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Innovation and Partnership

6.1. Context and overarching goals

Over the past four years, UCD has made great strides in both its traditional core functions of education and research and in their mutual reinforcement. Over the period of this new strategic plan, UCD will develop innovation as the third pillar of the University's core mission of service to Ireland in the wider world. In so doing, it will be made clear at each stage of the process that UCD innovation relates both to economic development and to culture and society which it will serve through the nurturing of the creative environment and the evidence-based design of better and more efficient social services.

The pivotal development in the innovation sphere during the period of this plan will be the *UCD-TCD Innovation Alliance*. The *Innovation Alliance* is comprised of three major strands:

1. A joint venture in business development that will see UCD and TCD bring together their technology-transfer and enterprise-development activities with ambitious targets for job creation through the formation of spin-out companies, the support of spin-in companies and Irish small to medium enterprises, and the development of substantive and sustainable partnerships with foreign multinational companies
2. The formation of a new UCD-TCD 4th-level *Innovation Academy* whose aim is nothing less than the formation of the minds of a new, globally conscious generation of innovative, creative and entrepreneurial graduates who will play the same leadership role for Ireland on the international stage that 20th-century graduates did for the newly independent Ireland
3. A new partnership with government and its agencies, the business and venture-capital community and other stakeholders with the goal of developing the policies and supports necessary to establish Ireland as a thriving innovation ecosystem.

This alliance is a radical partnership between the education sector, the State and its agencies and the business and venture capital communities with an objective of developing Ireland as a global innovation hub. The *Alliance* will work to develop a world-class ecosystem for innovation that will drive enterprise development and the creation of sustainable high-value jobs. By forming the *Innovation Alliance* the universities recognise the need to evolve and play a powerful role within such an ecosystem.

There is a critical need to create innovation networks at a national level and to invest in their evolution in order to optimise university collaboration and to facilitate engagement by industry.

Key national partnerships already developed by UCD and on which the *Innovation Alliance* will build include:

- Molecular Medicine Ireland, a ground-breaking collaboration formerly known as the Dublin Molecular Medicine Centre and now extending beyond the initial UCD-TCD partnership to include other medical schools in Ireland
- The National Institute for Bioprocessing Research Training (NIBRT), leveraging UCD's expertise in chemical engineering and cell biology, structural biology at TCD and the downstream processing and glycobiology at Dublin City University (DCU) and now including the wider community through the (bio)pharmaceutical Sciences Network of HEIs
- The National Digital Research Centre, located in Dublin's Digital Hub and established as a not-for-profit private company whose shareholders include TCD, DCU and Ireland's two design colleges: the National College of Art and Design and the Institute of Art, Design and Technology
- TRIL, a partnership with TCD, the National University of Ireland, Galway, and Intel focused on supporting older people in their homes.

Central to the formation of the *Innovation Alliance* is a vision of Ireland's economy as one that will be increasingly dependent on the development of an indigenous knowledge-intensive sector. Ireland will also continue to be an attractive location for high-value manufacturing and services industries, largely funded by FDI. A significant proportion of these will perform high-value research and development activities.

UCD is positioned to play a major role in the national economic recovery by contributing to *Building Ireland's Smart Economy*, the government's framework for sustainable economic renewal, in particular by developing Ireland's emergence as an 'innovation island'. Under the innovation pillar, UCD's mission is to support, feed and facilitate this shift by translating its knowledge and expertise to the benefit of Ireland's economy and society.

Different disciplines will contribute in different ways:

- The sciences and engineering disciplines will contribute by founding research partnerships with enterprise, forming campus spin-outs and licensing and commercialising its intellectual property (IP)
- The human sciences, business and legal disciplines will work to better inform the actions and thinking of policy makers, practitioners and the government
- UCD's arts and humanities will enhance the cultural life of the country, both deepening our roots and placing them in a global perspective, through the creative utilisation of digital media and other new technologies.

Across all disciplines, UCD will foster entrepreneurship and innovation at the 3rd- and 4th-levels to create the business leaders and educated workforce that together will create the knowledge economy.

6.2. Core objectives

> **UCD has three core objectives for innovation:**
> 1. To maximise the impact of UCD's knowledge and expertise to benefit Ireland, especially from converging disciplines
> 2. To foster a culture of innovation and entrepreneurship at 3rd- and 4th- levels
> 3. To foster innovation amongst all UCD staff.

6.2.1. Maximise impact of UCD's knowledge and expertise

Under the Enterprise Ireland *Technology Transfer Strengthening Initiative* (TTSI) programme, NovaUCD is funded to increase the licensing and commercialisation outputs from UCD's research base, including licensing to established companies and ventures. The main outcome from this strategic priority has been to meet the specific targets of the TTSI programme, which have been set to reflect international benchmarks in exploiting the outputs of research. Through the development of the *Innovation Alliance*, by 2014 UCD should witness a step-change in such activities, particularly in the founding of campus companies. These outcomes will reflect a major shift in the research and innovation culture of the institution, especially in the area of converging disciplines. As a major initiative, UCD has set itself the goal of building a multi-million-euro seed fund for campus companies based, in part, on reinvesting income gained from its commercialisation activities and also on funds raised from outside the institution. This will be enabled by creating a joint business development activity with TCD that will assess and assist the early development of new enterprises emerging from our academic activity.

6.2.2. Fostering innovation and entrepreneurship at 3rd- and 4th- levels

By 2014, UCD's offerings at undergraduate and postgraduate level will be transformed to embed aspects of innovation and entrepreneurship through the *Innovation Academy*. At the undergraduate level, distinct streams with a business emphasis will be implemented in the scientific and technological disciplines. UCD will mainstream courses in innovation and entrepreneurship at the 3rd- and 4th- levels. This will give all students access to a range of transferable skills and a knowledge of business, thus giving them a wider set of career

options beyond their core discipline. As of 2008, courses delivered by NovaUCD on starting a business and on IP have been introduced into the structured PhD programme. Furthermore, new and adapted MSc and MBA courses are planned to focus on business aspects of the science, engineering and technology sectors. These courses are targeted at both new graduates and high-skilled workers to provide for their re-education and/or up-skilling, enabling them to enter new sectors and to support continuing professional development. There will be masters-level courses (MScs and MBAs) in prioritised research themes (energy, engineering, biotechnology and biosciences and ICT) that will provide business education for researchers and support the re-skilling and up-skilling of workers looking at a career change. This suite of initiatives will amount to a significant change in UCD's educational landscape.

6.2.3. Fostering innovation amongst UCD staff

During the period of this plan, UCD will foster and reward innovation amongst UCD staff through specific inclusion of innovation as a criterion for promotion. Additionally, it is intended to build an innovation track record into our recruitment criteria where appropriate.

6.3. Key metrics and performance indicators

UCD will assess its progress against the objectives set out above using the following metrics.

- Innovation index (combining patents, companies, licences): this measure reflects whether UCD is meeting its innovation outputs relative to its research income and international norms: target 10 per cent year-on-year improvement
- Percentage of PhD students taking innovation modules as part of their course work (target 80 per cent)
- Percentage of staff protecting IP or contributing to policy papers
- Formal collaborations, partnerships and joint ventures with industry, non-governmental organisations and arts and cultural organisations.