

Without research and innovation, Covid-19 would have been an unprecedented global health disaster. Long-term investments in UK research and innovation enabled a rapid response, aligned initially to development of therapies, but subsequently to approaches designed to address the long-term social, health and economic impacts of the pandemic. Cardiff researchers – from bioinformaticians to lawyers, clinicians to journalists – have, and continue to, play a critical role in UK-wide efforts to address the challenges caused by Covid-19. This is complemented by new approaches to global data-sharing and collaboration, which would have been unthinkable a year ago. Looking forward, our research and innovation ambitions remain unchanged but will be delivered mindful of these seismic changes, ensuring Cardiff continues to be well-placed to contribute to the health, wealth, security and well-being of future generations in Wales, in the UK and globally.

Our Ambition

Cardiff University is a successful, internationally leading, broad-based, research-intensive university, confirmed by our top five position in REF 2014. As the Welsh *Home of Innovation*, we are committed to ensuring that our research has a positive impact on society. We support our community of scholars to work with imagination, energy and creativity, developing solutions to global challenges, whether Covid-19, mental health, crime and security or climate change. From working to eradicate homelessness to developing the next generation of smart energy-efficient housing, our academics and students excel in cultivating the external partnerships they require for successful translation of excellent research.

Building on the previous strategy

The period following the REF 2014 result has seen continuing investment in our research infrastructure and capacity, major research success with business and an upwards trajectory of research income. In 2019/20, we obtained Cardiff's highest-ever level of research awards (£150 million). We have also doubled our interdisciplinary research Centres of Excellence, and the number of independent research fellows. Innovation, fuelled by our outstanding research, has been accelerated by our major campus expansion, where research and innovation are co-located, and co-created, promoting collaboration and entrepreneurship in our academics and students. This is exemplified by our Institute of Compound Semiconductors, a leading academic-business incubator, which is part of the South Wales CS Connected cluster. We have developed new major strategic partnerships with industry, public and third sectors, including our collaboration with the Office for National Statistics. Joint working with local communities helped address their needs, including our Grangetown Community Gateway and CAER Heritage Projects. We continue to work with our Welsh, GW4 and other partners to deliver globally competitive research.

Underpinning objectives

We will be known as a University:

- **where academic careers and positive research culture flourishes.** Our diverse community of researchers, from students to professors, will be supported and empowered to conduct high-quality research with global influence, with support provided for those most impacted by Covid-19.
- **which places research excellence at the heart of our innovation and civic mission delivery.** Innovation and research will be seen as equally important and synergistic activities, with staff given the time, space and incentives to undertake successful knowledge exchange activities. Training, catalyst funding, collaboration spaces and innovation incubators will support

development of entrepreneurial mindsets, supporting fluid mobility of ideas and staff across academic and non-academic sectors.

- **which invests in state-of-the art facilities, equipment and support for our researchers, technical staff and partners.** We will continuously improve our supporting infrastructure and facilitate state-of-the-art digital approaches needed for a globally interconnected research and innovation ecosystem. Completion of our Innovation Campus will ensure production of excellent research with impact.
- **which continues to grow and diversify our business and strategic partnerships to catalyse inward investment into Wales.** Working with partners, we will develop a seamless approach to collaboration and knowledge exchange aligned to greater inward investment into Wales, as well as supporting degree apprenticeships, innovative FE-HE training partnerships, and job creation in regional priority research and innovation sectors.
- **where global collaboration and partnership is nurtured.** Researchers will be supported to develop international partnerships that deliver solutions to challenges faced by those most in need around in Wales, the UK and the world. We will embrace virtual collaboration, and open data-sharing, broadening our reach and partnerships.

Making this happen

We are committed to facilitating a positive and inclusive research culture, which enables delivery of research excellence delivered with integrity and transparency. We will broaden the diversity of voices in our research community, and ensure we recognise the contributions of professional-academic research teams. Our investment strategy will catalyse new ideas and creativity from staff, but also research at scale, from discovery through to translational research, within Wales and worldwide. Completion of a sector-leading Innovation campus will provide the infrastructure and collaborative co-working spaces for effective partnership with business, industry, public sector, government and other organisations. Complementary investments will catalyse the entrepreneurial ambitions of our staff and students, continuing Cardiff's upwards trajectory as a sector-leading driver on research-led innovation and impact. We will ensure to consider the needs of our local communities, and the impacts of Covid-19 on them, in delivering these goals.

Nurture and promote delivery of research excellence, with integrity and inclusivity

We will:

- include excellent outputs and impact into REF 2021, reflecting our inclusive approach to supporting research excellence across all disciplines and all members of our diverse research community. Our aim is to be in the top 12 in REF 2021 (based on Research Power).
- align our REF aspirations with the continued implementation of a robust, fair and effective Performance Development Review process coupled with provision of enablers designed to support production of excellent research in line with discipline-specific standards.
- ensure that Covid-19 inequalities in research are considered in all research and innovation decision-making, ensuring that students and staff most affected continue to be supported to deliver their research ambitions.

Enrich our research culture, promoting success across all our diverse research communities

We will:

- champion an open and inclusive research culture for researchers at all career stages, supported by our Deans of Equality, Diversity and Inclusion, and Research Environment and Culture.
- prioritise the development of inspirational and effective research leaders, while also supporting Cardiff's ambitions around research-led excellent teaching.
- support early career researchers in terms of training, building and sustaining their careers as well as increasing our visibility and commitment to equality, diversity and inclusion, aligned to The Concordat to Support the Career Development of Researchers.

- embrace the principles of transparency, collaboration and efficiency of open research beyond basic compliance, aligned to our commitment as a signatory to DORA.
- ensure that equality, diversity and inclusion is embedded within all decision-making across our research and innovation portfolio
- provide funded strategic initiatives to ensure researchers have the time, space and supportive environment in which to undertake excellent research. Specifically, we will invest funding in:
 - new University Innovation Institutes, focused on rapidly growing interdisciplinary and translational research, enhanced by access to major bid development support
 - University Research Leave, linked to our innovative Disglair Scheme designed to support the transition of talented researchers into teaching and research careers
 - delivery of our new International Partnership Strategy, and research-focused collaborations with international partners aligned to their respective national strategies, priority areas and initiatives.
 - world class facilities and infrastructure, as well as innovation and civic mission initiatives that benefit our local communities and region
 - early-stage impact and translational research helping researchers develop their understanding of the needs of external partners and effective knowledge exchange collaborations

Accelerate growth of major research and innovation clusters within the region

We will:

- grow our research and innovation priorities via external investment in our new University Innovation Institutes, working closely with external partners within the innovation ecosystem in Wales, UK and worldwide.
- actively collaborate with Welsh Government and other regional stakeholders, such as the Cardiff Capital Region City Deal, Western Gateway and GW4 Alliance, to create clusters of innovation excellent at scale.
- invest in the people, places and partnerships necessary to deliver our innovation ambitions, including growing our major strategic partnerships with business.
- continue to invest in the development of our major Innovation campus, including Innovation Central, as a critical vehicle to support start-ups, spins-outs and SMEs within the region.
- improve University support and processes via our Research Wales Innovation Fund, creating greater opportunities for our staff and students to engage in innovation and enterprise.

Nurture and promote creative, innovative and entrepreneurial academics and students

We will:

- develop a sector-leading suite of imaginative training opportunities in innovation, enterprise, public engagement and civic mission, supporting rapid development of entrepreneurial and innovation skills in our staff and students.
- introduce new internal funding schemes designed to support effective delivery of innovation, impact and translational research, providing investment at all stages of the translational research pipeline.
- appoint honorary innovation fellows from business, industry, NHS and other key sectors to enrich Cardiff's innovation community, supporting mentoring, entrepreneurial skill development and partnership working.
- grow the Cardiff University Innovation Network to be a sector-leading, high quality stakeholder forum for sharing of best practice, and generation of new research and development propositions.
- develop supportive mechanisms to grow support secondments and staff exchanges between the University and partner organisations

- promote and celebrate success in innovation and impact, ensuring that all members of our diverse community are able to undertake knowledge exchange activities, from early-stage through to commercialisation.

Train a skilled workforce able to accelerate delivery of the future economy

We will:

- introduce a new Cardiff Innovation Development Scheme to support training of Cardiff students who wish to develop skills and expertise in innovation and enterprise.
- continue to enrich our *Innovation for All* programme, via training, funding, partnership and mentorship, thereby maximising the opportunities for Cardiff students and researchers to deliver innovation, public engagement and civic mission activities
- provide opportunities for our students to undertake work placements and internships, contribute to public engagement and civic mission activities, and work in partnership to develop creative solutions to societal challenges.
- establish new educational provision in response to industry demand, as evidenced by our joint FE-HE training programme to support job needs in advanced manufacturing or our Data Science Academy which provides skilled data scientists aligned to industry needs.
- strengthen our provision of Continuing Professional Development and Executive Education, ensuring this aligns to our research and innovation strengths, and meets the key needs of employers.