



**Empowering UK
universities:
how strategic
institutional support
helps research thrive**

**Case studies on the impact of
mainstream Quality-Related funding
and Research Excellence Grants (Part A)**

What is strategic institutional support for research?

Strategic institutional support for research uses funding awarded to UK universities by devolved funders in each of the four nations.¹ Unlike other sources, once this funding is allocated decisions on how to deploy it on research priorities are left at the discretion of universities themselves. These performance-based institutional grants form one side of the UK's unique 'dual-support' system, alongside the £3 billion of Research Council grants competitively awarded to individual researchers annually.

The category covers Part A of Research Excellence Grants (REG) in Scotland, and mainstream Quality-Related (QR) Grants in the other three nations, combining to around £1.4 billion per year. Across devolved funders, it is complemented by other dedicated funding for university-business interactions, support for universities undertaking charity-funded research, and Official Development Assistance research into the problems faced by low-income countries.²

Alongside other funding streams, strategic institutional support for research is allocated based on a UK-wide, peer-review assessment of research excellence, the most recent of which was the 2014 Research Excellence Framework (REF). An institution's performance in this highly-competitive process dictates the funding it will receive annually until the next assessment, typically six to seven years later. In contrast to other sources of public funding for research, the stable nature of this allocation allows institutions to develop and implement long-term research strategies.

¹ Devolved funding agencies: Department for the Economy (Northern Ireland), Higher Education Funding Council for Wales, Research England, and the Scottish Funding Council. Note that the formation of UK Research and Innovation (UKRI) in April 2018 means that the devolved funder Research England sits alongside the UK-wide research councils within a single agency.

² For more information on support for charity-funded research, see: www.amrc.org.uk/charity-research-support-fund-faqs

Why is strategic institutional support for research important?

Strategic institutional support for research combines flexibility and stability, giving universities the confidence to pursue ambitious research goals and seize opportunities.

It devolves decision-making to those at the front line, allowing local knowledge and cumulative experience to guide the strategic direction of each individual institution.

Through a series of case studies, this report explores how this funding supports universities across the UK to:

- **build a world-leading workforce** which nurtures new talent and attracts the very best research and technical staff from around the world
- **strengthen research culture** to generate better science and build an environment which gets the best out of researchers
- **forge new partnerships** with institutions and businesses across the world to combine expertise, share investment costs, and manage risk
- **experiment with bold ideas** which require exploratory work to attract further funding
- **develop world-class infrastructure** to keep the UK at the cutting edge of established and emerging areas of research
- **amplify investment** by allowing universities to unlock external income and seed major funding collaborations
- **make an impact locally** by supporting universities to be hubs of innovation and job creation in their local community, as well as across the entire UK
- **sustain and connect disciplines** to ensure the UK has the breadth of expertise needed to tackle major societal challenges.

As the UK research funding system undergoes a period of significant change and expansion, these activities will be more important than ever, and no other funding source currently offers this unique combination of scale, stability and flexibility. The ambitions set out in the Government's Industrial Strategy, and the growth in mission-led funding, will all rely on strategic institutional support to underpin and deliver the coherent and efficient research system needed to achieve their goals.

Case studies

- 1 Swansea University (page 13)
- 2 University of Sussex (page 13)
- 3 University of Portsmouth (page 13)
- 4 City, University of London (page 8)
- 5 University of Sheffield (page 8)
- 6 Coventry University (pages 8 & 19)
- 7 University of Aberdeen (pages 9 & 12)
- 8 Queen's University Belfast (pages 9 & 12)
- 9 Falmouth University (page 14)
- 10 Cardiff University (pages 14 & 15)
- 11 University of Lincoln (page 10)
- 12 University of York (page 10)
- 13 Lancaster University (page 17)
- 14 Cardiff Metropolitan University (page 17)
- 15 University of St Andrews (page 15)
- 16 University of Nottingham (page 19)
- 17 Bath Spa University (page 22)
- 18 Glasgow University (page 20)
- 19 University of Cambridge (page 12)

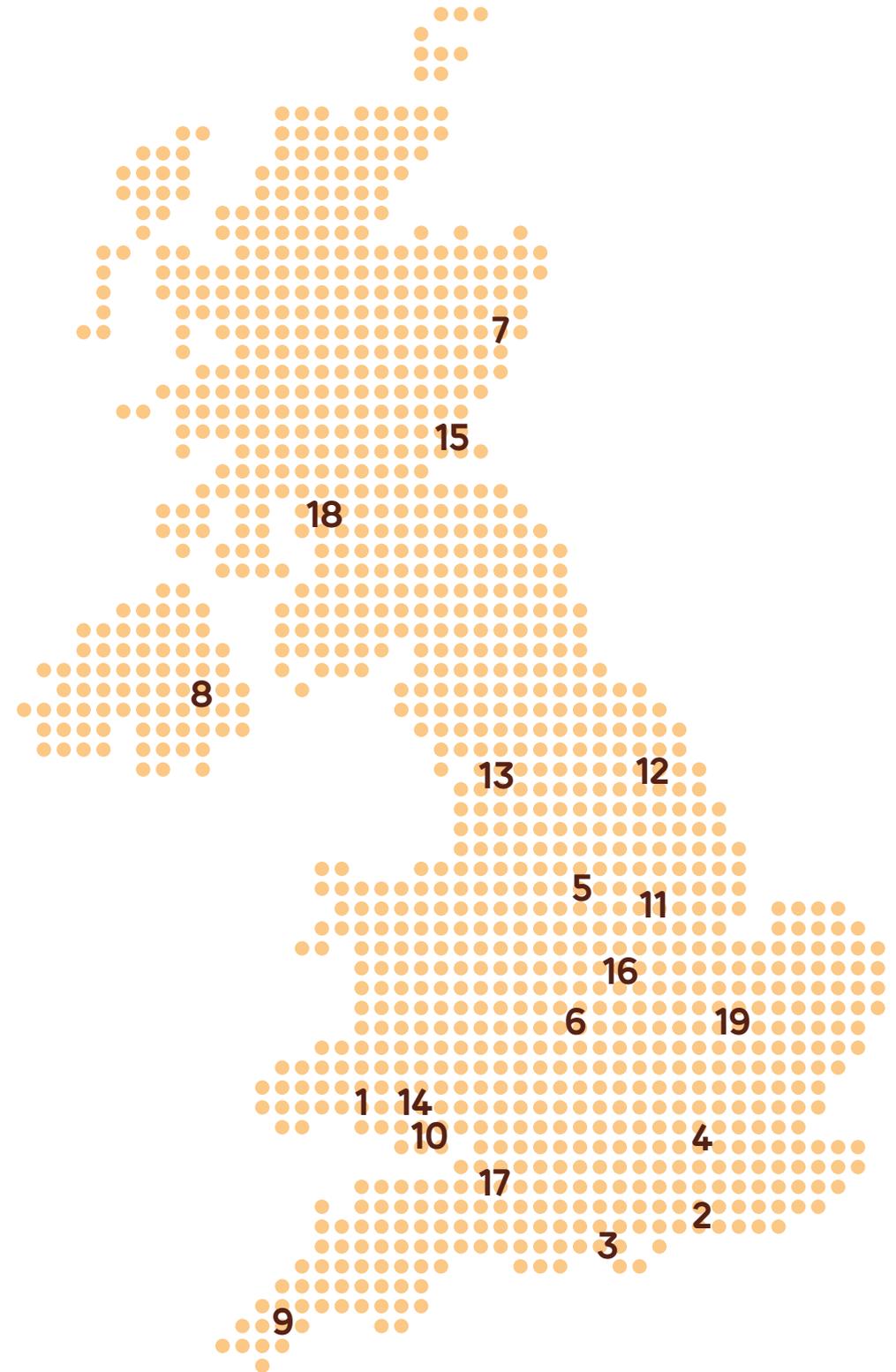
National breakdown of funding

£1,050m
England (2018/19)

£170m
Scotland (2018/19)

£71m
Wales (2018/19)

£43m
Northern Ireland (2018/19)



Building a world-leading workforce

University of Sheffield

The University of Sheffield invested £1.3 million of its QR income to recruit and support talented early-career researchers across a variety of disciplines. Established in 2013, the Vice-Chancellor's Fellowship Scheme has enabled 15 appointed fellows, many from international backgrounds, to focus entirely on conducting research, building collaborations, and securing external funding. After only two and a half years, the cohort had secured £17.5 million in external funding, with two-thirds being awarded further external fellowships from external funders. In this way, the flexibility of QR funding has allowed the university to recruit international and national talent, and help these individuals to thrive during a pivotal career stage.

Coventry University

At Coventry University, a combination of Higher Education Innovation Funding and QR has been channelled into the Supporting Postgraduate Students in Industry for Employability in Research (SPIDER) programme. This programme supports PhD students to undertake placements in public, private and charitable organisations within their field, both nationally and internationally. In 2016/17, it funded projects with 13 different partners, who themselves contributed either financially or through staff time and access to facilities. Placements are divided equally between large companies and SMEs, and the programme has enabled the university to foster closer links with industry while nurturing new skills among its students.

City, University of London

In a strategic plan to rapidly boost research capabilities, City, University of London used QR funding to support senior staff appointments. City's three-point approach reinforced high-performing areas with additional staff, reinvigorated specific disciplines with fast-tracked appointments, and built capacity in promising new research. From 2012 to 2016, this major recruitment drive attracted 170 senior researchers from around the world, in subjects including mathematical biology, nursing and health, and finance.

100

The number of places that City has climbed in world university rankings since 2015

This has helped City climb 100 places in the world university rankings since 2015, with the proportion of its academics who are producing world-leading or internationally excellent work more than doubling to 48% since 2010.

Strengthening research culture

Queen's University Belfast

Queen's University Belfast used QR funding to build a "culture of research ambition" designed to promote research excellence, provide flexibility for talent to flourish, and encourage rounded contributions to research life. This includes establishing the World Leading Researcher (WLR) initiative, which aims to expand the university's international outlook by financing part-time contracts for leading researchers from elsewhere in the world. So far, 23 such researchers have been placed across the university's nine schools, where they have enhanced the research culture by forging new connections, helping to secure internationally competitive research funding, and undertaking PhD supervision. The impact of these researchers on the university's research and impact portfolio has already been demonstrated in the 87 4* and 3* outputs they contributed to the university's 2014 REF submission.

23

Global researchers brought to Belfast through the World Leading Researcher initiative

University of Aberdeen

The University of Aberdeen has used REG funding to provide a broad range of career support to researchers, advancing strategic research priorities including regenerative medicine and the molecular basis of obesity.

Since 2014, the university has invested over £1.1 million to secure access to matched funding from Wellcome's Institutional Strategic Support Fund. This combined investment has supported staff returning from career breaks, provided researchers with seed-corn funding to trial new projects, funded activities to engage the public with research, and provided career development schemes for talented junior staff on their way to becoming independent researchers. The university has also been able to offer an International Partnership fund, which supports collaborative seed projects and exploratory work.

Forging new partnerships

University of Lincoln

The Lincoln Institute for Agrifood Technology (LIAT), established in 2016, has rapidly built a unique profile within the UK and attracted a significant investment from Innovate UK's agritech funding stream. The university invested over £600,000 of QR funding, helping to establish a core team at LIAT who work across not only research issues but also relevant political and policy issues such as the role of labour markets or agricultural efficiency. The Institute has drawn in multiple research partners including Berry Gardens Ltd, Tesco plc, and the Earlham Institute, and secured access to £4.7 million of external research funding. On an international level, QR funding has helped LIAT to establish a partnership with the Essential Livelihoods project in Kenya, to develop new crops and income streams for thousands of smallholders who are dependent on the tea industry.

University of York

The University of York used £220,000 of QR funding to create York Art History Collaborations, which connects its Department of History of Art with galleries and museums. This investment has supported partnerships with over 50 organisations – ranging from local partners such as York Art Gallery to national museums such as the National Gallery, London, Tate Britain and the V&A, and a major exhibition with the Fries Museum in the Netherlands. The department recently collaborated with the Government Art Collection on a major research project on the history of their collections and their continuing impact on international diplomacy. Partnerships have also extended the Department of History of Art's reach, with over one million people estimated to have seen co-curated exhibitions.



Agritech research at the University of Lincoln.

Experimenting with bold ideas

University of Aberdeen

The University of Aberdeen used its REG income to provide the £464,000 of match-funding needed to secure a Discovery Award from the Medical Research Council. This combined funding will support new and integrated approaches to obesity research, by extending the understanding of the signals in the brain which regulate body weight. Aberdeen's REG contribution will provide targeted proof-of-concept funding for new technologies in this field, with the aim of advancing current thinking. Alongside the research funding, the award has also allowed the appointment of two Discovery Fellows, helping to build capacity within the university.

Queen's University Belfast

Queen's University Belfast tackles global challenges as part of its wider institutional strategy by supporting high-risk, high-potential research through its Pioneer Research Programmes, funded by £8 million of QR income. After an open call, six programmes were approved, covering interdisciplinary areas such as intelligent autonomous manufacturing systems. The initiative will offer three years of financial support, alongside 31 studentships ring-fenced by the university. The flexibility and stability provided by QR funding allowed the university to back these ambitious, early-stage ventures with the scale of resources needed to establish them sufficiently and leverage external funding for future growth.

University of Cambridge

£2.7m

Invested in Strategic Research Initiatives since 2010

At the University of Cambridge, QR funding supports the development of emerging research themes and collaborations. This includes a portfolio of Strategic Research Initiatives (SRIs), which use small amounts of QR funding to initiate greater coordination on key research topics. These initiatives draw together a critical mass of expertise from across the university, in areas such as big data, public policy, and synthetic biology. A total of £2.7 million has been invested in SRIs since 2010. Four of these, representing just a fraction of the total, have secured £36 million from external funders. After six years, the evolving portfolio has also seen several SRIs graduate into cross-disciplinary Interdisciplinary Research Centres within the university.

Developing world-class infrastructure

Swansea University

The stability of QR funding helped Swansea University secure the loans and other investment needed to design and build its £450 million Bay Campus, which opened in 2016. This redeveloped 65 acres of brownfield land in Neath Port Talbot previously occupied by BP Transit, bringing together accommodation for students and academics, and research space supported by industrial partners. The campus will host the new £31 million Computational Foundry, a bespoke environment designed to foster world-class computational science and interdisciplinary research. When this becomes fully operational in late 2018, it will host 1,150 undergraduate students and 150 researchers, supported by prototyping facilities and networking spaces.

University of Sussex

The University of Sussex used £1.5 million of QR funding to underpin a £5 million redevelopment of its Wolfson Centre for Biological Imaging. The stability of this funding stream helped to mitigate the risks of this long-term investment, and leveraged a grant of £1.5 million from the Wolfson Foundation for equipment and building works. The centre will offer state-of-the-art commercial instruments, enabling researchers to make discoveries that will help transform

people's lives. It will also act as a catalyst for innovation, building on Sussex researchers' track record in engineering better and more cost-effective optical microscopes. Further investment will help to configure the university's major research facilities into a single, accessible hub to make more effective use of skilled technicians and to promote cross-disciplinary working.

University of Portsmouth

At the University of Portsmouth, QR income has supported the Institute of Biomedical and Biomolecular Sciences to develop its capacity for research involving animals, as well as the technical expertise this requires. The institute now hosts the European Xenopus Resource Centre, which has attracted £3.4 million of further funding and established the university as a focal centre for frog genetics. Investing in the institute has also led to over £27 million of external funding being secured, chiefly from Research Councils, Wellcome and smaller biomedical charities. While 55% of the institute's submitted research was assessed as world-leading or internationally excellent in the 2008 Research Assessment Exercise, this rose to 90% in the 2014 assessment.

Amplifying investment

Falmouth University

Falmouth University has committed approximately £75,000 of its QR income to help seed the South West Satellite Applications Centre of Excellence. The centre will be based at Goonhilly Earth Station, a large radio communication site on Cornwall's Lizard peninsula, around 12 miles from the university campus. Led by the University of Exeter, the partnership behind this major investment has grown to include numerous research institutions and businesses. QR funding has allowed Falmouth to invest in the centre's staff, by seconding a senior health specialist from Cornwall Council. The centre's initial research themes of marine industry, agritech and e-health tie in with the university's institutional priorities and with Cornwall's economic, skills and enterprise agenda.

£75,000

Committed to help seed the South West Satellite Applications Centre of Excellence

Cardiff University

£17 million of QR funding has been central in establishing and scaling up the Cardiff University Brain Research Imaging Centre (CUBRIC), which is set to become one of Europe's foremost facilities in this field. The centre's first incarnation – CUBRIC 1 – was established in 2006, supported by investment from Research Councils and QR. Its purpose-built, three-floor facility offered state-of-the-art brain-scanning technologies, including MRI and EEG equipment. This investment built and sustained a critical mass of around 60 staff who drove the initiative forward and attracted £23 million of external grant income in the centre's first seven years. Further cementing its reputation for excellence, CUBRIC was expanded and relocated in 2016, with QR funding leveraging over £27 million of external funding from various partners including Wellcome, the Medical Research Council and the Wolfson Foundation.

Making an impact locally

University of St Andrews

£16.5m

Capital investment in new, state-of-the-art facilities

Established in 1896, the Scottish Oceans Institute is a world leader in oceanic research and species protection, hosting over 260 researchers, engineers, technicians and students. With its original Victorian building no longer adequate for modern digital equipment, the predictability of REG funding allowed St Andrews University and other funders including the Wolfson Foundation to commit to a £16.5 million capital investment in new, state-of-the-art facilities. These include a smart aquarium – the most technologically advanced in the UK – that will accommodate expanded teaching and community outreach activities. The institute's Public Outreach Centre will feature a glass wall into the aquarium and interactive displays to enable visitors to connect with the science taking place. It will help researchers strengthen links with local schools and the community, to promote public understanding of the world's oceans including the unique ecosystem of the North Sea.

Cardiff University

Cardiff University is working with industry partners to make South Wales home to the world's first compound semiconductor cluster – focused on the technology which underpins smartphones and satellite communications, as well as having healthcare applications. They aim to generate 2,000 high-value jobs over the next five years, and up to 5,000 in the longer term. QR funding has helped scale up activities, attracting the resources needed to provide companies with streamlined access to academic expertise. The plan, a collaboration with local semiconductor firm IQE plc, has secured the backing of multiple partners, including £12 million from the Welsh Government and a further £13 million from the Welsh European Funding Office. Backed by these strategic investments, the university was integral to securing the £50 million Compound Semiconductor Applications Catapult Centre for Cardiff.



Man living with advanced dementia and his wife using a highly personalised sensory blanket with embedded electronics created as part of the CARIAD Sensor e-Textile research project.
C. Treadaway.

Sustaining and connecting disciplines

Lancaster University

Lancaster's Department of English Literature and Creative Writing spends £508,000 of QR funding a year supporting over 30 academics involved in producing acclaimed scholarly editions, monographs and creative writing publications. These texts are among the most prestigious and internationally significant outputs of research in these disciplines, often taking seven to ten years to complete and generating impacts that can be felt across many decades. The flexibility of QR funding can offer academics the extended periods of time (often as sabbaticals) needed to focus on writing. Recently, researchers at Lancaster published a collected edition of over 1,000 previously unpublished letters by the scientist Humphry Davy and his "Circle" of associates. This could open up a new understanding of his experimental work, including the Davy safety lamp – a pivotal invention in the UK's industrial history.

Cardiff Metropolitan University

The Centre for Applied Research in Inclusive Arts and Design (CARIAD) is a multidisciplinary research centre which draws its membership from every school in Cardiff Metropolitan University. CARIAD conducts inclusive research and development projects based on undirected playfulness as a way to help people who have ageing and developmental conditions to engage with the world on equal terms. Using around £14,000 of QR funding, CARIAD was able to complete the Sensor e-Textiles project, which designed and made a range of sensory electronic textiles, with the involvement of professional dementia care providers and the families of people with dementia. Each Sensor e-Textile was bespoke, designed to bring comfort and joy to an individual with late-stage dementia through smell, sound, colour and touch. A range of local, national and international partners were involved, including universities, care homes and charities.

The nature of strategic institutional support allows universities to adopt internal allocation mechanisms which pursue their strategic priorities, further incentivise research excellence and deliver the best return on investment.



How do universities decide where to invest?

Coventry University

Coventry University uses QR funding to strategically invest for future development, rather than assign it as a reflection of past performance. Decisions on the strategic use of QR are taken at a senior level by the Vice-Chancellor, in consultation with faculty leadership and researchers. After the 2008 Research Assessment Exercise, senior leadership developed a five-year growth strategy for research across the university and distributed the £1.85 million of annual funding across all faculties and departments, while retaining a small central fund overseen by the Pro Vice-Chancellor. This central fund targeted cross-university strategic needs, such as the establishment of the university's first PhD scholarship fund. This strategy was rewarded with a significant improvement in results – with the proportion of research assessed as 3* or 4* rising from 27% in 2008 to 61% in REF 2014.

University of Nottingham

The University of Nottingham splits its £50 million of annual QR funding between the different schools that 'earned' this funding based on the previous REF assessment, and the overall university executive. The executive invests its share of the QR funding into institutional research priorities and fellowship schemes. This includes the Nottingham Research Fellowship Scheme and the Anne McLaren Fellowship Scheme, the latter of which supports 14 outstanding female scholars at an early stage of their academic careers in STEM subjects. The internal allocation of QR income to schools follows the formula used by HEFCE to calculate how much QR is awarded to each REF Unit of Assessment. This mechanism of distribution allows the university to reward and drive excellence in research, and allows schools to invest QR income according to their own strategic plans.

The case studies above illustrate two examples of how internal allocation decisions are made. Further exploration of the processes used across universities can be found in a 2014 report by Public and Corporate Economic Consultants (PACEC).³

³ PACEC (2014) A review of quality-related research funding in English higher education institutions. Available at: www.hefce.ac.uk/pubs/rereports/year/2014/qrrview/#d.en.98937

Delivering impact across the University of Glasgow

The University of Glasgow has used REG funding to grow a vibrant research community by attracting, developing and connecting talent across the university. Based on the results of REF 2014, Glasgow will receive approximately £275 million of REG funding to boost research excellence.

Attracting new talent

The Lord Kelvin Adam Smith Fellowships have attracted emerging research talent to Glasgow, with support from £12 million of REG funding.

Through this programme, 100 talented researchers have joined the university from across the world, with 40 securing their own additional fellowship funding.

Dr Julian Reboud

“The fellowship provided me with the time and freedom to engage with researchers outside my area of expertise, particularly in biology and medicine. This helped me establish a start-up company – SAW Dx Ltd – which is developing novel point-of-care diagnostics. It also gave me the confidence to expand my international collaborations, including with a team in India to develop low-cost technologies to detect diseases in cattle.”

Research: Point-of-care diagnostics
Fellowship highlight: Co-inventing a technology, leading to a spin-out company which attracted £1 million of Innovate UK and venture funding

Dr Eva Moreda Rodriguez

“My fellowship helped establish my profile as an independent researcher. I secured publishing contracts for two books, and performers and cultural organisations now regularly consult me on my specialist area of Spanish 20th-century repertoire.”

Research: Music as a cultural practice
Fellowship highlights: Developing an international research profile, becoming a permanent lecturer in music, and being awarded a follow-up Leadership Fellowship from the Arts and Humanities Research Council



The Research Hub, opening in 2020, will be devoted to nurturing interdisciplinary research.

Investing in career development

To support the development of early-career researchers across all disciplines, the university uses £20,000 of REG funding a year to fund the Glasgow Crucible.

The Crucible is an annual four-day leadership and development programme which helps researchers to become more ambitious in their funding applications and publications, get to grips with the knowledge exchange agenda, and develop interdisciplinary collaborations outside academia.

Now in its third year, the scheme has received exceptionally positive feedback from participants, who have been encouraged to try new and ambitious ways of communicating what they do.

One recent participant went on to write her first article for an online media outlet, The Conversation, which has attracted over half a million views since publication.

Building a connected community within the university and with external partners

The university is building a £100 million Research Hub, due to open in 2021, as part of a wider £1 billion, REG-supported investment towards a new urban quarter which will expand the university's campus by 25%.

The Hub will offer a stimulating and collaborative environment for interdisciplinary research and will connect the university with local and international industries. An Innovation Accelerator space will provide high-quality office and laboratory facilities for spin-out companies, entrepreneurs, and co-locating corporate–university research teams.

The Hub has also been designed to nurture new talent, with a 200 m² shared 'maker space' and fabrication laboratory.

Delivering impact across Bath Spa University

Bath Spa University is a relatively small university, but one which increasingly punches above its weight in its core areas of arts, humanities and education. QR funding was used to develop a dedicated Research Support Office, which has

helped the university deliver a rolling programme of high-quality research applications, and seen non-QR funding increase by more than 300% in the last few years.

The Bath School of Art and Design is leading the development of research through creative practice.



1940s

The two Bath-based campuses of the university are established as teacher training institutions.

1975

The campuses merge to become the Bath College of Higher Education.

1992

The College is granted degree-awarding powers and begins to develop its research profile.

2001

In the 2001 Research Assessment Exercise, the institution entered 50 full-time equivalent researchers across ten units of assessment. As a result, just over **£130,000** of QR funding was awarded and the institution was rated as having 100% nationally excellent research across both: English Language and Literature; and Theology, Divinity and Religious Studies.

2005

The institution was granted university status, becoming Bath Spa University.

2008

In the 2008 Research Assessment Exercise, 75 full-time equivalent staff were entered across ten units of assessment. Based on its performance, almost **£440,000** of QR funding was awarded and 20% of research achieved 3* or 4* ratings, establishing areas of research excellence in: English Language and Literature; History; Art and Design; Communication; Cultural and Media Studies; and Music.

2014

In the 2014 REF, Bath Spa entered 74 full-time equivalent staff, and was awarded almost **£850,000** of QR funding. External research grant income grew to **£862,000**.

Strategy

2001–2008

Developing research excellence:

- Supported academic staff in developing high-quality outputs and developed a bidding culture for research funding.
- Competition to establish new University Research Centres. Successful applications received a small pot of funding to support activities.

2008–2014

Building central support and strengthening research culture:

- Continued core funding for University Research Centres.
- Introduced a sabbatical scheme, which supported 11 academic staff.
- Created a Research Support Office which doubled research income to over £500,000 by the end of 2012/13 and expanded postgraduate numbers from 84 in 2010/11 to 140 currently.
- Provided ten professorial posts aligned to Bath Spa's areas of excellence.

2014–2021

Consolidating progress and growing new initiatives:

- An Internal Peer Review College to improve the quality of research bids.
- Early Stage Researcher and Research Leadership Programmes.
- A seed fund for public engagement, and the nomination of public engagement champions.



Department for the
Economy
www.economy-ni.gov.uk

Cyngor Cyllido Addysg
Uwch Cymru
Higher Education Funding
Council for Wales

hefcw

MillionPlus

The Association for
Modern Universities



Research
England

**RUSSELL
GROUP**



Scottish Funding Council
Promoting further and higher education



University
Alliance



Universities UK
International



Wellcome Trust, 215 Euston Road, London NW1 2BE, United Kingdom
wellcome.ac.uk

The Wellcome Trust is a charity registered in England and Wales, no. 210183.
Its sole trustee is The Wellcome Trust Limited, a company registered in England and Wales, no. 2711000
(whose registered office is at 215 Euston Road, London NW1 2BE, UK). SP-6972/200/07-2018/LP