. Almost all of the additional funding went into basic science, albeit some of it fell into the OECD category of fundamental-oriented research. The failure to provide corresponding support for applied research and innovation was an issue that needed to be addressed.
- In 2004 an international expert review panel chaired by Sir Richard Brook undertook an initial evaluation of SFI. It reported substantial progress towards establishing a research capability in Irish higher education institutions and recommended that there

should be no radical change of course. Over the following years SFI continued to build strong research groups and programmes, raising the profile of Irish research and producing a cohort of young researchers. Beginning around 2009 the remit of SFI began to change from fundamental to applied research, jeopardising the success in building a research system.

- There has been no significant change in the poor performance of R&D in the business sector over the last decade, particularly in indigenous industry. *SSTI 2006-2013* set a number of very specific targets in these areas and it is not clear whether these targets have been achieved over subsequent years.

In relation to the future evolution of science, technology and innovation policy, the following observations may be helpful:

- In the past, national S&T policy-making has benefited substantially from external advice and input, as has been comprehensively described in the paper in *Administration Vol. 59 No. 3 2011 (M. Fitzgibbon: A History of Science and Industrial Policies in Ireland, 1960-2010)*
- The review of Irish science policy undertaken by OECD in the 1960s provided a foundation and stimulus for the developments over the following decades
- The report of the Science, Technology and Innovation Advisory Council (STIAC) in 1995 led to Technology Foresight, the establishment of the Irish Council for Science, Technology and Innovation (ICSTI) and of SFI, the setting up of the Interdepartmental Committee on Science, Technology and Innovation and other structural changes. The work of ICSTI and its successor, together with a range of independent programme evaluations from the Science and Technology Evaluation Unit, provided critical and constructive input to the system. In recent years the absence of such external review is a weakness in the system

- The system at this juncture would benefit from a comprehensive review by an organisation such as the OECD, which continues to have a recognised track record in assessing national innovation systems. Utilising the policy expertise of the OECD would allow the perceived conflicts which have recently emerged between those advocating a basic versus an applied research approach to be addressed in a clearly independent way. In our view both must be supported as they have complementary roles to play. It could also address the issues beyond research, such as informal R&D, design, the purchasing and application of new technologies as well as the introduction of new business models, which are involved in perpetuating the ‘innovation deficit’ in Irish-based firms. Involving the OECD would also allow us to engage with what is happening in other countries – small States in particular.

APPENDIX

Details of the submitters

The four policy advisers involved in proposing this submission have, over a number of years, been closely associated with the public sector science and technology organisations and with the Science Policy Research Centre in UCD. They are currently members of the Agri-Food Strategy Group.

They are:

Professor Joe Cogan, former Head of the Science Policy Research Centre in UCD.

Professor Liam Downey, former Director General of Teagasc and former member of expert groups for EU Foresight Initiatives.

Michael Fitzgibbon was formerly Head of Science and Technology Policy and Programme Evaluation in Eolas and in Forfás.

Dermot O'Doherty is a consultant in innovation and business networks and was strategic planning manager in Eolas, the Irish Science and Technology Agency.