TU Dublin Research and Innovation





## **TU DUBLIN**

Research & Innovation Strategy 2023-2028

# Welcome from the Vice President of Research and Innovation

It is an absolute pleasure, and a great honour, to introduce TU Dublin's first Research and Innovation Strategy. The strategy outlines how, over the next five years, we as a university community will work with each other, and with our partners, to generate and apply knowledge to provide real life solutions. The strategy is the result of many people generously giving many hours of their time to come together to identify challenges, opportunities, and solutions, and to develop together a shared vision for the contributions that our new university's research and innovation efforts can make to society. The passion, insightfulness and ambition evident in these discussions was inspiring and I would like to thank everyone who took part.

Research and Innovation are central to the vision for TU Dublin as a technological university. As the world faces significant challenges relating to, amongst others, climate change, biodiversity loss, inequality, political instability, public health, our university is focussing on, as outlined in our Strategic Intent 2030, the "creation of new knowledge and the development of timely & practical solutions that address the SDGs." Our collective commitment to working towards the UN Sustainable

Development Goals is consistent with our longstanding culture of focussing research and innovation activity on delivery of positive impact in our society.

Solutions to the SDGs require concerted efforts across society, with universities playing a key role in providing open and creative environments in which new ideas can be explored and tested. The TU Dublin community has the energy and drive to play our part. Whilst we will actively support research and innovation activity from across the broad spectrum of disciplines pursued across all five TU Dublin faculties, we identify in this strategy a set of five research priorities, aligned to selected SDGs, where we believe that coalescing our efforts in a transdisciplinary manner will focus and amplify the excellence and impact of our work.

As specified in our university Strategic Plan 2024-2028, we seek to significantly increase the volume and impact of our research and innovation work over the next five years. The plan reflects targets relating to percentage of staff holding doctorates and percentage of enrolled research postgraduates as specified in the TU Act 2018, as well as additional targets relating to a significant increase in research-active academic staff, a doubling

of research funding, and maintenance of our strong performance in knowledge transfer. This strategy provides a roadmap for how we will work together to meet these ambitious targets. We expect that its realisation will be significantly supported by changes at the national level, including implementation of the Impact 2030 national strategy, including the creation of a new national R&I funding agency, and the further evolution of the technological university sector, including the implementation of OECD recommendations on career paths and academic contracts.

With this strategy as our guide, we will nurture a vibrant, well-resourced, resilient and supportive environment in which TU Dublin researchers and innovators can work individually and across disciplinary boundaries to create a better world together.

Back offs

**Dr Brendan Jennings**Vice President for Research and Innovation

October 2023



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## Research and Innovation in TU Dublin

Research and innovation at TU Dublin builds on a tradition of over a hundred years of involvement in Irish higher education, continually adapting and expanding its provision to reflect an evolving society and the wider environment.

Whilst research and innovation activity grew organically over this period, it accelerated significantly since the early 2000s, with the first large scale investments in research infrastructure through the Programme for Research in Third Level Institutions (PRTLI). PRTLI allowed the TU Dublin founding institutions develop dedicated research infrastructure facilitating the creation of the FOCAS, ESHI and CASH Research Institutes. These research institutes brought together researchers within broadly complementary fields of activity, encouraging and actively supporting collaboration between individual researchers and between research centres, with the goal of building critical mass in distinctive fields of enquiry. This was complemented by Enterprise Ireland investment in Technology Transfer Office capabilities and enterprise supports, and by Science Foundation Ireland and other national funders in foundational and industry-relevant research.

TU Dublin leveraged these investments to great effect—our community now comprises 1,000+ researchers and innovators, a significant proportion of whom are early career researchers pursuing doctoral degrees. This community is engaged in the generation of excellent and impactful research outputs and outcomes, which help ensure that the university continues to play a vital role in Ireland's economic, civic and cultural evolution. We remain committed to making a significant contribution to international knowledge and enhancing Dublin's role as Ireland's global gateway.

Research and Innovation are central to the vision for TU Dublin. As a Technological University supporting "a body of research that includes research relevant at regional, national and international levels," we pursue excellence in the conduct of our research and innovation activity and seek to disseminate our outputs widely, both via scholarly discourse and via direct application in real-world settings. Our work is underpinned by fundamental/ theoretical concepts that can translate into novel technologies, practices and policies for the benefit of learning, society, business and industry.



echnological Universities Act 2018. Available (1/10/2023): tps://www.irishstatutebook.ie/eli/2018/act/3/enacted/en/htr

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The following principles underpin how we undertake Research and Innovation activity in TU Dublin:

#### **Excellence:**

We pursue excellence in all of our Research and Innovation activity, whilst recognising that this activity and its outputs take many different forms, which need to be assessed and recognised on their own merits and disciplinary norms.

### Freedom of exploration:

We value the freedom of our community of researchers and innovators to explore ideas and research topics that are broadly aligned with university strategy and compliant with regulations.

### **Influence on Educational Provision:**

Beyond the focussed form of education that is a cornerstone of research student supervision, we ensure that, where appropriate, our research and innovation activity informs our taught programmes and pedagogical approaches.

### **Engagement and Impact:**

We seek to maximise the societal impact of our work by disseminating our outputs and insights beyond scholarly networks, to effectively engage with citizens, civic groups and government and showcase our work through real world deployments and in living lab environments;

#### **Openness:**

We actively support and promote the Open Research agenda with a strong commitment to making our research publications, data and other outputs open and publicly available;

### Knowledge transfer and commercialisation:

Where relevant, we proactively seek to transfer our intellectual property to external entities, including university spin-out companies, to contribute to solutions to real world problems and to economic, social and environment development, and to emphasise the importance of entrepreneurship and entrepreneurial collaboration;

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#### **Inclusivity:**

We strive to ensure that all of our work is conceived, planned and executed according to best practices relating to Equality, Diversity and Inclusion, so that we maintain an inclusive, diverse, safe, and respectful culture;

### **Good research practice:**

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We promote and promulgate ethical research and scholarly practice, emphasising integrity and rigour and sustaining a culture in which the principles of honesty, openness and fairness are understood and observed.



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## **Research Priorities**

TU Dublin is, as outlined in our Strategic Intent 2030,<sup>2</sup> uniquely Positioned to drive societal changes, by virtue of: our large community of 27,000+ students; the disciplinary-breath of our educational programmes; our emphasis on learning in a practice-based environment; and our focus on delivering real impact. In our strategic intent we commit that:

"We will be a leader and a voice for sustainability, a way of living and working in a new, more balanced way, a way that protects our planet for future generations. We will work with stakeholders to solve some of the world's most pressing problems and champion these issues at local, national and global level."

Research and Innovation is central to developing deep insights into the origins and drivers of these problems, and, crucially, to developing and delivering novel solutions. We believe that multi-, inter- and trans-disciplinary approaches are key enablers for the delivery of significant impact and that to maximise this impact, research and innovation work should be carried out internally and with external commercial and non-commercial parties (including government agencies and departments, local authorities and charities) who can help us convert new knowledge into tangible benefits.

2 Available (1/10/2023): https://www.tudublin.ie/explore/about-the-university/strategicintent/

Although the university already has a large community of researchers and innovators working individually and in collaboration on a wide range of challenging and pressing topics, we see a significant opportunity to use a set of research priorities to coalesce effort in a transdisciplinary manner to both focus and amplify the excellence and impact of our research and innovation activity. Moreover, prioritisation supports our strategic objectives1 that "Our Research Community will be internationally recognised in 5 key research fields" and that "We will be known for the creation of new knowledge and the development of timely & practical solutions that address the SDGs."

In identifying our research priorities, we viewed the planetary and societal challenges facing us through the lens of the 17 UN Sustainable Development Goals (SDGs),<sup>3</sup> which succinctly capture the breath and interconnectedness of the challenges the world faces, and through the 6 transformations to achieve the SDGs,<sup>4</sup> which offer a blueprint for operationalising achievement of the SDGs. Our chosen priorities overlap strongly with these transformations, are well aligned with national research priority areas as specified in Impact 2030: Ireland's Research and Innovation Strategy,<sup>5</sup> and also are consistent with European priorities as reflected most notably in the EU Missions in Horizon Europe.<sup>6</sup>

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<sup>3</sup> Available (1/10/2023): https://sdgs.un.org/goals

<sup>4</sup> Available (1/10/2023): https://resources.unsdsn.org/six-transformations-to-achieve-the-sustainable-development-goals-sdgs

<sup>5</sup> Available (1/10/2023): https://www.gov.ie/en/publication/27c78-impact-2030-irelands-new-re-search-and-innovation-strategy/

<sup>6</sup> Available (1/10/2023): https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/fund-ing-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe\_en

## HEALTH AND WELLBEING FOR A THRIVING SOCIETY

Our focus is to understand the foundations of good health and wellbeing, to investigate ways to promote and maintain good physical and mental health, and to address disease prevention, treatment, and management; all of which are critical to achieving SDG 3--Good Health and Well-being. This extends to exploring the impact of the built environment on health and safety, such as the design and construction of buildings, public spaces, and transportation systems, which contributes to achieving SDG 11-Sustainable Cities and Communities, and to investigating the impact of air quality, water quality and other environmental factors. We work on new techniques, devices and technologies for biomedical applications, including for disease screening, diagnostics and treatment, that are patient centred and safetyfocussed. Moreover, our work encompasses investigating the impact of behaviours and lifestyle choices on health outcomes, investigating the economic and social determinants of health (such as income, education, and social support), as well as gendered aspects of health and wellbeing. By prioritising research in Health and Wellbeing, we are helping to improve the quality of life of individuals, families, and communities in Ireland and further afield, as well as influencing and leading national and European health policies and programmes, in alignment with the UN SDGs.



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#### TRANSFORMATIVE DIGITAL SOLUTIONS

Information and Communication Technologies (ICT), as drivers of digital transformation, play an increasingly crucial role in shaping our society, economy, environment, and lived experience. Our research in this area focuses on developing ethical, responsible, sustainable and innovative solutions to societal challenges, including, inter alia, promoting digital inclusion, enhancing cybersecurity, and improving energy efficiency in ICT infrastructures. We study the positive and negative impacts of digital technologies upon society and investigate the impacts of digital technologies on ethics, epistemology (the construction of knowledge) and aesthetics (cultural production). We explore how emerging technologies such as artificial intelligence, blockchain, and the Internet of Things can be harnessed to address global challenges related to sustainability and contribute to the UN SDGs. For instance, our research contributes to SDG 9-Industry, Innovation and Infrastructure, by developing sustainable and resilient digital infrastructure, SDG 10-Reduce inequalities, by being responsible, ethical and inclusive in the development of technology, and SDG 11-Sustainable Cities and Communities, by exploring how digital solutions can contribute to sustainable and inclusive urban, rural and regional development. Our work in digital transformation also encompasses areas such as digital health, e learning, enterprise efficiency, and entrepreneurship, leading to significant impacts on promoting health and well-being, improving access to education, and driving sustainable economic development.

## SUSTAINABLE FOOD SYSTEMS AND ENVIRONMENTAL PROTECTION

A crucial challenge for Ireland, and the world, is how to produce enough food, while also minimising environmental impacts and promoting biodiversity. Our research in this area includes studying sustainable agriculture practices, investigating the impact of climate change on food production, developing new technologies to promote sustainable food systems, developing food enhancements, formulations, reformulations and nutraceuticals, addressing food safety and quality assurance, reducing waste, supporting a circular bioeconomy, as well as cultural aspects of food preparation and consumption. Additionally, our work encompasses exploring the impact of human activity on the environment, such as land and marine use, pollution, and the loss of biodiversity, and developing solutions to mitigate these impacts. This work allows us cover the full 'farm to fork' span of sustainable food production, thereby contributing to several of the UN SDGs, including: SDG 2-Zero Hunger, SDG 12-Responsible Consumption and Production, SDG 14-Life Below Water, and SDG 15-Life on Land. By prioritising research in Sustainable Food Systems and Environmental Protection, we seek to create a more sustainable future for all, with access to safe and nutritious food. and a healthy and thriving planet.

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## MATERIALS AND TECHNOLOGIES FOR SUSTAINABLE TRANSFORMATION

Innovative technologies and novel materials are intimately connected to the promotion of health and well-being, sustainable manufacturing, environmental protection, clean energy production and use, and economic growth. For example, the development of novel materials and technologies for use in manufacturing can help to promote sustainable production and consumption (SDG 12-Sustainable Consumption and Production Patterns) and create new job opportunities (SDG 8-Inclusive and Sustainable Economic Growth). The creation and optimisation of novel materials for use in renewable energy, alongside their integration in energy systems in a market-efficient manner, can help to promote affordable and clean energy (SDG 7-Affordable, Reliable, Sustainable and Modern Energy For All) and reduce carbon emissions (SDG 13—Combat Climate Change). Additionally, novel application of materials and technologies in water treatment or environmental remediation can help to address the challenge of clean water and sanitation (SDG 6-Access to Water and Sanitation). Our balanced portfolio of research and innovation projects in new materials and technologies, from foundational science to the development of near-to-market prototypes in partnership with industry, underpins how we help to solve pressing global challenges.



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## CULTURE, INNOVATION AND INCLUSIVITY IN A CHANGING SOCIETY

We recognise that meeting the challenges of contemporary times and addressing the UN SDGs, particularly with regard to ecological and digital transitions, requires moving beyond individual disciplines and promoting human-centred technological innovation and development that is consistent with thriving within planetary boundaries. We value our contribution to the creation of new cultural forms and are committed to research excellence alongside excellence in artist training. We explore the role of culture and the arts in promoting sustainable development, as well as how innovative experimental approaches based on insights from historical, cultural, philosophical and social science scholarship can contribute to building more inclusive and resilient societies. Drawing on insights from social science, from creative and cultural practices, incorporating historical and philosophical perspectives, our research develops an understanding of technology not just as tools and instruments, but as complex organic and inorganic systems involving the human and the non-human. We investigate how the processes and dynamics of entrepreneurship and innovation evolve, and how they can be harnessed to address

broader societal challenges, such as climate change and social exclusion. Through this work, we aim to contribute to several of the UN SDGs, including SDG 5—Gender Equality, by exploring and addressing persistent inequalities from an intersectionality perspective, SDG 8—Decent Work and Economic Growth, by exploring how we can inform and support entrepreneurship and innovation for sustainable economic growth, SDG 10—Reduced Inequalities, by investigating how we can promote more inclusive and equitable social, cultural and artistic practices, and SDG 11—Sustainable Cities and Communities, by critically examining ways of transitioning to resilient and regenerative forms of town and city planning and more sustainable forms of mobility.

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## **Strategic Actions**

TU Dublin delivers real change, innovation, and impact for society through its delivery of a high-quality educational experience for learners that is underpinned by a strong culture of knowledge generation through research, innovation, and engagement practices. Our community of distinguished researchers and innovators have a track record of generating scientific discoveries, developing technological advances, playing active roles in informing policy nationally and international, and contributing to the cultural and creative life of Ireland. Over the lifetime of this strategy, we will increase the volume of activity across all parts of university, proactively supporting our students, staff, partners, and stakeholders to generate positive impacts from their efforts that have tangible benefits for communities and society.

To drive the growth of impact-focussed research and innovation in the years ahead in line with the targets set out in the TU Dublin Strategic Plan 2024-2028,<sup>7</sup> we have identified sets of strategic actions that will collectively encourage, support, and celebrate the efforts of our researchers and innovators. Through these strategic actions we will foster an Environment and Culture that values creativity and openness, encourages excellence and promotes diversity, equality, and inclusivity. We will improve our

supports for Engagement and Impact, helping our researchers and innovators to ensure that the insights, benefits, and outputs from their work are shared with and harnessed by the wider community and society. Central to our work will be bolstering Collaboration and Partnership, both internally to support the formation and success of cross-disciplinary teams, and externally in terms of working effectively with communities, government, enterprise, and partner universities to create synergies and novel approaches to solving complex challenges. Finally, as a university, a key focus will always be on Nurturing Talent, through attracting, training, mentoring, incentivising, retaining and supporting the career development of our researchers and innovators.

#### **ENVIRONMENT AND CULTURE**

Improving the environment and culture within which Research & Innovation is carried out in TU Dublin will be essential to continuing to foster creativity, collaboration, and excellence across our community. The university can leverage the benefits of significant past investments in research infrastructure and supports across all our campuses that were made with the goal of growing activity in nascent research areas and facilitating collaboration by researchers with differing backgrounds and expertise. As we

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seek to grow research activity in line with our Strategic Intent 2030 and our legislative mandate, we will continue this approach. In addition to investment in physical infrastructure, the university is currently extending and enhancing the professional and administrative supports it provides to its community of researchers and innovators. Improvements in our research environment will be key enablers in transforming the culture of research in TU Dublin into one in which a majority of academic staff are engaged in Research & Innovation and work closely with a growing cohort of research postgraduate students, full time researchers and associated professional staff, to create impactful outcomes in a positive, collegiate and inclusive community.

To enhance the research environment in TU Dublin, through investment in physical infrastructure, information systems, and technical/administrative supports, to facilitate significant growth in impactful Research & Innovation activity.

To transform our culture into one that fosters creativity, inclusivity, and excellence, by making Research & Innovation activity a central focus of the work of our staff and students and by actively supporting, acknowledging, and celebrating their achievements.

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<sup>7</sup> Available (3/10/2023): https://www.tudublin.ie/media/website/explore/about-the-university/strategic-plan/documents/Strategic-Plan-2024-2028-FINAL.pdf

### TU Dublin Research and Innovation

#### **KEY ACTIONS**

To meet these objectives, we will:

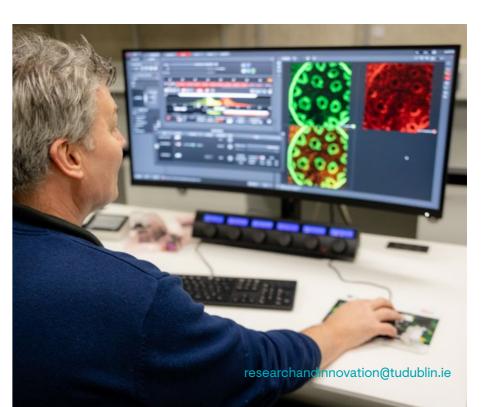
- Launch a set of Research Hubs that will manage a range of research infrastructures and support the development of cross-disciplinary teams of researchers and innovators to address complex challenges.
- Introduce policies and processes relating to the establishment, support and re-orientation of research hubs and research centres, ensuring that the university is well positioned to best use its available expertise to maximise the impact of its Research & Innovation activity.
- Continue to support the development of an entrepreneurial and innovation culture that embraces and drives impact from research that will support the delivery of outcomes that deliver solutions for SDGs, and enhance TU Dublin's reputation as a European leader in the innovation and knowledge transfer space.
- Maximise exposure of undergraduate students to Research & Innovation activity across the university through a range of initiatives including internships, open days, living-lab learning, research projects, public engagement activities and targeted communications.

- Ensure that the new University Educational Model reflects the breadth and depth of Research & Innovation activity across the university, offering students at all levels the opportunity to engage with research insights, develop new knowledge, and apply both in real-world settings.
- Develop structured mentoring supports for new lecturing staff and lecturing staff re-engaging with Research & Innovation activity.
- Continue to advocate for changes to nationally agreed Technological University career frameworks and workload allocation models that will incentivise, acknowledge, and reward Research & Innovation activity.
- Deploy a new university Research Information System and tightly integrate it with other university information systems, notably those used for Finance, HR, and student records.
- Ensure that IT systems and administrative supports are optimised to minimise research bureaucracy, freeing researchers and innovators to concentrate on high-value work.

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- Create a supportive and inclusive environment that values diversity, equity, and inclusion, in which individuals from different backgrounds and perspectives can work together to make impactful contributions to solving complex challenges.
- Emphasise openness, ensuring that research outputs of all kinds are made freely available where possible, and ensure that contributions to Open Research are valued and rewarded.
- Develop and implement policies and procedures that ensure compliance with legislative requirements relating to Research & Innovation activity.
- Nurture a culture in which all forms of research misconduct are actively discouraged and where allegations of misconduct are fairly investigated, and appropriate actions taken in a timely manner.
- Use our campus infrastructure as part of "living-lab" platforms in which innovative solutions to sustainability challenges can be explored and refined in collaboration with colleagues from across the university, external partners, and local communities.

 Continue to strategically invest in our campus infrastructure, particularly in buildings that will house laboratory and collaboration spaces dedicated to Research & Innovation activity. We will seek to complete the delivery of the FOCAS Institute project on our Grangegorman campus, and will actively seek funding for new capital projects that will enable and support increased Research & Innovation activity.



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#### **ENGAGEMENT AND IMPACT**

Sharing the outcomes and benefits of Research & Innovation activity beyond academia with the wider community and society is crucial to maximise its impact. TU Dublin has a proud heritage of generating important scientific insights, prototyping and launching novel technologies and companies, influencing policy, and reflecting on and contributing to the creative life of Ireland. To honour and expand upon this heritage, we will prioritise engagement with external stakeholders, including industry partners, policy makers, community groups, and government to ensure that our work is relevant and responsive to real-world needs. The university will support our researchers and innovators in forming and delivering collaborative research projects, knowledge transfer partnerships, and public engagement initiatives. We will enhance the visibility and reach of our outputs, such as publications and intellectual property, by effectively communicating our insights to different audiences and making then openly available. We will also seek to analyse, improve, and communicate the impact of our work as part of societal efforts to address the numerous complex challenges facing us locally, nationally, and globally.

### **OBJECTIVES**

To contribute to impactful solutions to societal challenges through effective engagement with internal and external partners and communities and active thought leadership that helps shape public policy.

To understand, maximise, communicate, and celebrate the impact of our Research & Innovation activity on our planet and its people.



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#### **KEY ACTIONS**

To meet these objectives, we will:

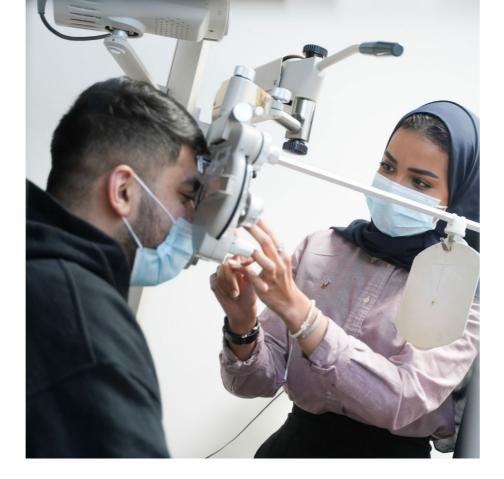
- Develop a TU Dublin framework for Research Performance Assessment that is humane and that recognises the diversity of activities, outputs and outcomes that exemplify quality, impactful Research & Innovation.
- Gather, curate and promote institutional, group and individual impacts and successes arising from Research & Innovation activity from across the university community.
- Develop at university, research hub, and school level the capability to horizon-scan for opportunities for high-impact Research & Innovation that is consistent with university priorities, and the ability to strategically invest to pursue these opportunities.
- Introduce a set of best practice guidelines and frameworks, including societal impact assessment tools, to help researchers and innovators maximise the mutual benefit of engagement with stakeholders and citizens.
- Deploy best-in-class approaches across the university to assess and communicate the impact of our Research & Innovation activity.

- Develop, introduce, and support a TU Dublin framework for Open Innovation that seeks to ensure that, insofar as possible, the outcomes and insights from Research & Innovation are made available for use by stakeholders internal and external to the university.
- Make available to researchers and innovators a range of formal and informal training and experiential learning opportunities to improve their practice of engagement with stakeholders and their ability to plan, assess and maximise the impact of their work, in the context of its contribution towards the UN SDGs.
- Improve internal communications and engagement events and activities, so that the entire TU Dublin community becomes aware of opportunities, ongoing projects, national and international collaborations, and the real-world impact of our work.
- Enhance external communication of our Research & Innovation work through a range of channels, highlighting the impactful work of individual researchers and innovators, teams of researchers and innovators, and the university as a whole.

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#### **COLLABORATION AND PARTNERSHIP**

The world faces significant societal challenges, including climate change, environmental degradation, inequality, poverty, political instability and conflict, and rapid technological change. These challenges are individually complex and multifaceted, but they are also tightly coupled with intricate causal relationships and interdependencies. Solutions to them are consequently complex and multi-faceted, requiring deep collaboration between communities of people with different skillsets, experience, and cultural perspectives. Universities play a key role in bringing people together, by promoting a culture of collaboration and teamwork, in which researchers and innovators are encouraged and supported to work together to share their expertise and resources. TU Dublin will support its community of researchers and innovators to develop collaborations internally, but also to establish productive and long-lived collaborative relationships with national and international partners that are underpinned by the infrastructure and funding necessary to facilitate progress.



### **OBJECTIVES**

To build ambitious and productive international networks of Research & Innovation collaborations and partnerships, supported by a diversified portfolio of funded projects and initiatives.

To engage deeply with partners nationally to develop outputs and insights that are translated into practical solutions that resolve challenges faced by society in Ireland.

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#### **KEY ACTIONS**

To meet these objectives, we will:

- Significantly increase the engagement of researchers and innovators in collaborations funded through Horizon Europe and other European Commission funded programmes, at least doubling the numbers of projects and cumulative funding drawn down.
- Develop a coordinated set of supports to assist researchers and innovators participate in large scale international collaborations funded through Horizon Europe.
- Recognise and incentivise researchers and innovators wishing to collaborate with internal and external parties while continuously improving business intelligence and strategic decision-making.
- Develop a set of deep partnerships with enterprise partners who are strategically well aligned with the university and collaborate on a programme of educational, research, innovation, engagement initiatives, and staff exchanges.
- Further deepen our relationship with our partner universities in the European University of Technology (EUt+), actively contributing to cross-partner research institutes formed by the alliance and to the development of joint doctoral programmes.

- Develop a range of collaborative relationships with government agencies, non-governmental organisations, charities, community organisations, and the local authorities in the Dublin region that encompass Research & Innovation activity and associated educational and public engagement activities.
- Engage fully with Irish research performing organisation partners in national research centres and other Research & Innovation related partnerships and programmes, notably with SFI research centres and Rol/NI/GB co-centres.
- Continue to procure and deploy research infrastructure that is unique nationally and that can be used as a basis for collaboration with academic, industry and community partners.
- Further deepen our relationships with indigenous SMEs, the start-up community and TU Dublin spin-out companies, to seek ways in which the university's Research & Innovation capability and its portfolio of intellectual property can be leveraged to support their development.
- Celebrate the achievements of researchers and innovators who engage in collaborative relationships that produce impactful outcomes.

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#### NURTURING TALENT

By actively identifying and nurturing talented researchers and innovators at all career stages, universities can attract and retain excellent individuals, who, working in an open, inclusive, and creative environment, will generate impactful outcomes that advance knowledge and contribute to understanding and solving real-world problems. As a technological university, TU Dublin is fortunate to be comprised of a large community of students and staff who work and learn in a practice-based, impact-oriented environment, with an over-arching goal of working together to create a better world. Nurturing talent is central to our identity. We will continue to support our researchers, innovators, and our technical and administrative staff, by equipping them with the tools, skills, and experiences necessary to allow them to apply their creativity and ingenuity to solve challenging problems, strategically building communities with the requisite mix of skills and experience to make real progress on solving key societal challenges.

### **OBJECTIVES**

To sustain a culture of excellence, creativity, and impact in our Research & Innovation community by identifying, recruiting, supporting, training, mentoring, and retaining talented and ambitious individuals.

To develop our capability to address societal challenges through initiatives that build capability and experience in disciplines and research priorities of strategic importance to the university.

**KEY ACTIONS** 

To meet these objectives, we will:

- Apply for, obtain and retain the "HR Excellence in Research Award" based on a customised HR strategy and action plan reflective of our commitment as a university to the 40 principles of the European Charter and Code for Researchers.
- Continue to attract, recruit, and retain a diverse cohort of research postgraduate students from Ireland, Europe and further afield, with varying backgrounds and experiences, growing this cohort towards the 7% target set out in the Technological Universities Act 2018.
- Ensure that research postgraduates in TU Dublin are provided with financial, administrative, pastoral, and social supports which are targeted towards their particular needs and requirements.
- Continue to refine and enhance our existing research postgraduate programmes to ensure students are equipped with the discipline-specific, professional, and transversal skills they will require to have impactful careers.
- Leverage relationships and partnerships with external entities including industry, government, non-governmental organisations, local communities, and partner universities to offer research postgraduates opportunities to broaden their skills sets and experience.

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- Develop new research postgraduate programmes, including professional doctorates, which target the formation of professionals having specialist knowledge and experience required to contribute to complex societal challenges.
- Ensure that our career framework and workload allocation model provide tailored workloads to academic staff at all career stages, which appropriately acknowledges and incentivises, inter alia, the effort and commitment involved in supervision of research postgraduate students and research staff.
- Offer a set of supports for new lecturing staff, including tailored workloads, access to research infrastructure, and professional development and training in sustainability policy for research impact and alignment, to assist them develop their Research & Innovation activity.
- Offer a range of supports to existing TU Dublin staff who wish to pursue doctoral studies, growing the proportion of qualifying full time academic staff holding doctoral qualifications towards the 65% target set out in the Technological Universities Act 2018.
- Significantly grow the size and diversity of our cohort of postdoctoral researchers and career researchers, supporting them to perform excellent and impactful research whilst also developing a range of professional skills through a bespoke career development programme.

- Ensure that technical, administrative and other professional staff involved in developing and delivering Research & Innovation activity are provided with appropriate supports, training and infrastructure to develop their professional skills, and that their contribution is acknowledged and celebrated.
- Celebrate the work and achievements of our community of researchers and innovators and those who support their work, through a range of internal and external initiatives including awards, internal communications, impact profiles, and recognition of achievements in career progression evaluations.
- Put in place sets of supports for researchers and innovators who are re-integrating in the TU Dublin community following absences including for, amongst others, maternity leave, extended parental leave, or extended sick leave.
- Develop and launch recruitment campaigns for cohorts of academic staff having Research & Innovation expertise and experience in areas of strategic priority for the university in the pursuit of its educational, research and engagement mission, thereby creating communities of like-minded colleagues who can collectively play a leadership role across the university.

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