



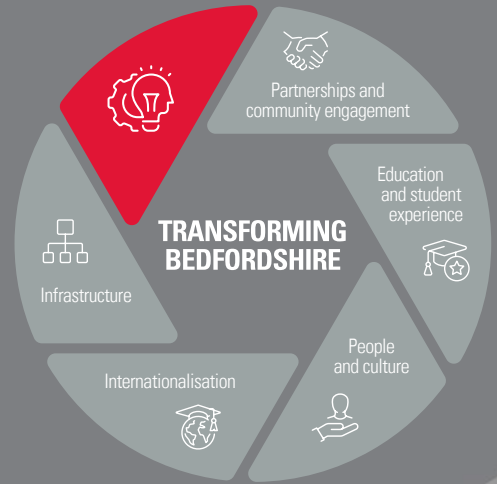
University of Bedfordshire

STRATEGY

RESEARCH & INNOVATION

2022-26

Professor Andrew Church
Pro Vice Chancellor



COMMITTED TO CONDUCTING RESEARCH

THAT SHAPES KEY CHANGES IN POLICY AND PRACTICE

- MEDICAL KNOWLEDGE
- CHRONIC DISEASE
- SUBSTANCE MISUSE
- LANGUAGE ASSESSMENT
- ROBOTICS TECHNOLOGY
- ... AND MORE

60% OF THE UNIVERSITY'S RESEARCH

HAS BEEN JUDGED **WORLD LEADING** OR INTERNATIONALLY EXCELLENT

REF2021 Research Excellence Framework

**OUTSTANDING
RANKING**



**3RD
92**

OUT OF
SUBMISSIONS FOR
ENGLISH LANGUAGE
RESEARCHERS

REF2021 Research
Excellence
Framework



HIGHEST POSSIBLE RATING
AT A HUGE

72%

OF ITS RESEARCH





STRATEGY

RESEARCH & INNOVATION

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OUR VISION

Our vision for Research & Innovation is to cultivate an interdisciplinary research culture and partnership environment that generates new knowledge, creates insights and resources that have a positive impact on society, inspires our students to push the boundaries of what's possible and transforms lives. By doing so, we'll stimulate business innovation and become a driving force behind policy and practice that will shape the future for the better.

Context

Research & Innovation are central to what makes us a University.

New knowledge generated by research inspires students, motivates staff, contributes to our teaching and is valued around the world.

Innovation and knowledge exchange work with partners ensures research and teaching have impact on the social, economic, technological and environmental challenges facing humanity. In the UK's 2021 Research Excellence Framework (REF2021) 60% of our research was graded as world leading or internationally excellent compared to 49% in the previous REF2014. The highly distinct research carried out by CRELLA - the Centre for Research in English Language Learning and Assessment - performed exceptionally well in REF2021 being ranked 3rd out of 92 submissions in the English Language & Literature subject area. To deliver these excellent outcomes in REF2021 our researchers have worked in partnership both nationally and internationally with over 8,000 external organisations on research and innovation projects.

The strategy to deliver this Research & Innovation

vision involves a set of action-based goals and commitments accompanied by success indicators that are the targets for us to meet in future. Equality, diversity and inclusion initiatives are central to the commitments and the strategy as a whole is aligned with our University's Equality, Diversity & Inclusion Strategy and Race Equality Charter application. The Research & Innovation Strategy has been developed with insights from our academic and professional service colleagues, postgraduate research students and external partners. We are very indebted to everyone who, despite the pandemic, shared their ideas with us. They have enabled us to develop this aspirational and inclusive strategy that challenges us to go further and ensure our research and innovation has impact.

OUR UNIVERSITY GOAL

The impact goal of the University's strategy "Transforming Bedfordshire" focuses our future research and innovation vision on actions that will enhance our reputation internationally and make a positive impact on our teaching and contribution to society.

INTERNATIONAL RESEARCH EXCELLENCE

Building on our strengths and the research we are known for.

Achieving our vision will require us to build on three existing and internationally recognised areas of research excellence linked to our Research Institutes.

Our Research Institutes collaborate with partners around the world and inspire our staff and students to generate new critical insights and thinking.

These interdisciplinary areas contribute to the student experience and courses taught at Bedfordshire. They cover life sciences, business, social science, arts and humanities, and enable our research to benefit people's lives and transform communities both locally and internationally.



HEALTH, WELLBEING & SOCIAL JUSTICE

- Institute for Health Research
- Institute of Biomedical & Environmental Science & Technology
- Institute of Applied Social Research
- Institute for Sport & Physical Activity Research
- Institute for Research in Applicable Computing

Our interdisciplinary institutes have had life-changing influences on health and social policy and practice through research into organ donation amongst minority ethnic communities, AI for chronic disease prevention and treatment, new biomarkers underpinning novel therapies, teenage pregnancy, health behaviour change, substance misuse, safeguarding children and adults and forced migration. We are internationally recognised

for our work that involves those with lived experience of the challenges we seek to address participating in the research process, including recent projects in the Global North and Global South.



TECHNOLOGY, BUSINESS & PRODUCTIVITY

- Institute for Research in Applicable Computing
- Business and Management Research Institute
- Institute of Biomedical & Environmental Science & Technology
- Research Institute for Smart Cities

Our scientists drive forward industrial innovation and green technologies deeply rooted in our research into nano-robotic manipulation, microbial ecology for food security, genomics and molecular diagnostics, AI-based digital twins, and autonomous robotic applications in transport and in manufacturing. The University's Business School has led research advances in analytics for information systems and operations management promoting environmental sustainability.



COMMUNICATION, LEARNING & CREATIVITY

- Centre for Research in English Language Learning & Assessment
- Research Institute for Media, Art & Performance
- Institute for Research in Education
- Institute for Sport & Physical Activity Research

Our world leading Centre for Research in English Language Learning and Assessment (CRELLA) created a new framework for language ability test development. This framework is now widely used by assessment agencies around the world to improve the quality of their tests. Education research has influenced inclusive teaching, special educational needs and disabilities provision in the UK, New Zealand and Australia. Our interdisciplinary arts and humanities researchers are leaders in creating new knowledge that transforms lives by tackling political communication, cultural inequality and embodied trauma.



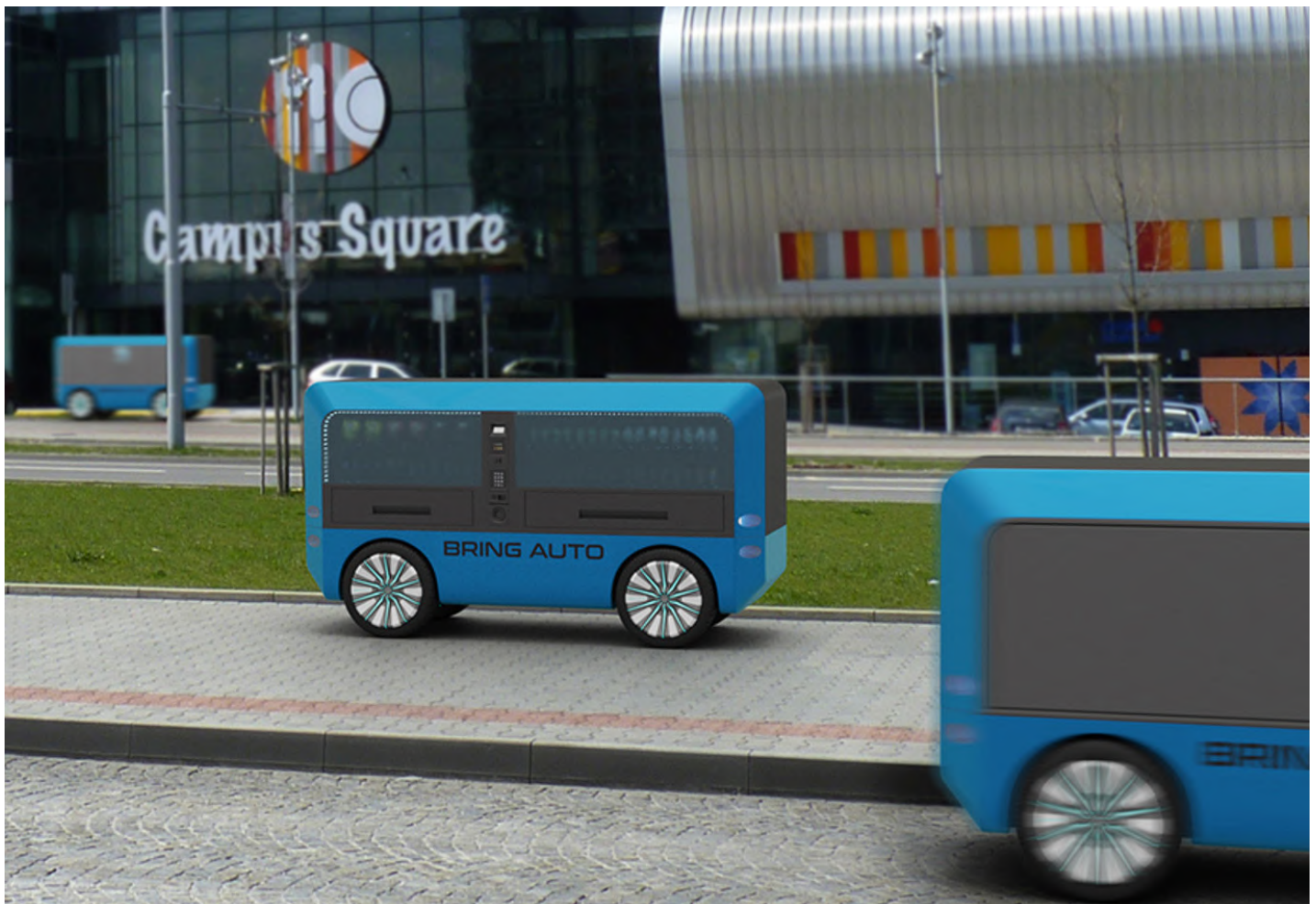
INTERDISCIPLINARY CROSS-INSTITUTE RESEARCH

Connecting research to our sustainability excellence and history of global partnerships

The University is a leader in environmental sustainability. Our state of the art STEM building provides excellent facilities for our students and supports science researchers who have made significant advances in green AI, 5G, digitalisation, life and data sciences. International and local partnership working connects our cutting edge environmental science, sustainability research and green economy training with the successful net zero carbon management planning of our estate and our innovations in the teaching curriculum linked to the United Nations Sustainable Development Goals. We are second in the UK and first in England in the People & Planet UK University Green League and have Platinum certification by EcoCampus.

This provides us with a nationally recognised base to guide further investments in STEM and social science research into environmental sustainability and the green economy.

We already have extensive international research partnerships with recent projects in 43 countries. Our international partnerships team have also developed teaching provision links with 20 higher education institutions in 17 countries. We will draw on these to extend the reach and influence of our research and innovation. We will further grow our international research reputation by improving the integration of our well-established research, innovation and teaching expertise addressing the climate change challenges facing society.

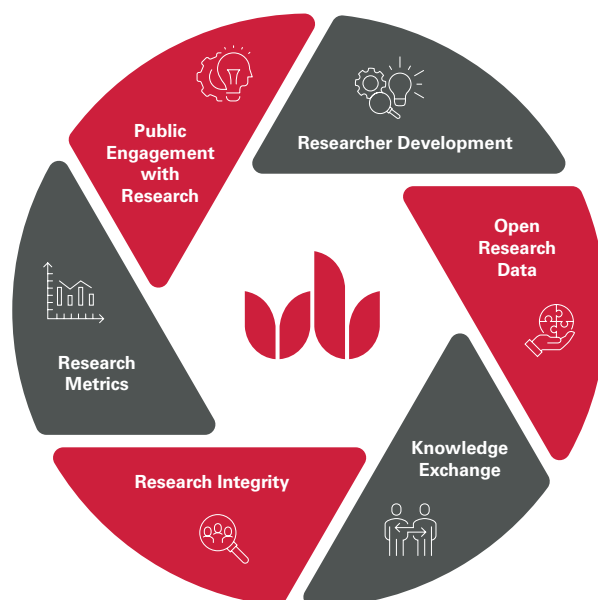


Project: '5G-ERA' (5G Enhanced Robot Autonomy). The University's Centre for Robotics and Smart Information System Studies (RSS), based within the Institute for Research in Applicable Computing (IRAC). Led by the University's Associate Professor in Computer Science and Robotics, Dr Renxi Qiu (Scientific Coordinator).

CONTRIBUTING TO OUR STUDENTS, PLACES AND MEETING NATIONAL PRIORITIES

All academic staff are involved in scholarship that includes a range of activities to ensure that teaching practice is informed by the best research within and outside of the University. Our new Academy for Learning & Teaching Excellence will provide all academics with new opportunities to strengthen the connections between their scholarship, teaching, research and practice.

The Academy is a central element in our new Education & Student Experience Strategy that will deliver an outstanding student-focused experience, founded on excellent research-informed teaching.



Our Research & Innovation Service contributes to a series of national higher education policy priorities. Successive governments have established a range of research concordats and agreements that have encouraged us to innovate in areas including Researcher Development, Open Research Data, Knowledge Exchange, Research Integrity, Research Metrics and Public Engagement with Research.

The national Knowledge Exchange Framework (KEF) and Research Excellence Framework (REF) are assessments designed to encourage research and innovation excellence. They are also important determinants of our reputation and funding. We have performed well in both assessments over the last decade especially for a university of our staff size. Recent national policy guidance, such as the UK Research & Innovation's People & Culture Strategy, encourages universities to enhance their research culture and promote diversity. We can make significant contributions in these areas with a dynamic and diverse community in which over a quarter of our staff and over half of our students are from minority ethnic communities.

Our Research & Innovation involves Knowledge Exchange (KE) that is beneficial for economic and social policy agendas in the regional and local economy, between 2017 and 2021.

1,500
ORGANISATIONS
WORKED WITH ON
RESEARCH AND KE



+800
FACILITATED SMES IN
FINANCIALLY
VALUABLE KE PER YEAR



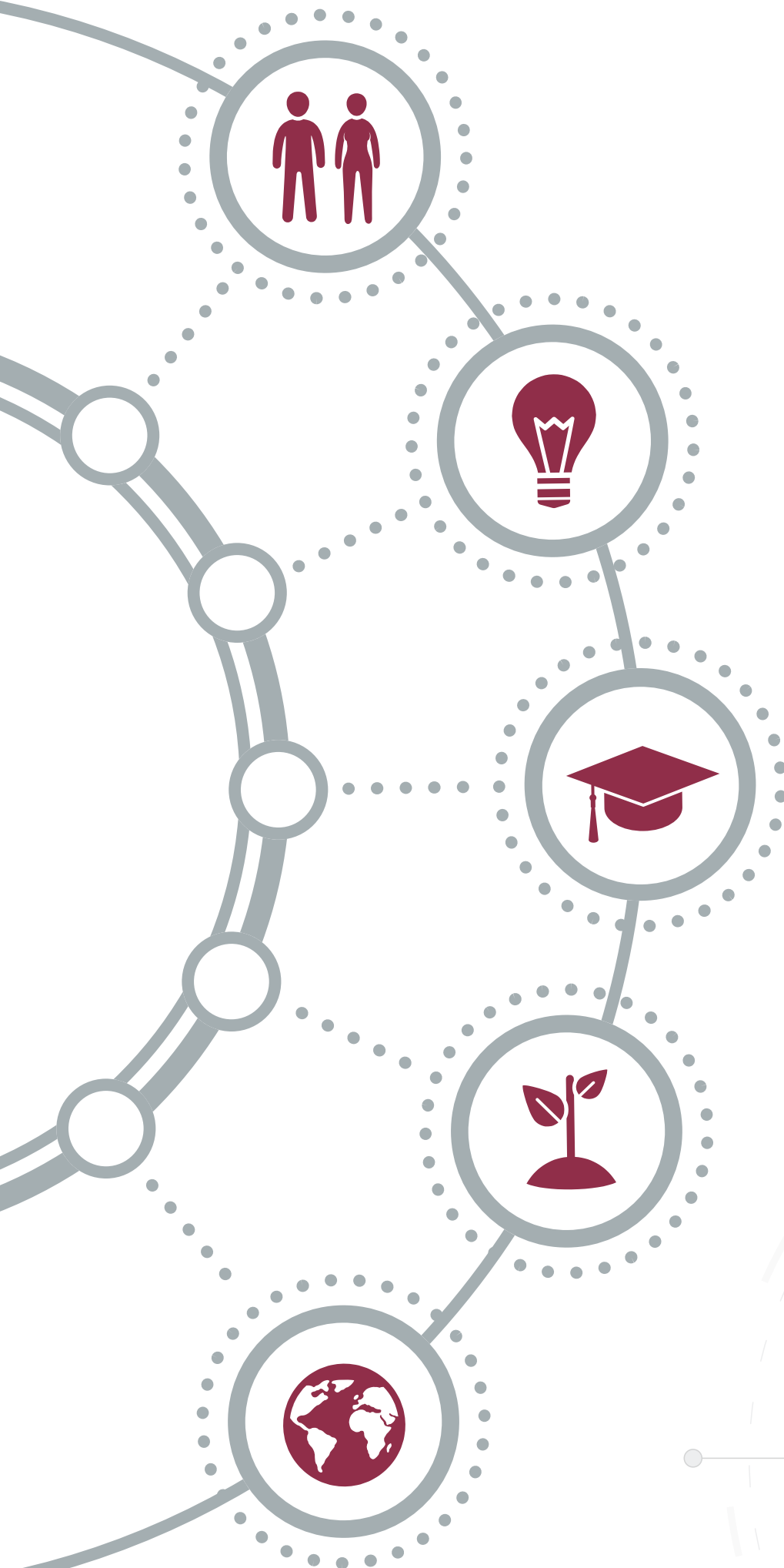
+400
THE UNIVERSITY
HELPED CREATE
NEW BUSINESSES



1000
NEW JOBS CREATED
IN THE REGION

FOR EVERY **£1 RECEIVED** IN FUNDING FOR
RESEARCH AND KE ACTIVITIES, THE UNIVERSITY GENERATES
£6.50 IN NET ADDITIONAL GVA

Our ambitious Research & Innovation Strategy will guarantee that in the future we continue to address local, national and international policy priorities and societal challenges.



OUR RESEARCH & INNOVATION GOALS & COMMITMENTS

The achievement of our five goals involves the delivery of a set of commitments that build on our strengths and lead to significant improvements in our research performance. We will monitor the achievement of the commitments through a small number of annual and longer-term success indicators.

FIVE STRATEGIC GOALS

The vision for Research & Innovation will be delivered through:



PEOPLE

Create a distinct research and innovation culture based on our values for inclusion and excellence that attracts talent, develops leadership, retains staff, rewards ambition, celebrates success and grows the staff community, producing high quality research outputs.



EDUCATION & STUDENTS

Contribute to the transformation of education and the student experience by ensuring our research, scholarship and innovation drives improvements in our taught course portfolio and curriculum, enabling students to engage with research, produce knowledge and generate solutions that address global challenges, social injustices and the United Nations' Sustainable Development Goals.



POSTGRADUATE RESEARCH STUDENTS

Develop a high quality postgraduate researcher community and experience by growing the number of research students and advancing an enabling and inclusive culture that is valued by the next generation of leaders in research.



INVESTMENT

Grow our international reputation by investing in a sustainable research and innovation environment that promotes collaborative interdisciplinary research, expands our international partnerships, fosters research integrity, nurtures early career researchers and increases external funding.



IMPACT

Enjoy a strong reputation for collaboration that co-creates impact meeting the needs of industry, policy makers and communities by maximising our external engagement through funded programmes, leveraging private sector investment and generating the mutually beneficial reciprocal exchange of ideas with our civic partners.

OUR COMMITMENTS & SUCCESS INDICATORS



PEOPLE

- Annually, **50%** of research outputs graded as being of international quality (3*–4*)
- **40%** of academic staff submitted to REF2028

Our research training and mentoring will expand to deliver strategic support for the production of research outputs and provide specific career development opportunities for early-career and mid-career staff.

We will value and reward the research and innovation of our staff by establishing new career frameworks for Associate Professor and Professor positions and improving the conditions of staff on research-only contracts so they align more closely with those of staff on teaching and research contracts.

New equality, diversity and inclusion reporting systems will deliver a research and innovation culture that is more inclusive and strengthens the engagement of our staff with the University's research environment.



EDUCATION & STUDENTS

- Continue to create start-up and scale-up business opportunities for our students, graduates and staff to maintain our **Top 10** position for business start-ups as measured by the Higher Education Business & Community Interaction Survey
- Hold at least one annual event to create opportunities for our students to identify and develop research linked to the United Nations' Sustainable Development Goals

We will improve graduate outcomes and employability by creating new cross-university innovation, entrepreneurship and incubation support programmes that align with faculty course portfolio priorities and engage students with regional businesses and partners.

Our Academy for Learning, Teaching Excellence will conduct and support new research into teaching and educational practice that will ensure our undergraduate curriculum is informed by staff research, external research advances and the latest global evidence on innovative pedagogy.

We will enable and support all our students to develop cutting-edge research skills in their curriculum, supporting projects that are framed by priorities identified in the United Nations' Sustainable Development Goals.



POSTGRADUATE RESEARCH STUDENTS

- **80%** overall satisfaction in the 2023 Postgraduate Research Experience Survey and **85% by 2025**
- The number of postgraduate research students increase by **30% by 2025** and the number of doctoral completions by **20% by 2028**

A new recruitment plan, investments in studentships, equality, diversity and inclusion initiatives to enrol more students with protected characteristics, and actions to strengthen the research career 'pipeline' for our Bedfordshire undergraduate students will expand and diversify the postgraduate researcher community.

We will create a vibrant postgraduate researcher environment valued by our students by expanding training, celebrating success, and enabling a strong postgraduate voice across the University.

By growing our professional doctorates, partner funded PhDs and Masters by Research programmes to offer new routes to PhD study, we will create more diverse opportunities for doctoral students at Bedfordshire.



INVESTMENT

- Increase our Knowledge Exchange Framework collaborative research ranking to be in the top **50%** of universities based on external income generation and co-authored papers with non-academic partners
- By REF2028 all our subject submissions will report increased levels of international activity and partnership

We will strengthen our international reputation for producing excellent research through development opportunities for staff, the appointment of new Professor and Associate Professors, and investment in the research infrastructure to support external income generation, international and interdisciplinary partnerships.

Increased support for our research ethics, open access and integrity policies and expanding staff training will maintain the highest standards of research rigour and openness based on best practice.

The management of staff research and innovation time through the workload- planning model and our use of QR income expenditure will become more efficient and transparent to enable staff to utilise their time effectively and to access seed-fund support through internal funding schemes.



IMPACT

- Train **200** academic and professional service staff in research, innovation and policy impact
- 75% of submitted impact case studies to REF2028 will be graded as internationally excellent and **25% as world leading**

New staff training and support will strengthen our research impact generation, grow our media profile and deliver new local, national and international partnerships with policy makers and communities to transform lives.

We will grow our income streams from interactions with businesses, governments and community partners through regional development funding for our projects, apprenticeship programmes, continuing professional development, short courses, training for practitioners and consultancy projects that meet skills and productivity needs.

Improved coordination between research data, financial processes and customer relationship management systems across the University will support all staff in identifying partnership opportunities and build trust with our partners based on our integrated approach to external engagement.



RESEARCH & INNOVATION STRATEGY IMPLEMENTATION

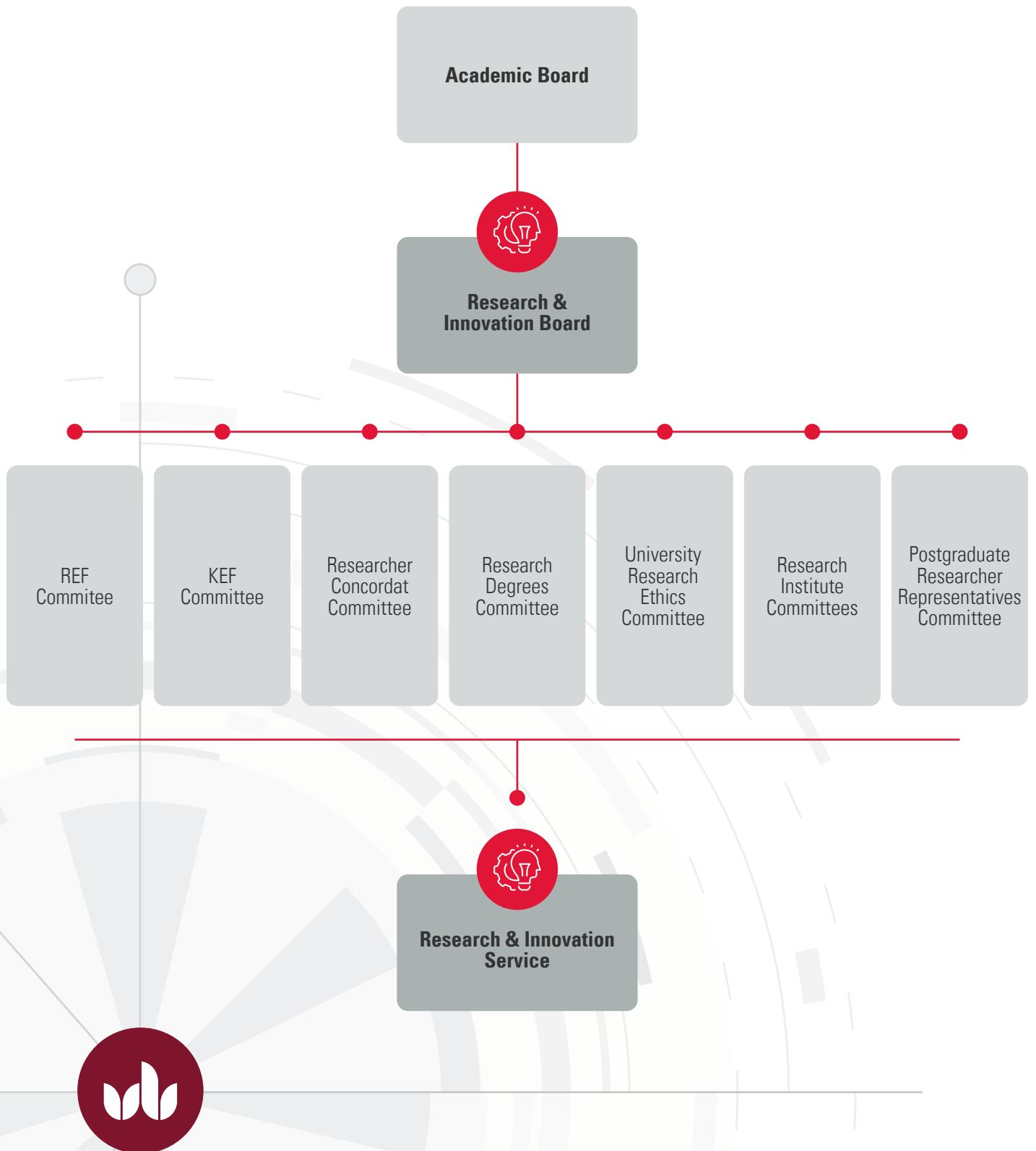
The governance structures and plans we need in order to deliver our Strategy are already in place. They will enable us to rapidly implement new initiatives and support for research and innovation.

The University's Research & Innovation Board will allow representatives of research leaders, early career staff and postgraduate researchers to provide inclusive strategic oversight. Every six months the Board will use a range of success measures to monitor the performance of our Research & Innovation Operational Plan including our performance on addressing equality, diversity & inclusion issues.

This single university-wide plan will be the main implementation vehicle for the strategy goals and commitments and ensuring all our initiatives to support Research & Innovation align with the University's Equality, Diversity & Inclusion Strategy. It will integrate with the Research Institute's annual plans, each of which will align with our five Research & Innovation strategic goals. The Research Graduate School will support the implementation of our goals and commitments for Postgraduate Researchers. A series of committees reporting to the Board will focus on one of the five strategic goals and develop an action plan. The committees' membership will be inclusive taking account of the protected characteristics of our diverse staff community. It will engage our dedicated academic and professional service staff, early career researchers and postgraduate research students with the delivery of the strategy. All supported by the high quality Research & Innovation Service team.

In response to government policy, the University is required to establish three-year plans in a Knowledge Exchange Concordat Action Plan and a Researcher Concordat Action Plan that will each be monitored by a committee. In preparation for the next Research Excellence Framework (REF) submission, we will also establish a committee to develop a REF Action Plan.

WHO WILL IMPLEMENT THE STRATEGY?



RESEARCH & INNOVATION STRATEGY RISKS

Our operational and action plans will take account of the challenging risks that research and innovation faces, many of which are to some degree linked to the Covid-19 pandemic. Internationally, many of our research collaborators in the global south face health challenges where vaccines are lacking as a legacy of the pandemic. At the University, staff turnover has increased affecting the sustainability of some partnerships.

Nationally, all universities are concerned about the delays to new regional funding programmes designed to replace EU funding streams and support the 'levelling up' agenda. Our rigorous planning for these changes is designed to deliver positive results. In this unpredictable environment the commitments outlined in the strategy will aim to attract high quality researchers and retain our talented staff.

At the regional scale, the Local Economic Partnerships and Growth Boards we have worked with over the last decade are likely to be restructured or wound down. We will need to strengthen our partnerships with local authorities to ensure our good relationships with large and small businesses, policy makers and local communities continue into the future. The commitments of our strategy aim to coordinate our relationships with external partners through the integration of customer relationship management systems so we can navigate this new partnership landscape successfully.







www.beds.ac.uk/ris