

**Institution: University of Stirling**

## 1. Context and mission

The University of Stirling is a globally significant centre of interdisciplinary research, located in Scotland and impacting societies worldwide. Our research focuses on making a difference to society, people's lives and the environment. Lord Robbins, our first Chancellor, championed the nurturing of skilled people and the application of their research expertise as critical components of building societal wealth and wellbeing. Since its foundation in 1967, Stirling has built upon these purposeful objectives, and they continue to guide us in an increasingly turbulent world. The strategic objectives of the University are rooted in our values. We strive to unlock the potential of our 14,000 students (3,800 postgraduates) and 1,500 staff, leveraging their knowledge and skills to shape the world in a positive way. The University is an international organisation: 20% of our students are from overseas and more than 120 nationalities are represented in our staff and student body.

To achieve our objectives, we have organised ourselves as a community of scholars whose purpose is to create new knowledge, deepen our understanding of the world around us, and share our insights at home and abroad. We continually mobilise the radical, innovative culture of the University to make a global impact through our research, our partnerships, and our 96,000-strong alumni community, providing leadership in countries, businesses, and communities across the globe. We communicate what we have learned to the wider world via appropriate channels, working in partnership with governments, business, and industry, the public and third sectors to identify and meet the changing needs of society.

Exemplars of our actions resulting in purposeful change include our leadership in the fight against tobacco-related harm; ensuring the safety of food supply for vulnerable communities through sustainable aquaculture (Queen's Anniversary Prize 2019); and working to improve the quality of lives of the millions of people with dementia across the world. We are an anchor institution for the Forth Valley Region in central Scotland, supporting more than 10,000 jobs, generating £200m of wages and adding £380m to the regional economy every year. We lead the innovation workstream of the Stirling and Clackmannanshire City Region Growth Deal (2020-2031), securing £46m of direct government investment to deliver research with impact through the National Aquaculture Technology and Innovation Hub, Scotland's International Environment Centre, and an Intergenerational Living Innovation Hub.

The University is structured into five faculties: Arts and Humanities; Health Sciences and Sport; Natural Sciences; Social Sciences and Stirling Management School. Faculties are organised into academic divisions and operate Faculty Research Centres, where the scale of activity makes this appropriate. There are three formally established University Research Centres: The Institute for Social Marketing and Health; the Nursing, Midwifery and Allied Health Professions Research Unit; and the Salvation Army Centre for Addiction Services and Research. Additionally, the University's Dementia Services Development Centre enhances dementia care globally through research-based consultancy and training. The Innovation Park offers premises and business support to over 70 firms in key sectors, supported by the University's research, and is home to the University's innovation and enterprise programme team.

## 2. Strategy

Our 2016-21 University Strategic Plan restates the importance of the original underpinnings of our institutional identity in formulating our approach to research excellence. Our current Research Strategy, “Research Responding to Society’s Needs”, is aligned to the University’s Strategic Plan. It focuses on developing capacity to deliver our established interdisciplinary and mission-oriented approach to research that tackles real-world problems, identifies creative solutions, and translates them into practice.

In pursuit of our strategy, research is organised through mission-oriented themes and programmes, which are designed to facilitate and nurture interdisciplinary, impactful research through co-production and collaboration across the University community. These themes and programmes reflect the University’s leading areas of excellence, including the wellbeing of ageing populations, the impacts and implications on society of the rapidly changing natural world, and the contemporary importance to identity and belonging of heritage and our shared connection with the past. They are closely aligned with the United Nations Sustainable Development Goals and foster the collaborations required to tackle local and global issues over the long term. Our research themes are:

- **Cultures, Communities and Society**  
This theme explores social justice at different scales and in varied places, influencing the agenda for policy and practice around the globe. Cross-cutting concerns include understanding how to: empower communities by enhancing their understanding of their cultural past to positively influence their future; providing a safe and secure home for every individual; critically challenging the societal changes brought about by digital media. The specific research programmes in this theme are: Home, Housing and Community; Cultural Heritage; Digital Society and Culture.
- **Global Security and Resilience**  
This theme has the cross-cutting goal of supporting the delivery of a sustainable and secure way of living for the world’s growing population. We pioneer research that addresses global hunger, climate change and clean technologies, sustainable aquaculture, and environmental protection. The research programmes in this theme are: Extreme Events; Environmental Change; Global Food Security; Human Security, Conflict and Co-operation; Being Connected.
- **Living Well**  
This theme focuses on supporting decision makers and institutions to improve well-being in a range of local and global contexts; combatting age- and gender-based inequalities; and supporting people to maintain, attain or regain good physical and mental health. The research programmes in this theme are: Ageing and Dementia; Health and Behaviour; Mobile Cognition; Contextual Learning in Humans and Machines.

We are progressively strengthening our priority research themes and programmes in pursuit of our core objective of Enhancing Research Excellence. Each programme has dedicated academic leadership and a designated Research Development Officer. They benefit from direct financial investment to stimulate and accelerate their development. They are the primary lens through which we present and communicate our research strengths and priorities. By design, our themes and programmes drive impactful, collaborative, interdisciplinary and international research.

Our research strategy includes an explicit focus on ‘Partnership and Communication’ to support our commitment to translating research insights into practical solutions. We have

extended and strengthened our research and innovation partnerships with academia, industry, business, policymakers, regulatory bodies, health and social care organisations, and wider communities. As demonstrated through our impact case studies, Stirling researchers have led collaborations delivering transformational impact with a very wide range of stakeholders.

Implementation of our research strategy internationally is principally achieved through focusing on a range of institutional partnerships in different parts of the world where we have established or are developing relationships, such as UNESP in Sao Paulo region, Brazil. The partnerships are managed by dedicated teams that share information and intelligence on collaborative research priorities that match our strategic approach. We achieve sustainability in these collaborations by broadening and deepening their activities through formal arrangements, including dual PhD programmes, staff exchange, and tailored pump-priming funding for Global Challenges Research Fund projects. Our global alumni network plays a major role in developing and supporting international research collaborations with academic institutions, businesses and other organisations worldwide. Institutional leadership of research has been significantly strengthened during the assessment period. Under the overarching leadership of the Deputy Principal for Research, new positions - Dean for Research Engagement and Performance and Dean of the Institute for Advanced Studies - have been created to lead deeper research collaboration across the University. Each Faculty has an Associate Dean for Research, supported by a Director of Postgraduate Research, and Impact Champions. The University's Dean for Equality, Diversity and Inclusion works directly with the research leadership team to promote diversity in research careers. A Research Environment Group has been established under the University Research Committee, with a specific responsibility for research culture, sustainability and enhancing the support available for researchers across the institution.

As a key strategic objective, the profile of the University's research and impact has been enhanced significantly over the assessment period. Recognising our responsibilities to contribute to informed public debate, we have deliberately targeted promotion of research outcomes and impacts to non-academic audiences, working in partnership with *The Conversation* to promote media access to our research. Our research outputs have been featured in more than 9,000 news stories across 72 countries, while our work is cited in almost 2,000 policy documents in 22 countries. We have increased total Altmetric mentions from 5,762 in 2014 to 35,286 in 2019. To facilitate interaction with policymakers, we introduced a Public Policy Hub in April 2019. The Hub holds a growing library of research-based policy briefings, permanently available for use by policymakers and other stakeholders. The policy briefing documents have been downloaded more than 5,000 times, while the blog provides research-based commentary across a range of topical and emerging policy debates. The University is also engaged with the Universities Policy Engagement Network (UPEN) and Scottish Policy and Research Exchange (SPRE), providing increasing opportunities for collaboration with policymakers in the UK's parliaments and governments.

### **Research Integrity**

The University is committed to the highest ethical standards in research and has signed the Concordat to Support Research Integrity. We actively promote a culture of best practice and integrity in all our research through the core values of honesty, rigour, open communication, care, and respect. To safeguard the interests of researchers, participants and funding bodies, research within the University only proceeds after detailed scrutiny by one of our three internal Research Ethics Panels. The Animal Welfare and Ethical Review Body examines all research involving animals and the NHS, Invasive or Clinical Research panel considers health-related projects and physical interventions involving

human subjects. All other projects are considered by the General University Ethics Panel. All three panels have an external lay chair, operate independently of research management in the University, are subject to audit by the University's internal auditors, and are overseen by the University Research Ethics Committee, which reports to the University Court. Where appropriate, ethical scrutiny is also sought from external bodies including the NHS Research Ethics Service.

The University subscribes to the UK Research Integrity Office and is a member of the Scottish Research Integrity Network. The University's culture of research integrity is supported by an institutional Research Integrity and Governance Manager, based within Research and Innovation Services. Dedicated training is available to all staff and students, covering peer review, ethical approval, plagiarism, authorship, and collaborative research. A full range of web-based briefing and reference materials are also available. In 2020, the University completed implementation of an online Ethics Review Manager system to support researchers in seeking ethics approval while enhancing best practice in research integrity.

### **Open Research**

The University of Stirling pioneered open access to research through the establishment in 2008 of STORRE, our online repository of research outputs (including doctoral theses) and DataSTORRE, our online repository of research datasets. We support the Concordat on Open Research Data and the UK Research and Innovation principles on open research. The University also ensures research data is GDPR-compliant. We continue to support an ambitious open research publishing programme and are committed to strengthening access via the green and gold routes. Our Article Processing Charge Fund supports the costs of publishing research papers funded by Research Council grants and open access publishing via the gold route. Funding is granted automatically upon application from any primary author publishing in a fully open access journal.

The University has signed the San Francisco Declaration on Research Assessment (DORA) and established a working group to develop a fair and transparent mechanism for monitoring and reporting research performance. This will be applied to staff recruitment and appraisal of research performance.

### **3. People**

The opening paragraph of our Strategic Plan 2016-21 states that:

“Our aim is to unlock the full potential of our students and staff, so that they can use their knowledge and skills to shape the world in a positive way.”

The wellbeing of our scholarly community is central to the University's mission and values; we strive to create an environment where everyone is treated with respect, their abilities are valued, and where support is provided for those staff and students with specific needs. Researcher development is facilitated by the University's "Achieving Success" programme that, through structured annual discussions, enables academic staff and their line manager to review and plan future research, impact and teaching activities. The process produces an agreed set of priorities and objectives, with an individual programme of development and training designed to support their attainment. Achieving Success facilitates progress towards promotion for researchers. Research planning and development is further supported by the University's Academic Staff Research Leave scheme, through which researchers can apply for a semester's research leave every three years.

The University's Researcher Development Programme is designed to meet the generic, personal and professional development needs of researchers. The programme maps to the Vitae Researcher Development Framework and follows the principles contained in the Concordat to Support the Career Development of Researchers.

Throughout the assessment period, the University has enhanced support for our research community through the following initiatives:

### **Institute for Advanced Studies**

The Institute for Advanced Studies delivers the University's Researcher Development Programme. It provides cohesion and depth to the quality of postgraduate research (PGR) support and promotes development and collaboration across the research community. Specific support for postgraduate research (PGR) students, whether embarking on a research career or preparing for a non-academic position, includes:

- A full programme of Researcher Development and Skills Training.
- Maximising opportunities for cross-disciplinary research, practice and social interaction (for example, through Pint of Science events) outside of their main area of study.
- A PGR-instigated Interdisciplinarity Research Network
- Focusing on identifying new, innovative research opportunities across disciplines by engaging with staff including via the Supervising Doctoral Studies programme.
- Enhanced policies and practices through the institutional Code of Practice for Research Degrees and Staff-Student Concordat for PGRs.
- Deepening and widening the range of research development and training opportunities to create the innovative "CPD4PhD", a rounded portfolio of activities students can undertake throughout their doctoral career alongside their thesis. On completion of the programme, students will receive a PGCert in Professional Practice alongside their doctoral degree.

The Institute also offers an open programme of enhanced skills training and development opportunities for research staff. This includes:

- Individual induction and training plans, allowing researchers to select the training which most benefits their own professional development.
- The Stirling Crucible programme of three two-day residential "skills labs" designed to help researchers innovate in research while building collaborations with their peers from different disciplines and non-academic organisations.
- Dedicated events for mid-career researchers leveraging collaborations with government and industry.
- A development programme to facilitate the progression to leadership roles.
- Advanced Study Groups – dedicated time for short-life, cross-faculty groups to pursue a targeted research objective.
- Fellowships for visiting researchers to stimulate new cross-disciplinary perspectives.

### **Research Environment Group**

The University has enhanced researcher support with the establishment of a Research Environment Group (REG), reporting directly to the University Research Committee. The REG proactively engages with our research community to gather ideas on how the University can improve its research environment - and build them into its ongoing programme of researcher support. The REG oversees implementation of the University's

action plan under the HR Excellence in Research Award (which was renewed in 2019) and the Concordat to Support the Career Development of Researchers.

The University's progress in enhancing the research environment has been measured by the REG through the biennial Careers in Research Online Survey (CROS) and Principal Investigators and Research Leaders Survey (PIRLS). Staff responding to the surveys have consistently reported that their contributions have been valued across a range of research activity, and that they have felt integrated with the research community at divisional and institutional level and supported in their personal and career development. All feedback is discussed at the REG with actions proposed in response. Further engagement and feedback is communicated weekly through an online Research Environment Digest.

### **Festival of Research**

Launched in 2018, we celebrate our research through an annual Festival of Research: a week-long intensive series of events showcasing the innovative research at the University, and a mixed programme of workshops, award ceremonies, plenary and panel sessions including public lectures involving a range of external presenters, funders, and partners to stimulate new ideas and strengthen our research culture. The Festival promotes new interdisciplinary collaborations across and beyond the University. It forms a key element in our year-round researcher development programme. The Festival is complemented by a series of 'Mini Festival' sessions throughout the year on subjects including ethics and research integrity.

### **Equality, Diversity and Inclusion (EDI)**

The University is committed to ensuring that no individual is disadvantaged as a consequence of their age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. We aim to promote a culture inclusive of all sections of society which is free from discrimination and unfair treatment.

As well as being documented in our Strategic Plan, the University's commitment to equality is reflected in the institutional Equality Outcomes 2017-2021; our Gender Action Plan, produced in line with guidance from the Scottish Funding Council; and in our commitment to the Athena SWAN Charter.

The University has an Athena SWAN Bronze award. We have also received Bronze awards for the Faculty of Health Sciences and Sport, the Division of Biological and Environmental Sciences (Faculty of Natural Sciences), the Faculty of Social Sciences, and the Institute of Aquaculture (Faculty of Natural Sciences).

All faculties and professional service areas have designated Equality Champions who take forward the equality and diversity agenda in their area. They form the Equality Action Forum - chaired by the Dean for Equality, Diversity and Inclusion - which helps raise awareness and promote best practice across the institution as well as overseeing and monitoring the implementation of the University's strategy for equality and diversity (equality outcomes) and ensuring compliance with statutory equality duties. An equality impact assessment is undertaken on all policies and strategies developed in the University.

The University offers a wide range of EDI, dignity and wellbeing programmes including:

- Equality and Diversity and Tackling Gender Based Violence training.

- A Walking Wellbeing Programme, which combines information with practical activities.
- Mental health training and support, including a Mental Health First Aid programme
- An Employee Assistance Programme, including out-of-hours counselling and mental health support.
- A zero-tolerance approach to bullying and harassment, backed by a new dignity at work and study policy.
- Tailored support for female staff, including a two-day personal and professional development programme (Stepping Stones), promotion training, and a Women in Leadership development programme.
- The national Aurora women's leadership programme - in which the University has participated for more than 10 years, with 121 women having successfully graduated. A five-year participant review identified that 76% of participants had successfully achieved promotion or a progressive career change since undertaking the programme.
- Unconscious Bias training for key staff in senior management positions as well as individual staff who may be involved with areas including academic promotions, Athena SWAN, REF2021 preparations.

The University has sector-leading representation of female leaders as Deans of Faculty. Four out of our five faculties - including both that fall under the Science, Technology, Engineering, Maths and Medicine (STEMM) umbrella - have been led by women during the assessment period. In addition, 51% of Faculty Executive members are women, and 50% of University Court members are women, a rise from 44% in 2017/18. Several staff and student-run groups demonstrate the culture of inclusion and embeddedness of equality and diversity activity. These include an LGBTQ+ staff-led support network, comprising academic and professional support staff who identify as LGBTQ+. Our Women in STEM society runs activities and workshops, for and led by staff members, such as the "20 women in 2020" social media campaign that shared the experiences of 20 role models from across the university at different career stages.

To support staff with caring responsibilities, a flexible working scheme is offered by the University for all staff with a minimum 26 weeks' continuous service. For academic staff returning from maternity or adoption leave, their return to work is facilitated through buyout of teaching commitments for a period of six months, to enable research development. Our campus is highly accessible for people with disabilities and tailored support is provided for researchers with additional needs.

The University has a low population of Black, Asian and Minority Ethnic (BAME) staff - slightly lower than the Scottish benchmarks National Census (2011) - with an average 5% of employees identifying as BAME (51% of which are male and 49% are females). The University is developing a new anti-racism and racial equality strategy, and developing an array of resources designed to raise awareness of black history and culture and the contributions of black people to our university and wider society, and encourage discussions about race, racism and tackling racial injustice.

#### **4. Income, infrastructure and facilities**

##### **Research Grants and Contracts**

We regard external research funding as a key enabler of our research activity and capacity, and therefore continue to pursue a trajectory of growth in research grant and contract income. We have, in the assessment period, transformed our approach to research funding

and have deliberately pursued a strategy of applying for large-scale, mission-oriented, interdisciplinary and multidisciplinary grants. This approach has borne fruit; the value of our research applications has increased over the assessment period by 116%, from a base £43.6 million in 15/16 to £94.1m in 19/20. The value of research grant and contract awards has grown throughout the period of our Strategic Plan, from £8.8m in 2016/17 to £16m in 2019-20. We expect further significant growth in 20/21: as of January 2021, we have already exceeded the £16m total of the previous year and have confidence that we will achieve £23m by the end of the academic year.

### **Professional Services**

Research and Innovation Services (RIS) is focused on directly supporting the University's strategic objectives in all areas of research and innovation and has a broad range of expertise with many staff holding doctorates. In addition, other professional services provide specialist support for key areas of activity, including library and information systems, research finance, research laboratories and other facilities, human resources and organisational development.

In RIS, the Research Development and Performance Team supports: the development of research activities, from small developmental funding for early career researchers, to large-scale programme funding applications; the establishment of related networks externally; postgraduate research opportunities and researcher development. They support the priority themes and programmes with dedicated Research Development Officers. The Research Integrity and Governance Team leads on ensuring that all activity meets the highest ethical standards through appropriate policy, procedures and support for expert review. The Contracts Team leads on the provision of support for the contractual elements of research and innovation funding, intellectual property considerations, partnerships and collaborations. The Research Systems Team oversees all information systems used in supporting the research lifecycle. These include the Worktribe Research Management System, the Ethics Review Manager system and all web-based support resources in the University Research Toolkit. Preparations for the University's submission to the Research Excellence Framework are coordinated through the Research Assessment and Impact Team. The Innovation and Enterprise Team leads on the support for commercial aspects of our research and our enterprise agenda, including delivering an Enterprise Programme for those who are interested in developing innovative ideas, start-ups and skills to engage in enterprise activity and connecting with a range of knowledge exchange activities including Interface, which promotes academic business links across Scotland, and the UKRI Knowledge Transfer Partnership scheme. The University's City Region and Growth Deal programme is delivered through the Innovation and Enterprise team.

### **Research Investment Fund**

Competitive internal research funding schemes – Connect, Connect+, Spark, and Escalator - are provided by the University and are available to all academic staff to support the development of project applications. The awards range from £5,000 to £20,000 of direct costs, depending on the scheme applied for. Connect supports discussion and exchange of ideas and facilitates interactions between researchers and stakeholders; while Connect+ builds on Connect, supporting meetings and/or workshops to consolidate relationships and collaborations and facilitate funding applications. Spark provides pump-priming for research projects where these may lead to larger funding applications. Escalator provides additional funding to support the implementation of research findings and escalate the impact and delivery aspects of projects.



## Research Facilities

The University provides a full range of research facilities, laboratories, information resources, and equipment. These include a number of distinctive elements:

- a unique research-led kindergarten for developmental psychology work;
- large-scale research aquaria including the UK's largest marine aquaculture research facility at Machrihanish in Kintyre;
- a tropical ecology field station in Lope National Park, Gabon;
- the Iris Murdoch Building, a global exemplar of dementia architecture and design, which houses the Dementia Services Development Centre;
- a fully-accredited environmental radioactivity laboratory;
- an extensive art collection and major creative industries archives.

Research infrastructure is being enhanced through two major renovation projects, with £41.7m invested in a new campus central hub and improved sports facilities. The entire top floor of Campus Central - which is transforming the heart of the campus, and will open in late 2021 - is dedicated to promoting interdisciplinary research, as the home for the Institute for Advanced Studies. This will provide 1,000m<sup>2</sup> of new social and research collaboration spaces, with state-of-the-art technology, informal space to network and showcase our research to the public. Campus Central builds on the successful redevelopment of the University Library, with major improvements to accessing the University archives and special collections. As Scotland's University for Sporting Excellence and the UK Sports University of the Year 2020 (The Times and The Sunday Times Good University Guide), our newly-completed £20 million sports complex provides state-of the-art studios and fitness suites which are available to support the work of our health and sport researchers. The £46m of investment secured through the Stirling and Clackmannanshire City Region Growth Deal will deliver further major enhancements to the University's research infrastructure for environmental sciences, aquaculture and food security, and ageing and dementia. In the period 2021-2030, we will deliver the National Aquaculture Technology and Innovation Hub, Scotland's International Environment Centre, and an Intergenerational Living Innovation Hub, all facilities of national and international importance. These facilities will enable cutting-edge environmental projects, digital innovation, technological and design solutions for health and social care, and support the transition to sustainable, resilient businesses and communities. The City Region Deal investment is expected to leverage a research and innovation programme in excess of £109m over the next decade.

The University is committed to achieving sustainability in all of our operations, including the development and use of research infrastructure on and off campus. We are signatories to the Global Climate Letter for Universities and Colleges, committing the institution to reach net zero.