DCU
Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

DCU Strategic Plan 2017 - 2022
Talent, Discovery and Transformation

Constituent Strategy
Research and Innovation

Introduction

A core element of DCU's Vision is to be a globally-significant university that is renowned for its discovery and translation of knowledge to advance society. This commitment to world-class research is central to the new Research and Innovation Strategy which sets out a range of specific actions to advance our reputation in that regard. In the first instance, we commit to foster a research culture across all levels of the University and will empower our staff and students to reach their full potential in research. This will build upon the existing broad based research strengths across the five faculties and the established Research Centres in the following thematic areas:

— Health technologies and the healthy society;
— Information technology and the digital society;
— Advanced manufacturing and materials;
— Sustainable economies and societies;
— Democratic and secure societies;
— Educational research and innovation.

While academic excellence can be pursued in any discipline within DCU and at any scale, we recognise that, in general, the greatest impact is achieved from a critical mass of multidisciplinary researchers tackling important research questions. With this increasing focus on mission -oriented research, we will conduct an externally-mediated prioritisation exercise to identify the research areas we will target. This approach needs to be underpinned by a recruitment and retention plan that is aligned with these priorities. More generally, we will seek to strengthen significantly our human capital at all levels of research through a range of initiatives and we will place a particular emphasis on fostering research leadership and providing the research supports at local level.

Such is the nature and complexity of the major research challenges facing the world that international collaboration is essential in order to make significant and sustained advances. We will promote and support international research collaborations while also taking particular account of geo-political developments. We will also renew our efforts to showcase our research achievements and distinctiveness, both nationally and internationally. Scientific excellence cannot be achieved without state of the art research infrastructure and facilities. We will develop a road map to sustain and improve our research infrastructure and to plan for future technological needs.

DCU has a well-established reputation for innovation. This has been based both on our effective translation of research outcomes into societal and commercial benefit and the responsiveness of the institution itself to national and global challenges and opportunities. The recent expansion of DCU has created new possibilities for us across all disciplines. We will foster a broader culture of creativity and innovation in DCU, beginning with the narrative used to describe the university and its priorities, both inside and outside the University. We will promote the exploration of possibilities arising at the intersections of creative processes and technological innovation. We will develop an Innovation Plan that leverages the wide-ranging assets available right across the University.

Enablers

Key factors that will enable us to realise the research goals outlined are an increase in:

— The quality of research output and its impact
— The number of academics defined as research active
— The number of PhD students
— The number of academics holding external research grants
— Research grant income and the diversity of funding sources
— Engagements with enterprise to enhance impact

Supporting these enabling factors is crucial and a series of specific Research and Innovation initiatives to be rolled out early in the strategy period will provide such support. These are described below.

In order to offer a proactive faculty-based support service for academic staff in the planning and writing of externally funded research grant applications, each faculty will appoint a Research Development Officer. The specific objective of making these appointments is to increase the number, scale and success rate of research grant applications across the University. This role will involve developing a close working relationship with the Executive Deans and with the relevant Research Support Officer in RIS.

In terms of improving the citation performance of the University's research output, discipline specific Citation Action Plans will be developed in conjunction with the Library and Quality Promotions Office. These plans will focus on the importance of publication in top quartile journals, the added citation benefits related to international co-authored publications, publication planning as part of our mentoring initiatives, the use of open access repositories (e.g. DORAS), the use of unique research identifiers (e.g. Orchid ID) and the use of social media channels to improve citations.

Key Research Development initiatives will be introduced including an enhanced suite of training initiatives, developing a repository of successful applications as exemplars and the introduction of an internal process of peer review for external grant applications.

A review of our Research Ethics structures and processes will be undertaken to ensure the enhancement of robust and consistent Research Ethics principles, Standard Operating Procedures and approval at the appropriate level.

RIS will oversee the continued deployment of the TORA financial management system for research funding. TORA is an integrated research application and award management system and database with the capacity to track all externally-funded research applications and awards. This greatly facilitates both internal and external reporting, and clearly identifies the sources of funding and breakdown between exchequer and non-exchequer funding. High quality research information will be provided to senior leaders on a quarterly basis.

The central importance of the open access policy to research infrastructure in terms of sustainable professional management of critical items of high end equipment and facilities for a broad range of academic and industrial users is a key element of the research strategy. This centralised approach greatly helps with decision making in terms of large scale investments and provides a route through an access charging plan to recoup the instrument running costs.

A Research Strategy Group and a Research Forum, chaired by the VPRI, will be convened in order to ensure that staff with responsibility for co-ordinating the research effort across the University can feed into the roll-out of the strategy on a regular basis.

The Research and Innovation Strategy reflects all six of the themes outlined in the Strategic Plan vision statement. The development of talent is central to the success of the University's ambition to grow the next generation of research leaders. The plan to launch a non-exchequer funded new Assistant Professor talent recruitment initiative represents one aspect of the University's commitment to deliver on this objective. The plans for the development of future research leaders for the identified priority areas are another manifestation of this commitment to talent development. The discovery and translation of knowledge to advance society encapsulates the research and innovation vision articulated in the plan and directly relates to both the national and international agendas of an increasing focus on the impact of the research activities. This represents a continuation of the University's commitment to proactively engage with the enterprise sector. The opportunities afforded by the newly expanded academic discipline base in the university facilitate the exploration of possibilities arising at the intersections of the creative arts and technological innovation. This is particularly true for the rapidly evolving ICT sector which has the potential to have a major impact on the integration of arts and technology. In a wider sense, the transformative impact of the increasing pace of the advancement and application of technology, in areas such as sensor development, internet-of-things (IoT) technologies, advanced manufacturing and ICT necessitates a continuous evaluation of the emerging opportunities for research and innovation activities in these areas. Finally, the commitment in the strategic plan to put sustainability at the core of the University affirms our intention to promote and support sustainability Research across the University.

Constituent Strategy Goals

DCU Strategic Goal	Action	Success Measured by:
Conduct a robust Research Prioritisation Process to identify our research priorities	Identification at faculty level of the strategic research priority areas which map onto established and emerging research strengths with the potential to deliver distinctive impact.	Completion of Research Prioritisation Process Development of Internal Support Strategy Tracking of research indicators in priority areas
	Initiate an external evaluation process to identify themes which reflect overarching research strengths with an emphasis on multidisciplinary research and distinctive capabilities.	
	Prioritise internal research support measures to enhance activities in the identified areas.	

DCU Strategic Goal	Action	Success Measured by:
Develop a Human Capital Plan for Research to underpin our research goals	Establish an integrated, strategic approach whereby recruitment and retention of staff at all levels will be aligned with our research priorities.	Completion and internal dissemination of plan
		Annual review of strategic alignment in appointments across faculties
	Implement a succession planning process in key areas of research focus to ensure continuity of research activities.	Specific successes (e.g. Science Foundation Ireland [SFI] Research Professorship Programme)
	In terms of recruitment, specific individual funding schemes such as IRC Laureate, ERC awardees, SFI Research Professorships and SFI Future Research Leader programmes will be targeted to complement existing research expertise and build research teams of critical mass.	Uptake of RCF by the research community
		Number of 'emerging research leader appointments'
	Ensure that both research and innovation excellence are recognised in career progression criteria for senior positions.	
	Implementation of the Researcher Career Framework (RCF) which will enhance Career Planning and Development for early career stage researchers.	
	The plan will also identify initiatives to attract and support emerging Research Leaders.	
Establish a Research Impact Initiative with a focus on enhancing the University's research performance and impact across all five faculties	Development and deployment of discipline specific Citation Action Plans in conjunction with the Library and Quality Promotions Office.	Launch of Research Impact Initiative
		Implementation of research targets and impact guidelines at faculty level
	A Research Impact Initiative scheme will be developed to disburse research support funds directly to academic researchers based on their Scopus outputs, with the objective of improving the indicators for research excellence.	Improvement in the University's citation performance
		Increased research funding support to schools based on academic outputs
	An annual Research Impact Awards scheme which will be held on the President's Research Day, will recognise the link between research excellence and the associated translational impact. There will be one award per faculty reflecting the diversity of research impact across the University.	Annual awards for research performance and translational impact
	For staff working in the broad creative arts area, the University's operational definition of 'research' outputs will recognise Creative Outputs, which are published works or publicly performed, with an element of external validation, such as being commissioned, exhibited, performed or published by a recognised organisation of some standing.	

DCU Strategic Goal	Action	Success Measured by:
Support prioritised opportunities for international Research Collaboration	Establish a Strategic Partnerships Office to prioritise the development of research partnerships (e.g. with Arizona State University) as well as new partnerships with clear evidence of significant potential. Deepen our engagement with the Global Consortium for Sustainable Outcomes (GCSO) to address sustainability challenges from a solutions perspective. Through the Strategic Partnerships Office, identify areas for research collaboration within our European Networks – Young European Research Universities (YERUN) and European Consortium for Innovative Universities (ECIU) and participate in the related researcher mobility programmes.	The number of publications with international partners The number and scale of funding awards with international partners Engagement indicators (including student and staff mobility) with such partners
Foster the development of new Research Leaders	Identification of leadership for multidisciplinary research initiatives to spearhead specific research efforts The launch of a non-exchequer funded new Assistant Professor talent recruitment initiative. These future research leaders will be recruited into the five faculties for an initial two year term. A Research Mentoring Support Scheme will be implemented in line with the above initiative. The University Leadership and Management Training (ULM) programme will be provided to the future research leaders.	Introduction of Leadership Identification and Support scheme Implementation of new Assistant Professor talent recruitment initiative The number of proposals led by DCU Principal Investigators Increase in update of Research Mentoring Increase in number of early stage career academics on ULM programme
Promote our research activity to our stakeholders to raise the external profile of DCU research in the media and among the general public	Expand membership of the Research Communications Group to include Faculty Officers Extend presentation and media training to Early Stage Career Researchers Undertake an external stakeholder study of the research and innovation perception of the University's activities. Support engagements with the RTÉ "Brainstorm" platform for all academic disciplines Develop a Research Impact Report showcasing the social and economic impact of the University's research.	Percentage increase in the number of DCU research stories mentioned on digital platforms Percentage increase in the number of DCU research references in national and international media

DCU Strategic Goal	Action	Success Measured by:
Research Support Operations and Oversight	Improve our Research supports, procedures and operations over the period of this plan.	Establish a Research Strategy Group to advise the VPRI on the roll-out of research initiatives.
		Introduce peer-review process for external grant applications
		Complete and implement review of Research Ethics processes
		Deployment of TORA and integrate with management information.
Foster a culture of creativity and innovation in the University.	Drawing on the expertise in all five faculties and support units, we will put in place a supportive environment to foster a culture of creativity and innovation across the university by;	Implementation of an annual programme of events, tracking staff and student engagement numbers.
	Developing relationships with key external thought leaders in creativity and innovation and appointment of Adjunct Professors in these areas.	Increase in investment in investor ready projects
	Establishing an annual programme of cross-university initiatives designed to support creativity and innovation in all disciplines. This will include the President's Award for Innovation, an expanded "Insights in Innovation" seminar series, events aimed at promoting student innovation, including pre-accelerator courses, Hackathons and student competitions.	Number of projects validated and screened
		Increase in start-up or social enterprise ideas from humanities and social sciences and promote greater cross faculty interaction
	Promoting social and cultural entrepreneurship, through specific initiatives in those areas to widen the base of innovation supports.	Attraction of sponsor for President's Award for Innovation
	Developing a university-wide initiative in Digital Transformation drawing on expertise in all five Faculties, DCU Invent and DCU Alpha. This will coordinate with other constituent strategies and seek to leverage our wide expertise in this space to enhance the student learning experience, to develop next generation research projects and to further build DCU's reputation for leadership in this space. We will seek external support to develop a team of new research and teaching positions with expertise in different dimensions of Digital Transformation in all faculties and to appoint a Digital Innovator in Residence to champion emerging opportunities for external collaboration and commercial and social knowledge exchange.	Appointment of Adjunct Professors in creativity and in innovation.

DCU Strategic Goal	Action	Success Measured by:
Develop and implement a DCU Innovation Plan	A new DCU Innovation Plan will further deepen and broaden our innovation activity, increase the coherence of the different activities across the University and thereby increase awareness and engagement by students, staff and external partners. As part of this plan we will: Put in place a supportive framework across the University to increase knowledge transfer from our research for social, cultural and economic benefit. Create a series of 'makerspaces' where staff, students and external partners can work collaboratively to advance innovation projects, to promote creative product ideas and to support students, staff and enterprise partners with masterclasses, events and idea development support. Enhance support for DCU Social Entrepreneurship initiatives such as Ashoka Changemaker Campus and related programmes. Introduce an Easy Access IP commercialisation model to drive new consultancy, contract research activity and facilities access. Increase the strategic planning and coordination between the different elements of the University engaged in innovation activity. Seek external support to enhance Invent's Tech Venture Programme.	Completion and dissemination of Innovation Plan Number of staff, students and external partners engaging in innovation activities Provision of opportunities for students to study areas of innovation and entrepreneurship Increased rate of applications to EI for Commercialisation Fund grants An increase in the number and value of Innovation Partnerships An increase in knowledge transfer activities and DCU's Innovation Index Number of DCU students and enterprise partners of the University accessing or utilising the planned makerspaces Growth in consultancy projects at DCU Growth in Social Innovation initiatives