Trinity College Dublin

Update on College Research Strategy
Dean of Research

23rd February 2012

The purpose of this brief report is to highlight a number of recent developments both nationally and within College that may have a significant impact on the College's research activities in the future. These developments are considered under four headings as follows:

- Roll out of the College's research strategy implementation plan;
- National research policy;
- Research funding diversification; and
- Research productivity and participation in funded research.

Roll out of the College's research strategy implementation plan
A central element of the College's research strategy implementation plan has been the identification of an evolving set of multi/interdisciplinary areas (so-called "thematic areas") in which significant research strength exists and in which College is well positioned to have significant impact internationally, with the goal of fostering further collaborative research within those areas. During this semester, this process has been rolled out through an on-going series of town hall meetings designed to bring together the communities working in these areas. At the time of writing, four such meetings have taken place

- Ageing (11th January) , 100 attendees
- International Integration (18th January), 30 attendees
- Digital Humanities (10th January), 45 attendees
- Smart and Sustainable Cities (23rd February), 46 attendees

A town hall on Cancer is scheduled for late February. Further town halls on Telecommunications, International Development, and Sustainable Society have been planned with further areas to be rolled out later. Feedback on the process and the individual meetings has been extremely positive. In each case a steering committee is being convened to develop a strategy and further collaborative activities within the area.
In parallel, a College delegation of theme champions (or their representatives) visited Brussels on the 9th and 10th of February to meet with key individuals within the European Commission and the Irish Permanent Representation to the European Union, who are shaping the design of the forthcoming Horizon 2020 programme. This event was intended to promote Trinity as a leading European research performing organisation, create the connections necessary to allow us to influence the design of European programmes, and stimulate the development of strategy for research funding in the thematic areas. Of particular note is the positive response that our proactive approach and strategy for multi/interdisciplinary research received.

National research policy
During the last year separate activities addressing research (area) prioritorisation, the funding of research centres, and intellectual property management have been ongoing at National level.

The National Research Prioritorisation Exercise has now been completed and a report submitted to the Minister for Jobs, Enterprise and Innovation for consideration by the government. To date neither the report nor specific recommendations have been published. It is anticipated that the report will recommend that the majority of public research funding be focused on 14 priority areas (Future Networks and Communications, Data Analytics, Management, Security and Privacy, Digital Platforms, Content and Applications, Connected Health & Independent Living, Medical Devices, Medical Diagnostics, Therapeutics, Food for Health, Sustainable Food Production and Processing, Offshore Marine Renewable Energy, Smart Grids & Smart Cities, Manufacturing Competitiveness, Processing Technologies and Novel Materials, Innovation in Services and Business Practices) and 6 platform areas (Biomedical Science, Nanotechnology, Advanced Materials, Micro-electronics and Photonics). These areas align well with College's research strengths. Crucially, the report is likely

to recommend that a minority share of public research funding continues to be made available for non-priority research including evidence-based policy research.

While a report on the future of research centres in Ireland is being completed by ACSTI there appears to be no cross-agency consensus on support for large integrated (ie spanning the spectrum from fundamental to applied/contract research) centres as was proposed in early drafts of the ACSTI report. Crucially, Science Foundation Ireland has launched a new research centres programme as an evolution of its previous Centres for Science, Engineering and Technology (CSET) and Strategic Research Clusters (SRC) programmes. This programme will support centres with up to six years of funding for core activities, including core research, as well as funding for a number of targeted projects, each of which will include one or more industry partners. Following a so-called 'hub and spoke' model, centres will have the opportunity to grow in size during their lifetime, by adding targeted projects. SFI anticipates offering funding of between €1m and €5m per annum. Participation in the programme requires substantial industry cash and in-kind contributions to the research.

Recently, the National Intellectual Property Policy Group (IPPG) and Intellectual Property Implementation Group (IPIG) have produced a draft national policy on the commercialisation of the results arising from public sector research as well as a framework for industry engagement with public research. Supported by Forfas, the initiative is described as providing "policies and procedures to help industry make good use of Ireland's public research institutions". College is supportive of the overall aim of providing clear national policy on industry research collaborations with Research Performing Organisations (RPOs) and recognises that it is in our interests to ensure that technology may be transferred to industry in a timely and consistent manner across the sector. However, together with other RPOs in the state, we have serious concerns with many aspects of the draft policy related to issues such as the creation of a National (so-call 'Central') Technology Transfer Office which "can act as the first port of call" for companies seeking to license IP, the situations in which non-exclusive royalty-free (NERF) licenses might be granted (for example, in the draft policy, NERF licences are not confined to jointly-created IP and free rights to university solely-created IP are permissible), and the possible imposition of " intellectual property integrity assurance processes throughout the public research sector". We will continue to engage with Forfas as this process continues in order to ensure that our concerns are addressed.

Research funding diversification

As noted in the Planning Group report to board, the need to develop and invest in robust strategies for research funding development and diversification is critical. Work is already underway within the College's Research Development Office to develop a strategy to support diversification of research funding with a special emphasis on EU funding sources such as the expected Horizon 2020 programme and investment in this strategy will need to be considered urgently. The strategy which has been considered by the Research Committee on several occasions foresees a number of new initiatives including Research Programme Officers being deployed locally in Schools, eventually on a self-financing basis but underwritten by the College in the short term, a mentoring programme for staff seeking to develop proposals to new sponsors (in collaboration with the Staff Development office), and support for buy-out of staff time to develop proposals of scale. Research Programme Officers would work with the School's Director of Research/TRI's Director to develop and manage an implementation plan for the unit's research funding strategy and particular emphasis should be placed on securing non-exchequer research funding especially Horizon 2020 funding .

Development of a strategy for a more proactive approach to industry liaison is also beginning and, in this context, further consideration for whether and how the College should support contract research will be required including better support for the management of service contracts.

Research productivity and participation in funded research

Using the current Research Quality Metric criteria, as of the 7th of February 2012 70.28% of core staff are research productive. The percentage varies considerably across individual Schools from 33% to 100%. While changes to the criteria would certainly influence this figure, it nevertheless suggests a lack of research productivity across College. Clearly the percentage of research productive staff needs to increase significantly in line with the new academic contract. The principles of a College-wide Workload Allocation model are currently being worked on to ensure equitable allocation of duties also ensuring that staff have the capacity to engage in research. In

addition, it is proposed to establish a Provost's Award for Research to recognise the College's leading researchers.

A recent analysis of open research accounts reveals that 435 Principal Investigators (PIs) have active research accounts. Moreover, in a five-year review of research income 20 PIs (3% of total) were responsible for generating 35% of income earned over that period. The 50 PIs (8% of total) with the highest research income accounted for 50% of all income earned over that period and 20% of PIs (130 in total) accounted for 78% of income. Based on this analysis, losing key staff represents a significant risk. However, it also suggests that there is potential to grow participation in funded research in the context of the research funding diversification/development strategy.