

SHAPING THE FUTURE

UCD STRATEGY FOR RESEARCH,
INNOVATION AND IMPACT



**RISING
TO THE
FUTURE**
UCD Strategy 2020-2024

INTRODUCTION

UCD's story of research, scholarship and innovation is one of diversity and depth.

Our academic community spans a broad range of disciplines, and is driven by the pursuit, the application and the sharing of knowledge.



The expertise of our researchers, from outstanding individual scholars to leaders in large multi-stakeholder teams, illuminates the education we deliver, builds the university's reputation and supports a vibrant society and economy.

Our researchers advance cultural understanding and inform national discussion of issues such as social housing and youth mental health. They explore the physical world from sub-atomic particles to distant galaxies. They enable advances in sustainable agriculture, renewable energy and advanced manufacturing. They apply new digital technologies to deliver innovations in fields such as quantum computing and personalised medicine, and in our understanding of our society and our history.

The imprint of our research can be seen around the world, from schools in Dublin's inner city and the bioeconomy campus in Co. Tipperary to resilient and innovative communities in Ethiopia.

It is seen in our physical facilities, ranging from the extraordinary Museum of Literature Ireland in our university's first home to the newest facility on our campus, the extension to NovaUCD that houses some of Ireland's most innovative spin-out and spin-in companies.

Our research is felt in the lived experience of people through the model of deliberative democracy that gave rise to the Citizens' Assembly and constitutional change.

The Covid-19 pandemic has brought to public attention as never before the global need for research and innovation. Within UCD, our researchers have risen to the challenge of the pandemic with great determination. They have led the development and implementation of clinical trials, novel testing methods, national epidemiological models, technological supports and more, despite the many constraints of this time. Much more research remains to be done as we seek not only to respond to the disease, but also to recover from its economic and societal impacts and to reimagine aspects of our society based on our learnings during this extraordinary period.

While Covid-19 is the most immediate of the global challenges facing humanity, it is not the only one. The challenges of sustainability, of harnessing the power of digital technologies, of sustaining health and of empowering humanity also depend centrally on the advances that come through research and innovation.

This strategy outlines how UCD will build on our success to date in order to produce excellent and impactful research and innovation that makes a real difference in areas of national and global need.

Professor Orla Feely

Vice President for Research, Innovation and Impact
February 2021

RISING TO THE FUTURE

Rising to the Future, the UCD Strategy 2020-2024, sets a bold ambition for the university, based around four core objectives, six key enablers and four strategic themes. This Strategy for Research, Innovation and Impact indicates how our work in research and innovation will deliver on the university-level objectives, supported by the key enablers, and will support the delivery of impact within the strategic interdisciplinary themes.

Research and innovation have a role to play in each of the four core objectives, but the focus of the Strategy for Research, Innovation and Impact is on **Objective 1: Increase the quality, quantity and impact of our research, scholarship and innovation.**

To deliver on this objective, UCD will emphasise **excellence** and **impact** in all aspects of our research and innovation, delivering both at a scale that allows us to make a difference in areas of national and global significance. This will be achieved through investing in our **people** and providing a **culture and environment** in which they are supported to deliver on their potential and ambitions.

A key area of focus within this strategy will be our research culture and practices. We will seek excellence not only in **what** we deliver through our research and innovation, but in **how** we deliver it. Our research culture will fully reflect UCD's values. This will be clear to every member of our research community, with the strong and visible support of our research leadership at all levels. We also recognise that research practices have radically changed during the pandemic and that some of these changes will persist. We will examine and adapt our research practices to reflect new opportunities and changed circumstances, and to support our commitment to sustainability.

Research, scholarship and innovation will also be central to the four strategic themes, with researchers from across all disciplines working together with a focus on the delivery of solutions that address major global challenges. This will be catalysed by university-wide **campaigns** to pursue emerging areas of particular promise and to respond to urgent needs.

To achieve all of these ambitions, we draw on the enablers of the UCD Strategy, which will support the hiring and development of excellent people and the delivery of the facilities, systems, services and funding that underpin our research environment.



EXCELLENCE

Under this strategy, excellence will be at the core of every aspect of our research, scholarship and innovation. This excellence will be evident in our research community, in our internal culture and organisation, in the knowledge and the innovations that we generate, and in our external engagement and impact.



We will achieve excellent research, scholarship and innovation within and across disciplines

We will foster research excellence in every discipline, at every scale and by all parts of our research community. We recognise that excellence in research, scholarship and innovation is manifest in different ways across the broad range of disciplines in UCD. We will work to ensure that our understanding of excellence in each discipline reflects best international practice, and that it is effectively propagated and supported within the discipline in the university. Our strong capability in research analytics will support our ability to guide discipline-specific expectations, and we will enhance our performance as assessed through both qualitative and quantitative methods. We will adopt and advance best international practice in defining and delivering excellence in interdisciplinary research.

We will seek out and develop partnerships that enable excellent research and innovation

External partnerships have steadily grown to become a significant driver of the quality of research, scholarship and innovation for research-intensive universities. We will encourage and support greater collaboration with international research leaders, both institutionally and at the level of individual researchers and research groups, including the enhancement of visiting professor and mobility schemes.

We will partner with industry leaders, with ambitious smaller companies, with government bodies, with entrepreneurs and investors, and with cultural and societal organisations who share our commitment to excellent research.

Our innovation activity will build on a foundation of demonstrable excellence

We will expand our network of external collaborators, advisers and investors, to identify and support breakthrough innovation projects with the greatest potential for scale and impact. Building on our achievements to date, excellence in innovation under this strategy will be measured by the success of our spin-outs and spin-ins in attracting investment and scaling, in the level of adoption of innovative products and services that are created by commercialising our expertise and inventions, and in the value we bring to innovation in public policy and professional practice.

We will grow and showcase our areas of strength, scale and global relevance

We will support and celebrate areas of particular success in research, scholarship and innovation at UCD, profiling them locally, nationally and globally. Where we identify important opportunities to expand our academic cohort through new hires, we will apply our new recruitment mechanisms in support of this, expanding our breadth and depth in areas of strategic significance.

IMPACT

In UCD we deliver real impact through our research, scholarship and innovation. This impact may be felt in many different spheres, including culture, society, the economy, public policy, health and the environment, and includes the impact of the talent pipeline we develop and support through our research.



We will support recovery from the Covid-19 pandemic

The effects of Covid-19 will be felt for a long time in Ireland and around the world. UCD researchers will work to address the full diversity of challenges arising from the pandemic, from the immediate scientific and public health response to the broader effects in society and the economy. This will rely on novel collaborations across our broad set of disciplines, and with a range of engaged partners.

We will invest in major initiatives and facilities to achieve impact through innovation

The development of the NovaUCD East Courtyard and the establishment of the University Bridge Fund have both substantially increased the university's capacity to support impact through innovation, including the creation of new companies, licensing of novel technologies and the provision of expertise through consultancy. We will build on these with additional innovation supports and new sector-specific initiatives, including the NovaUCD AgTech Connector Innovation Hub at UCD Lyons Farm.

UCD will lead partnerships that can achieve breakthrough impact

The landscape for research and innovation is changing in response to the scale and complexity of the challenges we face globally. Universities increasingly play a central role in convening partnerships across government, industry, academia, healthcare, and civil society that are needed to address the complex challenges of our time. They also act as a connection point to international networks with similar ambitions. Leading multi-stakeholder partnerships is a growing strength of UCD, and during the period of this strategy we will build on this strength to enhance our ability to address global challenges, supporting and recognising our researchers who lead multi-stakeholder initiatives and who deliver impact at scale.

Our research and innovation will deliver real benefits to students

Excellence in research, scholarship and innovation underpins our ability to deliver an excellent education to our students and to develop an outstanding talent pipeline at all levels. Our students will develop their capacity for innovation, stimulating a spirit of creativity and entrepreneurship, and enhancing their ability to apply knowledge to solve problems.

UCD THEMES

Through our themes we will deliver impact that addresses major global challenges.



Creating a sustainable global society



Building a healthy world



Empowering humanity



Transforming through digital technology

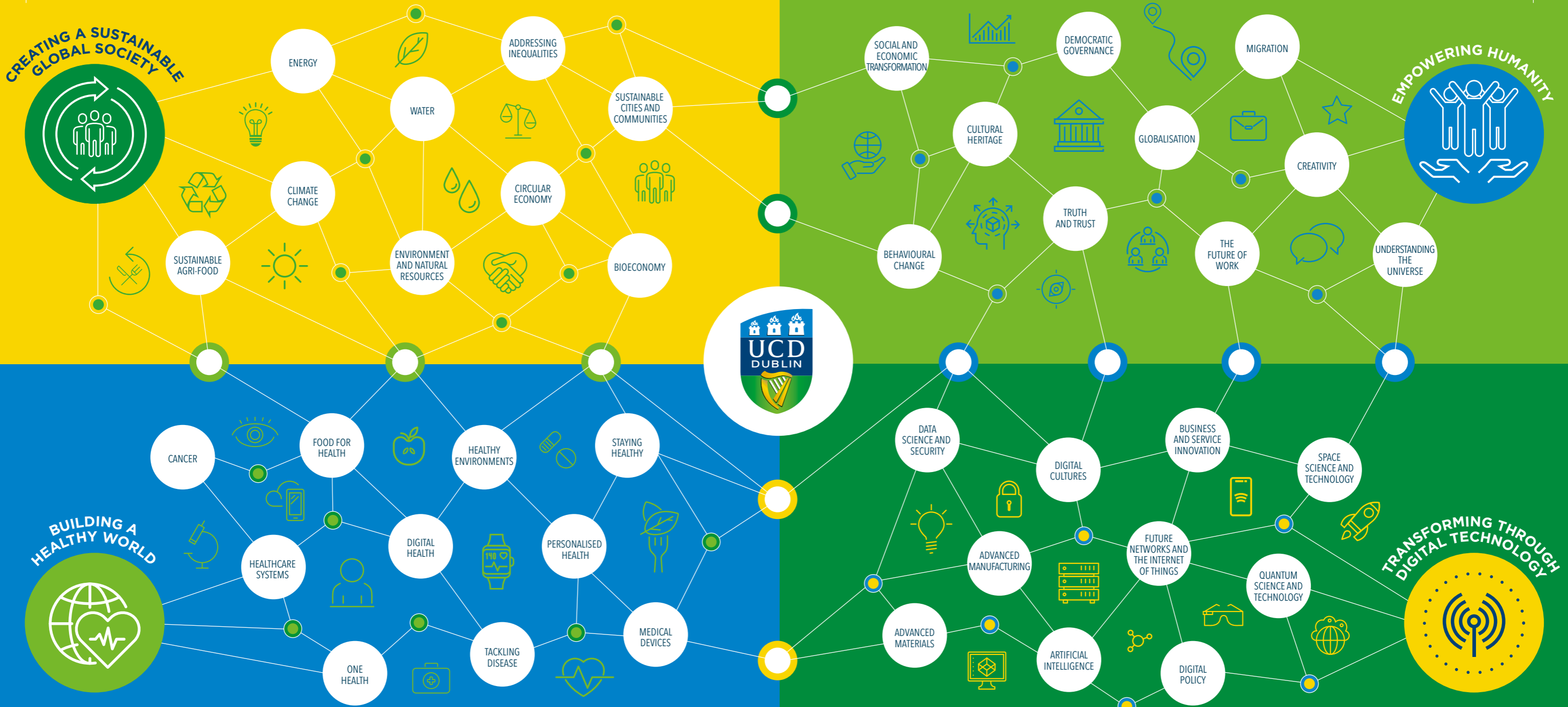
The four strategic themes of the UCD Strategy 2020-2024 *Rising to the Future* represent an opportunity for the university research community to work in a co-ordinated interdisciplinary fashion to contribute to the development of solutions to major global challenges.

To achieve impact through excellent research and innovation within the themes, UCD will:

- Take a leading role in existing and new national and international research collaborations that are focused on these themes, and further develop our network of partners in these areas spanning academia, industry, NGOs and the public sector.
- Develop our internal structures and supports, including research institutes, that enable agile campaigns of cross-cutting coordinated activity at scale and bring our commitment to excellence and impact to the strategic themes.
- Use our ambitious recruitment schemes to attract current and future academic leaders in relevant fields, while also supporting our current academic leaders and developing our future leaders within the themes.
- Ensure the follow through of thematic research to inform the development of new modules to support the themes in UCD's education mission. UCD will also develop its internal policies so that research and innovation is conducted in line with the themes, such as the Green Labs initiative.
- Continuously communicate the ambition and achievement in the themes and be recognised for our impact.

UCD already has a portfolio of successful and high-profile research and innovation activities which have produced significant impacts. Over the period of this strategy we will build and develop these existing successes and pursue wholly new lines of research and innovation, drawing on new combinations of disciplines and in collaboration with a growing array of partners. The identification of four strategic themes for the entire university will support us in applying the full breadth of our resources to deliver impact in areas of major global concern.

Our four themes are well matched with the thematic challenges and opportunities described in the Horizon Europe missions and clusters, in Ireland's National Research Priorities, the Programme for Government, and in the United Nations Sustainable Development Goals. The following diagram highlights many overlapping areas arising from these initiatives, and aligns them with the four themes of *Rising to the Future*.



PEOPLE

Outstanding people drive excellence and impact in research and innovation. Under this strategy, UCD will invest in our faculty, researchers and professional support staff to support them in achieving their ambitions. A faculty recruitment strategy is a central part of the UCD Strategy 2020-2024 *Rising to the Future*. This will include recruitment into strategic research areas, building critical mass where UCD can deliver excellence and impact.



Equality, Diversity and Inclusion will be at the heart of our actions

We will ensure that the implementation of the research and innovation strategy embraces our Equality, Diversity and Inclusion policy and strategy and supports the implementation of the UCD Gender Equality Action Plan. This will be complemented by a greater focus on gender as a feature of our research programmes.

Outstanding people are our key resource, and we will support them to succeed

Our research community of new and existing faculty, researchers and professional support staff represents an outstanding resource for research, scholarship and innovation. By driving excellence and optimising our support structures and services, we will ensure that our people are supported to reach their full potential within UCD, delivering excellence and impact, enhancing the university and its reputation, and supporting a talent pipeline for society and the economy.

Faculty, researchers, and support staff will benefit from development programmes

Our development programmes will be tailored to career level and will span a wide range of topics from basic elements of research to commercialisation bootcamps and impact-focused hackathons. We will run specific programmes to develop research leadership talent, and the Performance for Growth programme will support all faculty and staff to deliver on development goals aligned with the university strategy.

Research managers and administrators, and all who support our research activity, are essential to delivering success. We will invest in their professional development, supported by the implementation of the Job Family programme.

Faculty will be supported to focus on excellence, and mobilise quickly

For our faculty, we will ensure that development opportunities and our systems of workload allocation, sabbaticals and academic recognition are all oriented in support of excellence. Early-career faculty will be a particular focus over the period of this strategy, and we will ensure that these new faculty members are appropriately supported, managed and mentored to prosper and become the research leaders of the future.

Postdoctoral and postgraduate researchers are key to our research success

Professional and career development for postdoctoral researchers will continue to be a focus for UCD. These supports enable the further development of technical and transferable skills, to support postdoctoral researchers in their ability to build successful careers inside and outside academia. We will continue to implement best practice in doctoral training, and innovate in cohort based programmes such as the SFI Centres for Research Training and EPSRC Centres for Doctoral Training.

RESEARCH CULTURE AND ENVIRONMENT

We want every member of our research community to experience a positive culture that clearly values research and an environment that supports them to reach their full potential and to deliver on their ambitions. We will continue to develop our research and innovation supports, our systems, our facilities and our policies, enabling a culture of excellence and impact and supporting a rapidly growing community of academics.



Our research culture will reflect UCD's values

Every member of UCD's research community, from students to university leadership, has a role to play in shaping a research culture that embodies our values of excellence, creativity, integrity, collegiality, engagement and diversity. Through our policies and our practices we will continue to build a positive and proactive culture of integrity, dignity and respect in research. We will deliver training and supports, recognising and profiling examples of good practice. Where misconduct occurs we will take action based on strong policies and procedures. We will make responsible use of research metrics and ensure that all aspects of research are valued and supported. We will support the transition to Open Science, carefully manage our research data, and reflect our commitment to sustainability in our research practices.

Our supports for research and innovation will exemplify best practice and enable success

Informed by international best practice, supports for research and innovation will be renewed to align with the strategy and the four strategic themes. We will improve the co-ordination of central research supports across UCD Research and Innovation and other support functions, optimising the interface experienced by researchers. We will also seek to improve the distribution of supports between these central units and the local research support resources in Schools, Institutes and Centres. Under UCD's Digital Transformation programme we will digitise transactional elements of research support,

allowing staff to focus on more creative, strategic and valuable supports to our research community.

UCD will work with our partners to develop the national research and innovation system

Within Ireland, we will work with partners to build support for a system of research and innovation that delivers on national needs and recognises the centrality of knowledge creation and talent development across all disciplines to a vibrant economy and society. The creation of the Department of Further and Higher Education, Research, Innovation and Science provides an outstanding opportunity to work with policymakers to shape the future of research and innovation in Ireland.

We will grow our international success in research and innovation

Internationally, we will work through organisations such as Universitas 21, the Worldwide Universities Network and CESAER to influence programmes in support of research and innovation, highlighting the value of global collaboration in addressing global challenges. We will build our success in Horizon Europe and grow our relationships within the European Union and other key international organisations. We will develop our strong and enduring research links to the United Kingdom, and in particular to Northern Ireland, and will make the case for combined government investment to support this. We will grow our success with leading international foundations, and with the funding programmes most strongly linked to research excellence.

CONCLUSION

Society needs the insights and solutions that come from excellent research and innovation. The Covid-19 pandemic has made this very clear, and we see it also in the other major issues of our time, such as climate change, digital transformation and healthy ageing. In UCD, we seek to make a difference in these areas of great global challenge and opportunity.

Under this strategy, UCD will emphasise excellence in every aspect of our delivery and support of research and innovation. We will invest in people and in an environment that enables their success. Our research culture will prioritise integrity, dignity and respect, and we will reflect our commitment to sustainability throughout our research and innovation. We will collaborate and learn across disciplines, and the strategic themes and major campaigns will provide cross-cutting opportunities for our community to deliver impact at scale in areas of global need.

By rising to the challenge of the pandemic with resilience, creativity, and commitment, our researchers have shown how we can rise to the other major global challenges. The period of this strategy will be one of great disruption, but we can act to shape the future through the excellent and impactful work of UCD's vibrant research and innovation community.



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