

Research Strategy

2017-2023

UNIVERSITY OF BRISTOL

RESEARCH STRATEGY 2017-2023

Introduction

Our University ambition is to be “globally renowned both for the quality of our teaching and learning environment and for the excellence and breadth of our research and scholarship – as well as for the strength of the partnerships that underpin them” (see [Vision and Strategy](#)).

Our research reputation is built upon our core disciplinary strength and breadth, in which we will continue to invest and build. We have also built a significant reputation for multidisciplinary research through our University Research Institutes. We pride ourselves on our commitment to critical enquiry and research excellence, and to realising the impact of our research on society, and we are committed to delivering excellence in research-rich education.

Competition for research funding is fiercer than ever before, as is the need to work creatively and nimbly with a wide variety of partners in the development and execution of research and the realisation of its impact. We must build scale in key areas, provide the environment necessary to be a destination of choice for the best scholars, and attract and retain more PhD students and early-career researchers who are the engines of the research endeavour. We must attract, nurture and retain the next generation of research leaders and stars and develop a truly international outlook - attracting students and staff from all over the world, providing a sustainable research environment and raising our research profile on the international stage.

We want to enhance further the scale, quality and impact of our research by embedding entrepreneurial thinking in all our staff and students, and through fruitful partnerships with a wide range of organisations. We aim to be a sector leader in terms of our ability to establish and maintain productive and sustainable collaborations.

The world-leading Bristol SETsquared Business Acceleration Centre and its home, the University-run Engine Shed, are together a cauldron of highly-connected enterprise activity and new business creation, and our National Composites Centre at the Bristol and Bath Science Park is a role model for industry-academia collaboration. We will seek out and work with the best high-growth, innovative companies based in or relocating to our region, and establish new ventures with public- and private-sector organisations to create test beds for our research.

Our Vision for research is therefore:

- To build on our position as one of the world’s leading research-intensive universities and be internationally recognised for the quality and significance of our research; and
- To be exemplary in our approach to collaboration and be a partner of choice and beacon of good practice in innovation and impact.

Aims and objectives

AIM 1: To build on our position as one of the world's leading research-intensive universities and be internationally recognised for the quality and significance of our research -

Objectives:

- 1A. To create a sustainable research environment and a vibrant and collaborative research culture, building on our core disciplinary research strengths and supporting cross-disciplinary collaboration both within and outside the University
- 1B. To grow and diversify our research income portfolio, and provide resources for capacity-building and development to areas of emerging research excellence, in response to global challenges
- 1C. To be a destination of choice for the best scholars, and attract and retain more PhD students and early-career researchers who are the engines of the research endeavour

AIM 2: To be exemplary in our approach to collaboration and be a partner of choice and beacon of good practice in innovation and impact -

Objectives:

- 2A. To develop a truly global outlook, working with international organisations and universities to provide visibility and accessibility to collaborative research opportunities and to deliver high quality world-leading research outcomes and impact
- 2B. To be an Engaged University, fostering a culture of engagement throughout all parts of the University, and building strong and sustainable partnerships with the community and its industries
- 2C. To be a leader of innovation and enterprise in the city and region

These two core aims and six objectives will build on the priorities for research, innovation and partnerships, as set out in the University's [Vision and Strategy](#), which are to:

Research

- Establish a limited number of Specialist Research Institutes to support the growth of, and give greater external visibility to, world-leading specialised research programmes of scale.
- Further develop pan-University multidisciplinary research through the expansion of our four University Research Institutes, which are focused on health (Elizabeth Blackwell Institute), the challenges of living with environmental change (Bristol Cabot Institute), data science research (Bristol Jean Golding Institute) and exploration of the human condition (Bristol Brigstow Institute).
- Create 100 tenure-track Vice-Chancellor's Fellowships for early- and mid-career researchers to boost research and leadership capacity in areas where Bristol is an

established international leader or has the capacity to develop internationally-competitive scale and impact.

- Increase our PhD student numbers to be in the top quartile of the Russell Group and further develop the Bristol Doctoral College as a comprehensive resource for the enhancement of the PhD training experience.
- Develop postgraduate research training relationships with overseas institutions and industry partners, including joint/dual PhD degrees or 'cotutelle' arrangements involving our diverse array of Bristol-based national Centres for Doctoral Training and Doctoral Training Partnerships.

Innovation and impact

- Increase the innovation potential of our graduates through a number of complementary initiatives: the mainstreaming of innovation and entrepreneurship in the new Bristol Futures undergraduate curriculum initiative; the launch of the Bristol Innovation Programmes – a suite of new, four-year undergraduate degrees which couple established subjects with innovation; and a major new venture in business education, innovation and entrepreneurship and their interfaces with other disciplines [see Education Strategy 2017-2023].
- Work with regional industry, universities and local government to develop a select number of research and innovation themes where established regional research excellence and scale can be harnessed through collaboration to drive world-leading innovation, economic growth and job creation.
- Develop a new Bristol Digital Living Innovation Platform as the University's flagship contribution to the regional research and innovation agenda. This platform will be a test bed for research that integrates data collected in real time (via everything from transport networks to home-based medical sensors) into projects that enhance businesses, public services and the lives of local people. This new venture will be fully engaged with our new business education initiative and with the Engine Shed hub and SETsquared business incubator, at the core of our new Temple Quarter Enterprise Campus.

AIM 1: TO BUILD ON OUR POSITION AS ONE OF THE WORLD'S LEADING RESEARCH-INTENSIVE UNIVERSITIES AND BE INTERNATIONALLY RECOGNISED FOR THE QUALITY AND SIGNIFICANCE OF OUR RESEARCH

Objective 1A: to create a sustainable research environment and a vibrant and collaborative research culture, building on our core disciplinary research strengths and supporting cross-disciplinary collaboration both within and outside the University

- 1A1. We will further develop pan-University multidisciplinary research through the expansion of our four **University Research Institutes**, embedded within our institutional culture. We will build new communities that span disciplines, identify infrastructure needs and stimulate new areas of research activity that will allow us to exploit new funding opportunities across the four University Research Institute missions.
- 1A2. We will establish a limited number of **Specialist Research Institutes** to support the growth of, and give greater external visibility to, existing and established world-leading research programmes with significant future potential and a coherent and ambitious research vision.
- 1A3. We will continue to invest in our **physical and digital research environment**, including a rolling investment in high-quality academic infrastructure and a resilient, flexible, scalable and secure digital infrastructure. This includes a new phase of development in our high-performance computing facility and further investment in our digital assets.
- 1A4. We will maintain the highest standards of **rigour and integrity in all aspects of research** and we are committed to fostering a positive culture of research integrity for our research community. Responsible research and innovation is built on a quality assurance framework that allows us to ensure that important and innovative research is encouraged in line with appropriate management of the quality and risk arising from the research. This framework includes: clear policies, procedures and processes to support researchers in delivering high quality research projects and to ensure they are aware of the standards expected during the conduct of their research; suitable development and mentoring opportunities to encourage the positive development of researchers at all stages of their career; robust management and monitoring systems to ensure that policies relating to research including research ethics and integrity are implemented, early warning indicators noted and the research environment is such that potential concerns are identified at an early stage and appropriate support mechanisms are provided.
- 1A5. We will closely monitor institutional research and innovation **strategic performance indicators**, developing business intelligence which allows us to identify strengths and opportunities and which underpins evidence-based strategic decision-making. We will adopt a **responsible approach to the use of metrics in the assessment and management of research**, based on a series of key principles including: reliability, relevance, transparency, openness, co-creation and conversation, where metrics are always supported by expert judgement and evaluation.

Objective 1B: to grow and diversify our research income portfolio, and provide resources for capacity-building and development to areas of emerging research excellence, in response to global challenges

- 1B1. We will ensure that the University achieves the best possible financial and reputational outcome in **REF 2021**, providing strategic direction and professional project management support.
- 1B2. We will horizon scan for **strategic opportunities** and **develop relationships with funders and policy-makers** in the public, private and third sectors to raise visibility and ensure we are in a position to respond to and influence strategic priorities.
- 1B3. We will enhance institutional readiness and responsiveness to the external environment and to the needs of our research users, with a particular focus on opportunities such as the **Global Challenges Research Fund** and **Industrial Strategy Challenge Fund**.
- 1B4. We will launch a **Strategic Research Fund**, to pump-prime new and transformative research activities, support emerging research strengths, and to support and empower research leaders in leading large national/international research priorities.

Objective 1C: to be a destination of choice for the best scholars, and attract and retain more PhD students and early-career researchers who are the engines of the research endeavour

- 1C1. We will **increase our PhD student numbers to be in the top quartile of the Russell Group** and further develop the **Bristol Doctoral College** as a comprehensive resource for the enhancement of the PhD training experience. We will establish a **central postgraduate researcher (PGR) facility** within the Tyndall Place development to provide a physical infrastructure for PGR training, personal development, networking and collaboration; identify and establish a set of **'Bristol DTEs'** – thematic research training centres around which the BDC will work with academic staff to set up a focus for best practice PGR training and development; introduce mechanisms through which to offer **fee waivers** to international sponsor organisations and partner universities as well as to potential students; and set up and deliver an institution-wide **Graduate Teaching Assistant Scheme** with associated development opportunities and mentoring.
- 1C2. We will create 100 tenure-track **Vice-Chancellor's Fellowships** for early- and mid-career researchers to boost research and leadership capacity in areas where Bristol is an established international leader or has the capacity to develop internationally-competitive scale and impact.
- 1C3. We will create a **development hub** for our post-doctoral and early career researchers, building an integrated and inclusive community across the University. We will offer peer support and mentoring, comprehensive professional skills development and career support, alongside Fellowship open days and Fellowship boot camps in association with the Schools and Faculties.

1C4. We will **attract, nurture and retain outstanding academic and professional staff**, working in partnership with HR to develop institutional strategies for increasing **diversity and inclusivity**, incentivising research leadership, performance enhancement, promotion and progression, strategic recruitment, capacity-building and succession planning. We will nurture and develop the next generation of research leaders and stars by introducing mechanisms for mentoring and an enhanced programme of staff development activity. We will protect and, where possible, increase the time available for academic staff to focus on research and innovation, balanced against our institutional vision for student growth and an enhanced student experience.

AIM 2: TO BE EXEMPLARY IN OUR APPROACH TO COLLABORATION AND BE A PARTNER OF CHOICE AND BEACON OF GOOD PRACTICE IN INNOVATION AND IMPACT

Objective 2A: to develop a truly global outlook, working with international organisations and universities to provide visibility and accessibility to collaborative research opportunities and to deliver high quality world-leading research outcomes and impact

2A1. We will develop and proactively maintain a handful of large-scale **strategic institutional partnerships** with leading international organisations and universities, through bilateral or multilateral arrangements that address both education and research priorities.

2A2. We will work with developing countries to address **global economic development and welfare challenges**. Focal areas include: clean energy, health, sustainable agriculture, conflicts and humanitarian action, migration and refugees, urbanisation and urban systems, foundations for inclusive growth, and resilient systems.

2A3. We will fully exploit membership of a range of **international research networks** to support international research collaboration and researcher mobility.

2A4. We will develop postgraduate research training relationships with overseas institutions and industry partners, by implementing and marketing a **Global Bristol PhD programme** targeted at International Funding Agencies. We will also set up and grow a **Cotutelle PhD programme** targeted at establishing a portfolio of universities with whom we would embark on joint and dual degrees (Cotutelle), supporting international research relationships and student mobility.

Objective 2B: to be an Engaged University, fostering a culture of engagement throughout all parts of the University, and building strong and sustainable partnerships with the community and its industries.

- 2B1. We will develop deep, ongoing and high-quality **engagement between the University and its partners, stakeholders and publics**. We recognise the value that such engagement brings to our research and its outcomes, as well as the mutual benefit to all partners involved. We will develop our structures, processes and practice to ensure that the University is a supportive environment for our researchers to engage beyond academia.
- 2B2. We will deliver our agreed **Strategic Alliances Framework**, with the aspiration to develop long-term, productive and sustainable regional, national and international partnerships that enable transformational research outcomes and impact. We will establish leadership and governance structures; incentivise local academic champions; implement business intelligence systems and processes to support effective evidence-based strategic decisions; design and implement advocacy and communications plans to embed the Framework and facilitate culture change; and build capacity and knowledge through support tools, peer-to-peer learning, sharing good practice, bespoke training programmes and tactical investment in staffing/capacity.
- 2B3. We will develop and deliver programmes for the **innovative exchange of people** with industry, NHS and public sector, cultural, civil society, public and third sector organisations to accelerate impact development.
- 2B4. We will implement and market a **Bristol Industrial PhD programme**, drawing on existing alliances and partnerships and targeting industrial partners of the widest variety.

Objective 2C: to be a leader of innovation and enterprise in the city and region

- 2C1. We will further develop our partnership with the city/region in supporting innovation-led enterprise, through the expansion of our internationally-acclaimed **Engine Shed**, including the **Bristol SETsquared Business Incubator**, in the City's Temple Quarter and further development of the **Bristol-Bath Science Park** and its flagship **National Composites Centre**.
- 2C2. We will work with regional universities, industry and local government to develop a select number of **research and innovation themes** where established **regional research excellence and scale** can be harnessed through collaboration to drive world-leading innovation, economic growth and job creation. Initially these will focus on advanced engineering, digital innovation and other key themes in the Industrial Strategy.
- 2C3. We will develop a new **Bristol Digital Innovation Platform** as the University's flagship contribution to the regional research and innovation agenda, in partnership with regional academic institutions and industry, Bristol City Council and the Local Enterprise Partnerships, thereby establishing a major engine for regional economic growth of national significance. This platform will be a test bed for research that integrates data collected in real time (via everything from transport networks to home-based medical

sensors) into projects that enhance businesses, public services and the lives of local people. This new venture will be fully engaged with our new business education initiative and with the Engine Shed hub and SETsquared business incubator, at the core of our new Temple Quarter Enterprise Campus.

- 2C4. We will develop and implement a new **Research Commercialisation Delivery Plan**, to increase the level of activity and investments in new ventures created by staff, students and recent alumni.
- 2C5. We will launch the University of **Bristol Enterprise Fund II**, to offer alumni and investors the opportunity to invest in the development of scientific and technological innovations from the University of Bristol and from companies supported by the SETsquared Business Incubator. The University of Bristol Enterprise Fund will co-invest alongside the University's investment of intellectual property and business support, and will provides the private investor with an opportunity to invest in early stage technology companies as they spin-out of the University, while supplying additional finance to ensure that companies are properly resourced for the initial stages of commercial product development.

Strategic Performance Indicators

- 2.01 REF institutional Grade Point Average (GPA)
- 2.02 Research income per academic FTE
- 2.03 Business and community contract and collaborative research income per academic FTE
- 2.04 % research publications highly-cited
- 2.05 PGR doctoral awards per academic FTE

