Research & Impact Strategy
2016 – 2021
Shaping your future
The Ulster University Research & Impact Strategy 2016-2021 will empower our people to undertake interdisciplinary research in a supportive environment to produce internationally excellent and world-leading outputs and transformative impact in support of Ulster’s vision to deliver globally significant research with local relevance and to make a positive contribution to society as a whole.

As a research-led university, Ulster will strive to be a nexus of learning where research permeates our operations and is the basis of its reputation and the foundation for continuous improvement. This will extend from the curiosity-based, investigator-led basic research to applied interdisciplinary research and developmental work funded by business. Ulster will promote excellence in research and education by emphasising the mutual dependence of these activities.

As a civic university we will focus our efforts on global societal issues relevant to Northern Ireland and ensure that the outputs of our research have a positive impact on our civic society. Ulster University will achieve international recognition for its excellence and leadership in distinctive research themes that have global significance and create local and international capability and societal value. In gaining leadership in areas that unite our strengths, our researchers will work together to address large-scale multidisciplinary research challenges and achieve impact locally and globally. Furthermore, in our role as a civic university we will engage with the public to make the research process as accessible as possible for the benefit of wider society, we will partner with industry, government and the third sector to inform and develop impact, we will ensure that our research enhances the student experience, we will seek to bring to market the intellectual property arising from our work and we will pro-actively target businesses which align with our strategic research themes to match research expertise to help solve industry problems.

The Ulster University Research & Impact Strategy 2016-2021 defines our ambitions for our research activities and outcomes. It provides direction and sets out a plan for our research and its impact over the next 5 years. It builds upon core strategies to develop our people, research outputs and impact. Ulster’s research ambitions will be realised through strategic focus, interdisciplinary, research informed teaching, research development, enhancement of our research environment, good governance and integrity in the conduct of our research, and by monitoring, benchmarking and refining our performance measures.

Introduction
By 2021, Ulster will commit to:

- Increase the number of staff returned in REF 2021 by 50% over the course of this Strategy;
- Increase the number of PhD students at Ulster by 30%;
- Increase the number of research partnerships with business by 25%;
- Increase the level of Knowledge Exchange Income by 20%; and
- Improve our positioning within the top 25% of UK Universities within the next REF assessment for research power and in the top 20% of UK Universities within the 2021 HESA Higher Education Business & Community Interaction Survey league for its HEIF-determining metrics.

To enable Ulster's enhanced performance we will ensure:

- Undertake globally significant research in our chosen research themes;
- Ensure impact upon teaching, the economy and civic society;
- Focus on increasing our internationally co-created and co-authored research outputs;
- The provision of support, incentives and leadership for researchers to undertake interdisciplinary research of global excellence funded by the most prestigious grant awarding bodies;
- That Ulster's chosen interdisciplinary research themes of creativity and culture, healthy communities, sustainability and social renewal, become strongly embedded within our research environment, underpinned by investment from Ulster;
- The appointment of 50 new researchers in the period to REF 2021;
- Greater clarity around what it means to be a great Ulster researcher so that each colleague understands the personal expectations to enable us to realise our strategic ambitions;
- That our research students have an enhanced experience through the establishment of a new Doctoral College that will bring together existing research support functions, providing an enriching and supportive development environment for our research students and early career researchers;
- The enhancement of support for impact pathways, creating value within the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia; and
- Support for Ulster’s Teaching and Learning and International Strategies, ensuring collective measures to realise the vision for Ulster University set out in our 5 & 50 Year Plan.
Ulster University’s international reputation for research excellence has received worldwide recognition by the 2014 Research Excellence Framework (REF). Ulster University is currently in the top 25% of UK Universities for research power and 72% of our research activity, in terms of outputs, impact and environment, is judged to be world-leading or internationally excellent. The REF2014 exercise demonstrated that Ulster University is now:

– One of the top five universities in the UK for world-leading research in law, biomedical sciences, nursing and art and design;
– One of the top 10 universities in the UK for built environment, biomedical sciences, art and design and nursing research;
– Northern Ireland’s leading academic institution for research in biomedical sciences, law, business and management, architecture and built environment, art and design, social policy, sport, media studies and nursing; and
– Northern Ireland’s leading academic institution for Research Impact, with 44% determined as world-leading.

Ulster University is dedicated to driving innovation across industry, supporting businesses to access the knowledge that will help them develop their global competitiveness. HESA’s Higher Education – Business and Community Interaction (HE-BCI) Survey measures Ulster’s innovation performance and in its most recent assessment demonstrated that Ulster University is now:

– In the top 23% of UK Universities for the total income that is generated from its interactions with business and the community;
– In the top 10% of UK universities for its number of interactions with SMEs;
– In the top 21% of UK universities for its spin outs performance;
– In the top 5% of KTP providers across the UK, having managed around 220 successful KTPs since 1995, which have generated more than £22m in funding for business expansion.

These results demonstrate our influence, the relevance of our research and our impact in areas as diverse as health, the economy, the creative industries and social policy. Our performance reflects the quality, commitment and leadership of our research staff and students, our investment in research, the strength of our partnerships and our worldwide contribution.
People

Strategic Intent - The success of Ulster University, and its Research & Impact Strategy, is dependent on the quality and the performance of its people. To ensure that the ambitions of our staff and students are realised, we will recruit, retain and reward the very best people in terms of their ability and potential, and we will provide a world class research environment in which our people can flourish. We will enhance their skills and provide them with the tools and flexibility necessary to respond to the opportunities and demands of a globally engaged research-led University.

Objectives - By 2021 we will increase the number of newly appointed staff at least by 5%8. We will develop strategic approaches, including targeted investment, that will make these objectives achievable.

Supporting Actions

- **Sabbaticals** - A sabbatical policy will be introduced for research staff which constitutes at least one sabbatical per Research Institute member within a REF cycle.

- **Internationalisation** - Ulster University will work to attract the very best and most talented academics in order to advance its global positioning. Our collaborative research, international co-authorship, and international co-funded research outputs provide critical leverage in international markets and contribute to Ulster’s internationalisation strategy. We will include an international approach to the recruitment of all new academic staff. Excellence attracts excellence and Ulster can serve as an international beacon, signalling the capabilities of Northern Ireland to a global cohort of researchers.

- **Researcher Recruitment** - To increase Ulster’s REF performance we will appoint 50 new researchers in the period to REF 2021, and will continue to provide mentoring and support to enable current staff, PhD students and Early Career Researchers (ECRs) to become research active.

- **Staff Support** - Newly appointed staff, especially ECRs, will be provided with startup research funding packages. Senior administrative staff from the Department for Research & Impact will be aligned to each Research Institute to provide support for their grant applications and subsequent project management, research impact, publicity and public engagement.

- **Researcher Training and Development** - A training and development programme, Research Income and Grant Opportunities for Ulster Researchers (RIGOUR), will be delivered to provide researchers with support to enhance and improve the success rate of applications. A similar training and development programme will be delivered to increase the quality and reliability of research outputs and publications.

- **Interdisciplinary Research** - Researchers will be incentivised to work across the research themes and develop insights into the work of other disciplines through the organisation of regular seminars and town hall meetings across all campuses.

- **Research Students** - The University is committed to ensuring that the quality of research training at Ulster is at the highest international level. Our aim is to develop each individual to their full potential to produce creative and rigorous researchers for careers both in academia and industry. Ulster’s research institutes provide the supporting infrastructure for over 1,000 doctoral and Masters students annually. We intend to increase this number by 30% over the period to 2023. This will be achieved through traditional DfE and VCRS PhDs, an increase in the number of PhDs costed to external grant applications, professional PhDs in industry, PhD by published work and through taught Doctorates in bespoke areas.

The University’s commitment to equality is articulated in its Equality Scheme and Equal Opportunities Policy. The Equality Scheme addresses equality issues in relation to gender, marital status, religious belief, political belief, race, age, disability, sexual orientation, and responsibility for dependants. Gender and race are just two of the dimensions of diversity that we prioritise at Ulster University. Ulster University is presently preparing for the 4 year revalidation of its HR Research Excellence Award. Ulster University commits to all departments achieving bronze awards and to subsequent progression to Silver Award. The University will continue to fund staff to participate in the Aurora leadership development programme, with 8 people participating in 2016/17. A three-year Action Plan aimed at supporting and developing the careers of women in STEM has been in place since 2014. Ulster University is presently preparing for the 4 year revaluation of its HR Research Excellence Award. The award demonstrates Ulster’s commitment to good working conditions and career development for our researchers, which will improve the quality and impact of our research.

Expectations of the Ulster Researcher

The Ulster Researcher will demonstrate leadership in their subject, will strive to international standards of excellence, will collaborate globally, will nurture the development of both Early Career Researchers and Research Students, will attract grant funding greater than their benchmark peers, will contribute to Ulster’s internationalisation strategy, and will disseminate the results of their research through at least one high quality publication each year, through teaching, commercialisation, and knowledge exchange with business, public sector and wider community.
Strategic Intent – Ulster University will undertake internationally excellent and world-leading research, ensuring that our research outputs are cited and recognised, leveraging funding from prestigious sources and ensuring transformative experiences for our research staff, students and collaborators. They will advance the way we see the world in our chosen research themes and ensure impact through technological, creative and social innovation.

Objectives – We will double the level of research funding from prestigious sources during the course of this Strategy. We will use targeted resources to increase the number of internationally co-created and co-authored research outputs. We will enhance our research informed teaching and ensure a valued contribution to Ulster’s policies and strategies for the Teaching Excellence Framework 9.

Supporting Actions

– Quality – We will provide support, incentives and leadership for researchers to undertake internationally excellent and world-leading research. We will establish a uniform process of peer review to which all RIs/UoAs must adhere, which may be augmented by each RI as appropriate. A citations strategy has been developed and a dedicated support team has been established in the library to provide professional support and guidance to assist our staff in understanding the nature of citation indices and the factors which influence their positive accrual. Our researchers will be supported to increase the quality of outputs through training and workshops.

– Research Funding – We will establish a new team in the Department for Research & Impact tasked with better horizon scanning functionality to identify the right funding opportunities for Ulster researchers and to support our researchers in submitting successful research bids. Researchers will be supported through the research project life cycle from pre-application to post-project support. Practical support will be provided to scope, develop and draft funding applications. We will diversify our research funding sources and increase the level of funding from prestigious sources such as Research Councils, European and international sources, major charities such as Wellcome, Leverhulme Trust, Nuffield, Rowntree, and the NIH (USA), and NIHR (UK). A Research Development portal will be developed to promote strategically aligned internal and external funding opportunities available and guidelines on how to access same.

– Research Partnerships – We will seek to work with the very best through developing partnerships with national and international centres of research excellence. In particular we will identify international researchers and institutes that excel in work that best reflects our research themes. We will target resources to exploit these and to establish visiting and exchange programmes. Initiatives such as the Research Challenge Fund, Dublin City University and University of Maryland collaborative funding support are some examples of how to increase collaboration and the number of internationally co-created and co-authored research outputs.

Impact

Strategic Intent – Ulster University will build upon our internationally excellent and world-leading impact arising from the translation of our research into value to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia. We will ensure that our research is leveraged by the university to advance the student experience and conduct of our international and civic business. This will be achieved with our partners through the co-creation of knowledge and collaborative exploitation, and for the public good through economic, social, cultural, health care, public policy or services and environmental impact. Ulster’s researchers will be supported to identify pathways to impact at the earliest stage in the research process and partner strategically with those individuals and organisations that are essential for ensuring impact is realised.

Objectives – Ulster University will improve its positioning within the top 25% of UK Universities within the next REF assessment for 4* and 3* research impact and in the top 20% of UK Universities within the 2021 HESA Higher Education Business & Community Interaction Survey league for its HEIF-determining metrics.

Supporting Actions

- **Associate Deans for Research** – The new Faculty Associate Deans for Research will be impact champions, advocating for its importance, linking impact to strategy, sign-posting impact opportunities, providing visibility of potential impact case studies, and participating in rigorous and systematic review of research impact.

- **Management Support** – Research Institutes will develop an impact strategy and Research Institute Directors will report regularly on its implementation through the six month RI review mechanism.

- **Targets and Incentives** – Promotion pathways will be reviewed to ensure that impact is suitably incentivised. Maximising the impact of their work will form part of the individual expectations agreed with each of our researchers.

- **Strategic Partnerships** – We will identify and develop beneficial relationships with external partners in industry, government and the public and charitable sectors to inform and develop impact from our research, innovation and impact activities.

- **Public Engagement** – We will engage with the public throughout the research project, gaining empathy for user needs and disseminating results for the benefit of wider society. A marketing & communications programme will be delivered to communicate Ulster’s research & impact opportunities and results internally and externally through events, email communications, digital social media and on-line promotion.

- **Knowledge Exchange Strategy** – Maximising the impact of Ulster’s Research is a key aim of the Knowledge Exchange Strategy 2016-2019, which governs Ulster’s innovation actions as funded via the Department for the Economy’s Higher Education Innovation Fund. As part of the Knowledge Exchange Strategy research impact will be promoted by the provision of research impact support funding to Research Institutes, support will be provided for the definition of research impact pathways within grant proposals and the technology commercialisation section of the Department for Research & Impact will manage and develop commercial outcomes from Ulster’s research. Integrated Review & Discovery teams will be established comprising Research Institute members and Department for Research & Impact staff tasked with selecting and reviewing impact case studies, developing pathways to impact, and supporting the evidence gathering strategies for case studies. Furthermore, we will continue to exchange a knowledge with businesses and the wider community through a range of knowledge transfer initiatives. We will target businesses within and outside Northern Ireland that align with our strategic research themes to match research expertise to help solve industry problems.

- **Connected** – We will continue to play a key role in the Connected programme and actively seek to generate impact through Sector Specific Projects, Internal Knowledge Transfer, Competitive Fund and Marketing of the role knowledge providers play in the generation of economic growth.
Strategic Intent

Ulster University will achieve international recognition for its excellence and leadership in distinctive research themes that create local and international capability and societal value and have global relevance. We will provide resources to build our research capacity, international reach and significance and will work together to address large-scale interdisciplinary societal challenges, and aligning these endeavours with major funding opportunities.

Objectives

– To strongly embed Ulster’s chosen interdisciplinary research themes of creativity and culture, healthy communities, sustainability and social renewal within our research environment, underpinned by targeted investment from Ulster.

Supporting Actions

Ulster will focus its research within Research Institutes, Research Centres, and 4 strategic research themes, the structure of which will be reviewed in 2020.

Ulster University will increase the emphasis on, and role of, the new and existing Research Centres of Excellence as the key structures for development of the University’s research environment.

Ulster’s strategic research themes will become the focal point for the university’s investment in research development. These will encompass big societal challenges to which the University will make a global contribution; while other discipline-specific research topics will continue to be supported within the Research Institutes. Each strategic research theme will be aligned to one of Ulster’s 4 Faculties, and the newly appointed Associate Dean for Research within each Faculty will provide leadership for the development of its structure, research development and impact management while promoting opportunities for greater interdisciplinary research collaborations across the faculties, as well as with external partners and with international collaborators. The Department for Research & Impact will ensure that each theme is resourced to ensure rapid advancement and an effective contribution to their respective domain.

The 4 strategic research themes will be as follows:

- **Social Renewal**, with a strong focus on Peace, Conflict and Transition, Educational Attainment, Social and Economic Policy, Entrepreneurship;
- **Sustainability**, with a strong focus on Urban Renewal, Energy, Environmental Sustainability, Infrastructure, Digital Futures, Computing, Engineering, Composites;
- **Healthy Communities**, with a strong focus on Health Innovation and Policy, Sport for Life, Smart Aging and Smart Homes; and
- **Creativity & Culture**, with a strong focus on the Creative economy, Cultural diversity, the business of creativity.

Ulster will provide a new, dedicated Research Challenge Fund aligned to these strategic research themes to enable academics to both develop collaborative partnerships, and to enhance the research capacity and the capability to secure prestigious external grant income in pursuit of the development of inter-disciplinary research across these areas. The fund will be launched in September 2016 and will be available on an annual basis.

Research Focus
Strategic Intent – World-class professional services and infrastructure are needed to support and enable the research and impact ambitions of Ulster’s researchers. Ulster is committed to enhancing the environment for research staff and research students at Ulster as a catalyst for improving the quality and volume of staff research outcomes, productive collaborations, impact arising from research and optimum doctoral experience with post doctoral employability and increasing the generation of grant income across the institution.

Objectives – To provide a supportive research environment to produce internationally excellent and world-leading outputs and transformative impact.

Supporting Actions

- **Research Staff** - Enhancement of the research staff experience will be achieved through a range of measures including the introduction of a robust sabbatical policy, the reintroduction of the Research Challenge Fund, the establishment of a Researcher Development Portal, an international approach taken to the recruitment of all new academic staff at all levels and the introduction of a Distinguished Research Impact Awards Scheme, all of which have been referred to previously within the strategy.

- **Research Students** – Enhancement of the research student experience will be achieved by the establishment of a single cross-university doctoral college to oversee both research student administration and to form a Executive with the four Associate Deans for Research who will in turn have dedicated Faculty and Departmental support. An enhanced online portal for all PhD students and prospective students will be developed and an annual university wide PhD Student Conference established. A University-wide Doctoral Forum tied to the conference will be established to build research leadership and provide an opportunity for student feedback. Dedicated social spaces for PhD students will be established on all campuses to improve cross fertilization of ideas and an University Distinguished PhD Thesis Award and an University Best Student Paper in a conference or a Peer Reviewed Journal Award will be introduced. PhD funding will be re prioritized towards interdisciplinary research proposals and there will be remodelling of how PhDs are allocated to Faculties and UOAs.

- **Research Data** – Researchers, schools, faculties and institutes will be provided with a wide array of data, information and analysis to inform research planning. Ulster will ensure the provision of digital repositories and research information systems that facilitate both Open Access and the collection, storage and analysis of a vast array of research data.

- **Research Spaces** – Researchers are best able to perform high quality interdisciplinary research when they share the same space, the same research problem and develop trust. Research, Innovation and Incubation spaces, managed by the Department for Research & Impact, will be provided on each campus to bring together researchers, innovators and those staff and students with validated ideas worthy of support for research activity and startup incubation.

- **Affiliate Researchers** - A University Affiliate Membership initiative will be introduced, which is designed to offer Research Institutes (RIs) the opportunity to foster a more flexible and responsive membership profile. It will grant affiliate membership to external colleagues who can contribute to the impact and environment narratives for REF and increase the number of co-authored outputs and co-created funding bids. The initiative will also increase the University’s international reach, by allowing researchers working abroad to feed their research into our research communities and increase the reach and significance of our institution’s impact.
Research Governance and Ethics

Strategic Intent – The University expects the highest standards to be observed by its researchers, and recognises integrity as an essential aspect of research quality. The University seeks to promote and disseminate good research practice, emphasising integrity and rigour in research.

Objectives – To create a culture in which the adherence to research governance and ethics principles and procedures is encouraged, supported and valued, reflecting the requirements of governments and funders in Northern Ireland and internationally.

Enabling Actions
- The University will continue to encourage and support research integrity through a network of staff and a framework of policies, procedures and guidance. These are summarised and illustrated in the Code of Practice for Professional Integrity, which will be updated regularly to reflect changing sector-wide requirements.
- Appropriate training will be provided for staff and students in the overarching concepts of integrity and the ethics of research and also, where appropriate, in the specifics of an increasingly regulated environment.
- Compliance will be assured and measured through a series of appropriate publications, review processes, training events and audits.
Strategic Intent – Successful implementation of Ulster’s Research & Impact Strategy is dependent on our researchers having a clear understanding of what it is that makes a good researcher, having the data to hand which demonstrates this and mapping everyone’s achievements over the course of the strategy. We will have ambitious expectations set and agreed for the institution as a whole, for every Research Institute within the institution, and for every researcher working within a Research Institute. The University will ensure reliable, accurate and timely reporting and monitoring of research and impact performance against the appropriate indicators.

Objectives: That we all understand what it means to be a great researcher and how this will enable us to realise our strategic ambitions.

Ulster University will achieve its year 1, 3 and 5 targets for Research Student Experience, Research Student Completion Rates, PhD Student/Staff Ratio, Number of Staff Returned to REF, Number of Staff Collaborating Internationally, Number of Citations, Value of Research Grant Awards, Value of RCUK Research Grant Awards, Value of International Research Grant Awards, Number of Collaborative Research Projects with Business, Value of Knowledge Exchange Income (Contract Research, Consultancy, KTP & IP Income), Number of Live Impact Projects.

Supporting Actions:

- Targets - Appropriate targets will be agreed at individual, research institute and institutional levels and performance against these targets will be monitored on a regular basis. At an individual level targets will be set for research funding, research outputs, research impact and PhD supervision and completions. Expectations for each staff member will take into account benchmarked comparisons and vary according to discipline, staff circumstances and career level.

- Benchmarking - The University’s research and impact performance will be benchmarked against national competitors on an annual basis. The benchmark institutions are University of Exeter, University of Surrey, University of Lancaster, University of East Anglia, University of Sheffield, Newcastle University, University of Nottingham, University of Glasgow, Queens University Belfast, University of Reading, University of Strathclyde and De Montfort University.

- Research Information - The University has procured a new central research information system, PURE, which will assist both RI Directors and senior management to report effectively across all R&I KPIs and targets. The PURE system will provide a live feed from existing Research & Impact systems, which will facilitate dashboard reports on all the relevant Key Performance Indicators. The system will also ensure that the University manages effectively the full range of outputs for REF2020 and meets all requirements in relation to research data management. The Research Intelligence Tool will facilitate benchmarking Ulster’s performance against comparator institutions.

- Research & Impact Strategy Review – Performance against plan will be reported to the Research & Impact Committee and the Senior Leadership Team on a quarterly basis, and the Research & Impact Strategy will be reviewed on an annual basis and updated as required.