### **Institution: Bournemouth University**

#### 1. Context and mission

Bournemouth University (BU) is a vibrant community of over 1,800 staff and 19,000 students from more than 100 different countries. Our mission is to be recognised worldwide as a leading university for advancing knowledge, inspiring learning, and enriching society.

Established in 1992, we are one of the world's top 100 young universities (THE Young University Rankings, 2020). Our success is underpinned by an innovative and embedded institutional ethos that fuses *research*, *education* and *professional practice* to achieve maximum impact.

Our integrated research and impact strategy is implemented throughout our institutional strategy (BU2025), and we aim to:

- Be a catalyst for impact by advancing knowledge, creativity and innovation.
- Enrich society by having a significant impact on challenges world-wide.

Our interdisciplinary focus is reflected through four Strategic Investment Areas (SIAs), which have social sciences and humanities embedded within. The SIAs promote growth across areas of societal relevance (Figure 1).

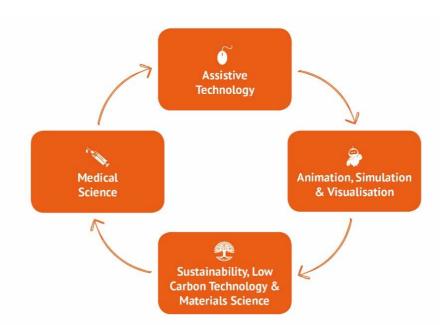


Figure 1: BU Strategic Investment Areas

We have invested in five cross-institutional *Research Institutes* and created 22 interdisciplinary *Research Centres* (Figure 2). These sit across four Faculties containing 19 Departments (Figure 3).

#### **ISLHE** ORI CLiMB **IMSET** IMIV Institute for Orthopaedic Centre for Institute for the Institute of Studies in Leadership, Impact Modelling of Socio-Medical Imaging Research Institute Landscape and and Management in Environmental and Visualisation Human Evolution Bournemouth **Transitions Research Centres** Centre for Centre for Ecology, Centre for Ageing & Dementia Comparative BU iWell Excellence in Environment & **Research Centre** Politics & Media Sustainability **Media Practice** Research Centre for Centre for Centre for Centre for Trade, Experimental Sustainable Midwifery, Maternal & Intellectual Development Media Research for & Socially **Property Policy** & Transition Cultural & Creative Responsible & Management Perinatal Health **Economics Industries** Consumption International Intelligent Spinal Interdisciplinary Narrative, Culture Centre for Tourism Nursing for Biomechanics Neuroscience & Community Long-Term Health & Hospitality **Research Centre Research Centre** Research Centre Research The Centre for NCCA Sport & Disaster the Study of (National Centre Seldom Physical Activity Management **Heard Voices** Conflict, Emotion for Computer **Research Centre** Centre & Social Justice Animation) **National Centre BU** Clinical of Post Qualifying Research Unit Social Work (NCPQSW)

Figure 2: BU Research Institutes and Centres

Research Institutes

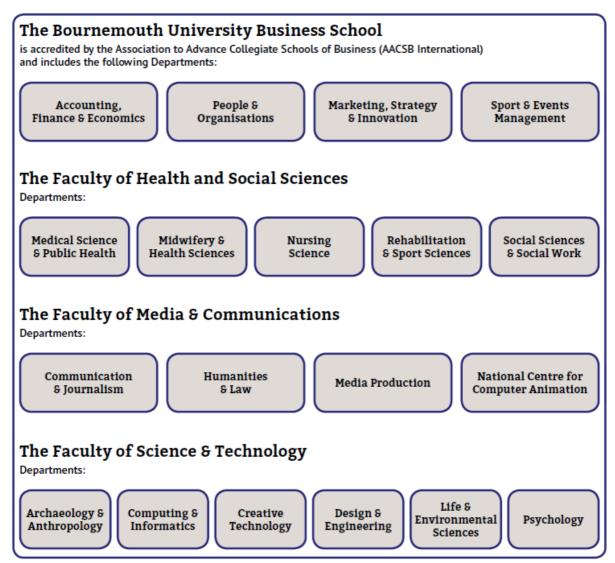


Figure 3: BU Faculties and Departments

Research spans a growing core of well-established, globally-recognised areas of excellence (Table 1), including our National Centre for Computer Animation (NCCA) (73% 3\*+4\* UOA32, REF2014) and Hospitality & Leisure Management (Top 10 QS World University Ranking, 2020) (84% 3\*+4\* UOA26, REF2014). Emergent research areas include: Psychology, English, and Creative Technology (bridging the NCCA and computer science).

We have invested in world-class facilities across two campuses within the conurbation of Bournemouth, Christchurch and Poole, Dorset. This region delivers £17bn GVA to the economy and is home to approximately 800,000 people, 28% of whom are aged over 65 (national average 18%). Health & Social Care and Medical Science are an increasingly important focus for innovative interdisciplinary growth given the context and needs of our region. In 2020, we were fundamental to the creation of a new University Hospitals Dorset NHS Foundation Trust. We are engaged in developing/delivering Dorset's Local Industrial Strategy. We contribute >£1M a day to the economy of South West England¹.

<sup>&</sup>lt;sup>1</sup> https://www.bournemouth.ac.uk/sites/default/files/asset/document/bu-economic-impact-report.pdf

Table 1: Units of Assessment (UOA) returned by BU for RAE2008, REF2014 and REF2021

UOA name(s)	RAE2008	REF2014	REF2021
Other Hospital-Based Clinical Subjects & Nursing &	4	3	3
Midwifery / Allied Health Professions & Nursing	11	3	3
Psychology	-	4	4
Computer Science & Informatics	23	15	11
General Engineering / Engineering	25	15	12
Geography & Environmental Studies	32	17	14
Archaeology	33	17	15
Business & Management Studies	36	19	17
Law	38	19	18
Social Work & Social Policy	-	-	20
Sport & Exercise Sciences, Leisure & Tourism	-	26	24
English Language & Literature	-	-	27
Art & Design	63	34	32
Communication, Cultural & Media Studies	66	36	34
Total (0/) of LIOAs submitted	10	8	13
Total (%) of UOAs submitted	(15%)	(22%)	(38%)

# 2. Strategy

## 2.1 Review of REF2014 Strategy for Research and Enabling Impact

Our success is underpinned by an *inclusive* approach to research as outlined in our Code of Practice. To enable our integrated research and impact strategy, our goals are to:

- 1. Increase the number of academics undertaking research and impact activities to expand **capacity** and develop **critical mass**.
- 2. Support and develop research independence and research and impact leadership to increase **capability** and ensure sustainable growth.
- 3. Maintain excellent, cutting-edge research and impact activities whilst increasing volume, enabling a step change in **performance**.

Since REF2014, we have delivered a landmark change in research *capacity* with 169% more staff being submitted to REF2021; this vastly exceeds the increase across the sector of 46%<sup>2</sup>. This creation of *critical mass* and investment in *leadership* has enhanced *capability* and enabled us to more than double our recognised research income from £15M in REF2014 to £33M in REF2021. Developing critical mass has enabled the creation of a team-based impact culture and a more diverse range of impacts within the case studies. We have *sustained* a pattern of increased bidding with awards that are longer in duration and larger in income. Collectively these activities have enabled a step-change in *performance* as exemplified through a range of £1M+ grants.

<sup>&</sup>lt;sup>2</sup> https://ref.ac.uk/news/submissions-made-to-ref-2021/

Table 2: REF research indicators

BU Return	REF2014	REF2021	Increase
% staff submitted	29	78	169%
FTE academic staff submitted	162	513	217%
Number of UOAs	8	13	63%
Number of impact case studies	22	47	114%
Number of staff included in impact case studies	50	146	192%
Staff per impact case study	2.3	3.1	35%
Number of impacts claimed per case study	2.6	3.9	50%
Total research income	£14,898,328	£32,759,327	120%
Doctoral degrees awarded	183	465	154%

## 2.2 Enabling and Actualising Research Impact and KE

Our Research Impact Programme brings together internal investment (Table 3) and training/development offered through our Research & KE Development Framework (RKEDF, Section 3). This is supported by our KE & Impact Team (9FTE, including four Faculty-based Impact Officers), and 8FTE Impact PDRAs for individual UOAs.

Our institutional Impact Subcommittee and KE Working Group review strategic progress including: monitoring/evaluating data returns (e.g. HE-BCI) and making resource recommendations (e.g. to our External Engagement Management Group).

Table 3: Investment opportunities for enabling impact and KE

Internal Funding Panel	Annual Budget	Purpose and exemplars	
Charity Impact	c.£25K	Charities e.g. conservation of the Mahseer fish, India (UOA14).	
Higher Education Innovation Fund (HEIF)	c.£365K	Business/industry, e.g. understanding the risk/effect of financial scamming (UOA20).	
QR GCRF	Challenge-led impactful rese developing countries, e.g. en responsible project manage Rohingya Refugee Camp (L		
Research Impact	c.£50K	Emerging areas and/or new collaborations, e.g. changing global understanding of police use of less lethal weapons against peaceful protesters (UOA34).	

We have prioritised two-way societal engagement throughout the research lifecycle via our lively public engagement programme (Table 4), underpinned by a strategic aim to build long-term partnerships/networks and increase the reach/significance of our impact. Events include: Arts by the Sea, Glastonbury Festival, ESRC Festival of Social Science, Café Scientifique, Pint of Science and professorial lectures. Our trailblazing cross-institution Festival of Learning has showcased research within our community, e.g. in 2017/18, 260 events attracted >8,000 attendees.

Table 4: BU HE-BCI data for public events, 2013/14-2019/20

Academic preparation time (days)	3,046
Number of attendees	1,706,772

We engage and target specific communities, e.g. through our award-winning Public Involvement in Education and Research Partnership. This has over 100 members with lived experiences relevant to health and social care and collaborates with external organisations to ensure those most affected by health and social inequalities can shape responses and improve outcomes and impact.

We create agenda-setting contributions to the global economy/society as exemplified by:

- Helping people live better for longer: Our research on nutrition in collaboration with care homes and dementia patients resulted in national changes to practice and policy (UOA3).
- Conserving waters and coastlines for future generations: We have developed a research-based model used in the UK, Europe and America to balance coastal environmental protection with societal and economic needs (UOA14).
- Helping organisations across the world to prepare for and recover from crisis: Our research is changing how journalists shape coverage of disasters e.g. following the 2015 Nepalese earthquake (UOA34).
- Challenging marginalisation, misinformation and under-representation: Our AHRC-funded research of para-sport events (UOA24, UOA34) is shaping coverage for the 2020 Tokyo Paralympics via collaboration with Channel 4, Paralympics GB and UK Sport.
- Supporting creative and cultural industries to grow sustainably and responsibly:
  Our research producing multi-sensory installations exhibited across the UK and online
  (including Tate Modern) provided evidence for how digital platforms can enable cultural
  institutions to stay relevant (UOA32).

## 2.3 Supporting Interdisciplinary Research

We use our SIAs (Figure 1) to catalyse interdisciplinary growth, e.g. through our Academic Targeted Research Scheme (Section 3) and new Institutes for the Modelling of Socio-Environmental Transitions (IMSET) and Medical Imaging and Visualisation (IMIV). The Professoriate support ECRs to build networks, capacity and teams and encourage interdisciplinary research. Our Research Centres/Institutes (Figure 2) each span two or more Departments, are inherently interdisciplinary, and generate impact. For example, our Institute for Studies in Landscape & Human Evolution brought together footprint research and data science to develop the 'PalaeoGo!' app. Deployed in UK museums/schools, it engages audiences by bringing to life prehistoric creatures. The interdisciplinary research also fuelled further collaborations with police forensic teams, resulting in a Knowledge Transfer Partnership (UOA11, UOA14).

**2.4 Supporting the Development of Research Collaborations, Networks and Partnership** We have developed global research networks (Table 5) through targeted investment including external match-funded doctoral studentships (Section 4), academic conference attendance, and addressing problems faced by developing countries (e.g. via QR GCRF, £394K since 2018). Our Global Visiting Fellowship scheme funds three-year collaborative projects, attracting world-class talent to contribute to the internationalisation of our research (c. £35K annually). ECRs are supported with joining/brokering networks by their research mentors, RDS and development through the RKEDF. Global networks are used to leverage funding, e.g. our Digital Reading Network attracted funding from the EC, AHRC and EPSRC (UOA27).

Our success is exemplified by the increase in collaborative research income (+39%, HE-BCI 2013/14-2019/20) and participation in wider networks, e.g. the EPSRC Industrial Doctorate Centre (Centre for Digital Entertainment) in collaboration with the University of Bath (UOA32).

With >40 industrial partners from the computer games and film industry, the Centre provides a wide range of networking opportunities and offers effective KE channels. It has enabled us to leverage further funding, e.g. from the Marie Curie COFUND scheme to establish the Centre for Applied Creative Technologies.

Table 5: International collaboration

	REF2014	REF2021	Increase
Income - EU Funders	£2.4M	£7.3M	205%
Income - Non-EU International Funders	£119K	£1.4M	1073%

We have stimulated increased industrial research collaboration (Table 6, Figure 4) through investing in long-term relationships with external organisations via HEIF, organising networking events, funder visits from Innovate UK and industrial speakers, and investment in new staff posts including: Head of External Engagement, Research Facilitator – Industrial Partnerships, Research Commercialisation Manager. Our SIAs are guided by diverse External Advisory Boards enabling excellent connections with a range of regional/national/global partners, ensuring projects and initiatives are co-created with partners and beneficiaries of our research.

Our networks enable us to contribute to policy development, e.g. our CLiMB Institute produced the National Competency Framework for Safeguarding Adults<sup>3</sup> in association with Learn to Care. The Framework has been endorsed by organisations including Skills for Care and Social Care Institute for Excellence (UOA20). Our Policy & Public Affairs team support researchers to submit evidence to national/international inquiries, e.g. our hybrid warfare research was submitted to NATO and is cited in the House of Commons Defence Committee's 12<sup>th</sup> Report (UOA18).

Table 6: Increase in Knowledge Transfer Partnerships (KTPs)

Research Income (GBP)	REF2014	REF2021	% Increase
Number of KTPs	9	12	33.3%

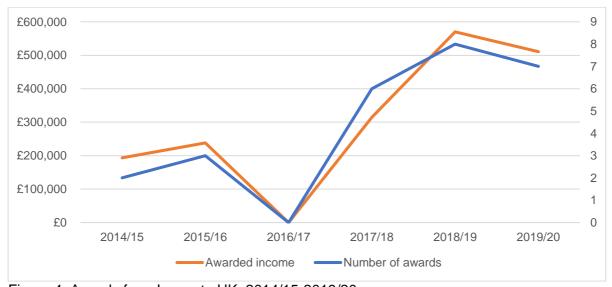


Figure 4: Awards from Innovate UK, 2014/15-2019/20

<sup>&</sup>lt;sup>3</sup> https://images.reading.gov.uk/2020/01/National-Compentency-Framework-for-Safeguarding-Adults-Comprehensive.pdf

We work closely with Dorset Local Enterprise Partnership (DLEP) to contribute to the development/delivery of <u>Dorset's Local Industrial Strategy</u>. We produce <u>business intelligence reports</u><sup>4</sup> and local <u>sector</u><sup>5</sup> and <u>economic</u><sup>6</sup> briefings as part of our regional strategy. Our relationship with Dorset Clinical Commissioning Group and in the formation of University Hospitals Dorset Foundation Trust provides important opportunities for research and impact.

## 2.5 Advocacy, Promotion and Support of Open Research

Our institutional repository (BURO, established 2008) provides open access (OA) to >10,000 research outputs and is supported by our Library's Academic Liaison Team and a Research Outputs Adviser. OA publishing is enabled through our OA Fund (c.£620K, c.415 outputs) and agreements with publishers (e.g. Wiley, Springer Nature, Sage, BMJ). Out of all the in-scope outputs we submitted to REF2021, 98.9% were compliant or had permitted exceptions.

Our *Publications* and *Research Data Policies* adhere to the Research Councils' *Common Principles on Data Policy* and the *Concordat on Open Research Data*. Our institutional *Outputs Subcommittee* ensures research outputs (in all media) provide maximum value. In 2017, we launched our research data repository (BORDaR, 36 datasets, c.2,500 downloads) and established Faculty Data Champions. We provide data management training and support Data Management Plans. Open Research requirements are embedded in our Code of Practice for Research Degrees.

In 2019, we signed up to the San Francisco Declaration on Research Assessment (DORA). A demonstration of our commitment to the responsible use of metrics, it will ensure our future policy and practice is informed by this international standard for research assessment.

## 2.6 Promoting and Supporting a Culture of Research Integrity

We adhere to the commitments in the Concordat to Support Research Integrity, supported by an Ethics & Governance Adviser and Clinical Governance Adviser. Our Research Ethics Committee promotes the best ethical practice and our Compliance & Licenced Activities Committee provides assurance regarding applicable regulatory requirements. Mandatory training/development on ethics and integrity is provided for staff and doctoral students. Our Research Ethics Code of Practice and Code of Good Research Practice outline responsibilities/processes. Ethical implications arising from research at all stages must be considered. Research undertaken by staff and students is subject to ethics review by our Science or Social Science Ethics Panels.

### 2.7 Future Strategic Goals

We will build on the success of our innovative integrated research and impact strategy to:

- 1. Increase the number of academics undertaking funded research and impact activities, particular in our interdisciplinary Research Institutes and SIAs, further expanding capacity, developing critical mass, and advancing new streams of research.
- 2. Grow our global research networks to enable a step-change in strategic partnerships and forums to secure more international collaborative grants, advance research impact and put research into practice, aligning 100% of all projects to UN Sustainable Development Goals.
- 3. Retain, develop and recruit talented academics to increase our funding application success rates and increase research and KE income to c.£25M by 2025.

<sup>&</sup>lt;sup>4</sup> https://www.bournemouth.ac.uk/about/regional-engagement/business-intelligence-reviews

<sup>&</sup>lt;sup>5</sup> https://www.bournemouth.ac.uk/about/regional-engagement/local-sector-briefings

<sup>6</sup> https://www.bournemouth.ac.uk/about/regional-engagement/local-economic-briefings

- 4. Promote a thriving culture of Open Research.
- 5. Increase the size of our PGR and ECR communities, sustaining a commitment to their vitality, development and success.
- 6. Continue to develop an inclusive environment that recognises all staff equally, e.g. remove our gender pay gap and all Departments will have Athena Swan awards.
- 7. Enable innovative interdisciplinary research by aiming for >50% of internal research funding to specify and integrate Social Sciences and Humanities.

### 3. People

## 3.1 Staffing Strategy

Our staffing strategy is based on a culture that values equality, diversity and inclusivity (EDI) and staff/student wellbeing. Our EDI commitments and achievements are demonstrated by our Athena Swan Institutional Bronze Award (2015, 2018) and three Bronze Departmental Awards. All Faculties have a Gender & Research Action Plan linked to Board-approved KPIs for gender equality. Our Women's Academic Network (2013) supports women/women's interests across BU. Our 2019 gender pay gap for academics was 7.6% (mean) and 13.7% (median), against our target of 0% (2025). We joined the Race Equality Charter (2016) and will apply for an award in 2021. We hold the HR Excellence in Research Award (2013) and are compliant with the Concordat to Support the Career Development of Researchers. We are a Stonewall Diversity Champion and have achieved Disability Confident status (2019). EDI matters are discussed regularly at our Research and Professional Practice Committee and informed by REF equality analyses.

We have focused on developing leadership and high performance through talent development and by growing research capacity in an inclusive way across the breadth of the University, whilst also developing and strengthening critical mass in our SIAs. This strategy will enable us to achieve a step-change in research performance whilst building sustainable research capacity.

# 3.1.1. An Inclusive Approach to Growing Research Capacity Across the University

Academic staff, including the majority of PDRAs, are employed on 'teaching and research' contracts with standard job descriptions and responsibilities for education, research and professional practice. Our workload planning model provides academic staff with a minimum time allocation of 25% for research and professional practice. Our overarching and inclusive Academic Career Framework (ACF) outlines the typical outputs expected from lecturer to professor and underpins our annual appraisal, pay progression and promotion processes. There are specific progression/promotion sessions for traditionally disadvantaged groups. EDI is embedded in recruitment/promotion processes, including checking panel diversity and positive action statements and flexible working options in job adverts. Unconscious bias sessions are run regularly for staff; this is a mandatory element of recruitment/promotion training.

We have invested in intellectual capital, with new academic posts in all UOAs. To increase capacity and capability, we have invested significantly in new posts at ECR and professorial level (Section 3.1.3). We recruit new academic staff who are qualified to doctoral level, and the majority (53%, Table 7) have been aged below 40. ECRs constitute 25% of our submitted staff (127.6FTE). The growth in our intellectual capital is further demonstrated through the increased proportion of academics with a doctorate (from 55% in 2014 to 76% in 2020) and the internal promotion of 355 academics since 2014.

Table 7: Academic recruitment and promotion by age profile 2013/14-2019/20 ('T&R' only)

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	Unde	er 30	30	-39	40	-49	50	-59	60	)+	To	tal
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Recruitment	56	10	242	43	145	26	84	15	30	5	557	100
Promotion	1	0	130	37	128	36	84	24	12	3	355	100

We provide targeted and specialist support for academics at all career stages to build capacity to undertake and lead research. All academics have a research mentor and have access to our comprehensive development framework (the RKEDF), which offers c.150 sessions annually covering the whole research lifecycle (Section 4). Any existing academic staff or those exceptionally appointed without a doctorate are supported to pursue doctoral study. We are creating a strong pipeline of academic talent, e.g. the majority of promotions have been for staff aged between 30-49 (73%, Table 7).

Our Study Leave Policy provides leave for research (prioritising ECRs and staff returning from family-related leave). ECRs are a target group for academic development. There are internal opportunities for research pump-priming (Section 2, 4), many of which are targeted at ECR-led teams; supported by professors to build confidence and experience. We have a lively ECR Network and offer ECR-specific development as part of the RKEDF. Our bridging scheme provides funding for contract researchers between projects to retain academic talent; c.30 bridging periods were supported between 2016-2020 (c.£166K). In 2019/20, the scheme contributed to the retention of four researchers, including promotions to lecturer. Very few 'teaching & research' staff are employed on fixed-term contracts (37.5FTE, 5.7%). We have reduced the number of staff on part-time-hourly-paid contracts, offering them the opportunity to move to established contracts, thus providing greater job security and employment benefits, and increasing their opportunities to undertake research; 24 staff took this opportunity.

#### 3.1.2. Investing in Interdisciplinary Research

We have targeted investment in posts linked to our SIAs to drive strategic growth and develop new areas of research excellence. Our Academic Targeted Research Scheme (ATRS) has enabled the recruitment of six ECRs as future interdisciplinary research leaders. The ATRS offers a three-year contract and generous research allowance, supporting applicants from diverse career paths, including those returning from career break. They are undertaking novel, ambitious programmes of research in areas including data science for medical imaging & visualisation (in IMIV) and health & science communication.

We appointed new future research leaders to our new Research Institutes (IMIV, IMSET) to ensure their longevity and sustainability. IMIV is led by a consultant from Royal Bournemouth Hospital. IMIV's strategic growth is further supported by a new radiographer and an ATRS senior lecturer (UOA3, UOA11). We have invested in IMSET via four new posts – a senior lecturer, two lecturers and a PDRA.

#### 3.1.3. Increasing Research Leadership

We have invested in growing the size and diversity of our professoriate to enhance our capabilities for research leadership (Figures 5 & 6). We have 96 professors (31.3% female), 70% of whom were appointed since 2013/14, including 33 internal promotions. The Professoriate form teams to stimulate innovation and creativity, provide mentorship for inexperienced staff, and increase external funding, outputs and impact. We have collaborated with organisations (including Microsoft and Inland Fisheries Ireland) to co-fund five collaborative teams, each with two PGRs and a PDRA, to stimulate this approach (UOAs 3, 4, 14, 15, 24).

### 3.2 Support and Training of PGRs

Our Doctoral College (14.2FTE) is dedicated to continual improvement of the PGR student experience, with Faculty-based Administrators providing subject expertise to our researcher community, and academic leaders in Departments providing oversight of research student progress/development.

Our comprehensive PGR Development Programme (based on Vitae's framework) provides academic, personal and professional development. This includes on-campus seminars/workshops (c.160 each year), supplemented by online modules and resource options to improve access to materials for PGRs based off-campus.

Quality supervision is monitored through the Advance HE Postgraduate Research Experience Survey (overall satisfaction is 87.1%, higher than sector average 86.1%, 2019). All supervisors undertake mandatory supervisory development every three years. Engagement by supervisors increased from 38% to 73% in 2018/19. We are committed to excellence and have three supervisors, some of the first nationally, who are accredited with the UKCGE Recognised Research Supervisor Scheme. We are rolling this out to all experienced supervisors and we will also participate in the UKCGE pilot for supervisors at an earlier stage of their career.

#### 3.3 Construction of our REF Submission

We defined significant responsibility for research based on staff meeting one or more of four indicators, designed to be transparent, fair, and inclusive. When developing the indicator set, we rejected combinations where the analysis indicated groups of staff may be disadvantaged.

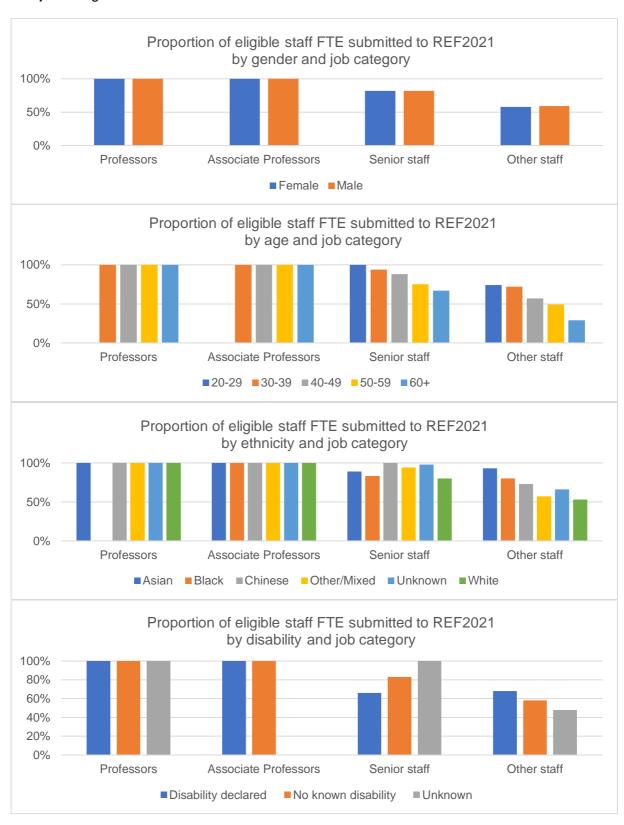
All staff involved in advising and making decisions received mandatory REF-focused EDI development. The diversity of internal REF groups (e.g. REF Steering Group, REF Committee, Staff Circumstances Board and REF Appeals Panel) was considered at all stages. Review panels were gender-representative (balanced wherever possible). Regular equality analyses informed our decision-making. We included additional characteristics, e.g. working hours and contractual status, and considered intersectionality.

Equality data informed all submission recommendations, e.g. when deciding which impact case studied to submit, we checked the gender balance of staff contributing to the case studies to ensure it was representative of staff submitted. Compared to REF2014, our REF2021 submission was noticeably more equal across protected characteristics, e.g. there was a 15% gap between submission rates for men and women to REF2014, which narrowed to 5.6% in REF2021.

Women, older staff, and staff with a declared disability were less likely to engage in independent research (as defined in our REF2021 Code of Practice). Regular analysis was undertaken and discussed by our Research & Professional Practice Committee between January 2019 and January 2021. Work to reduce potential inequalities is undertaken at local level, e.g. as documented in the Faculty 'Gender and Research Action Plans', and at institutional level, e.g. embedding EDI considerations more effectively into processes such as workforce planning, progression and promotion, and succession planning.

## 3.4 Staff by Protected Characteristics

Figure 5: Proportion of eligible staff against submitted staff (FTE) by protected characteristic and job categories. <sup>7</sup>



<sup>&</sup>lt;sup>7</sup> Senior staff include roles Senior Lecturer and above (excluding the Professoriate)

Figure 6: Proportion of submitted staff (FTE) by protected characteristic and job categories.





## 4. Income, infrastructure and facilities

## 4.1 Institutional Strategies and Supporting Activities for Generating Research Income

We have created an inclusive environment of research and impact development for staff at all career stages. This has enabled a step-change in research income by growing *the proportion of academics* engaged in bidding activity and increasing the *number* and *size* of applications (Table 8), particularly to prestigious funders.

Table 8: Number and size of research applications and awards

	2013/14	2019/20	Increase
Number of applications submitted	443	469	6%
Total income applied for	£31,119,705	£68,781,390	121%
Total income awarded	£6,991,640	£8,641,215	24%
Average bid size	£70,248	£146,655	109%
Average award size	£27,967	£41,149	47%

In 2016, we launched our comprehensive RKEDF (Section 3) offering inclusive, flexible, personalised programmes of development. Based on the success of our existing schemes (e.g. Grants Academy (2013-16: 61 staff were subsequently awarded funding >£2M (PI) and >£3M (Co-I)), we created new *Research Leadership* and *Research Council Development* Programmes to increase the institutional reach of activities. These programmes have led to a step-change in research income generation across our academic community (Table 9).

Table 9: Research performance of staff on cohort-based programmes (2018/19)

	Pre-Programme Post-Programme			
Number of applications	92	143	55%	
Total income applied for	£8.9M	£18.5M	108%	
Total income awarded	£714K	£1.3M	82%	

To support ECRs we have also used open-calls for pump-priming (annual budget c.£25K) to build experience of managing/leading projects and enable them to become part of research teams. An example of the success of this approach includes funding an ECR's research project visual impairment and the encounter/use of emoji (UOA11), which led to two Innovate UK awards (£90K as Co-I).

Table 10: Research performance of ECR RKEDF participants

	2016	2019	Increase
Number of applications	22	39	77%
Total income applied for	£1.1M	£2.8M	155%
Total income awarded	£40K	£284K	610%
Number of awards	4	9	125%

We offer robust pre-submission peer-review of funding applications including the use of External Application Reviewers who have supported 84 submitted bids since 2017, resulting in c.£600K awarded income. We arrange regular *Bid Writing Workshops* (e.g. Marie Curie, NIHR, UKRI) and *Funder Visits* (e.g. MRC, AHRC, Leverhulme, Wellcome), and maintain an award-winning *Research Blog*. All staff have access to *Research Professional*.

Our strategic approach to supporting research income generation is transforming our research portfolio with longer and larger applications and a radical uplift in applications to prestigious funders (Table 11). Since 2014, we have received our first ERC grant (UOA15), EC funding for a Jean Monnet Centre of Excellence (UOA18) and our first fellowships funded by the British Academy and

## Institutional level environment template (REF5a)



The Leverhulme Trust (UOA15, UOA4). We run a match-funded doctoral studentship scheme and have used this to attract £5.5M external income since 2013/14 (220 students). In addition, our Fundraising Team seeks donations for our key research projects, e.g. those related to underwater cultural heritage (c.£300K, UOA15).

Table 11: Number and size of research applications and awards (UKRI)

	2013/14	2019/20	Increase
Number of applications submitted	46	114	148%
Total income applied for	£6,943,207	£19,246,871	177%
Total income awarded	£398,584	£1,094,989	175%
Average bid size	£150,939	£168,832	12%
Average award size	£49,823	£78,214	57%

#### 4.2 Resources and Facilities

# 4.2.1 Research and Impact Infrastructure

Our central Research Development & Support team (c.40FTE) promote and facilitate a culture of high performance in research and impact by providing support for grant submission, researcher development, research impact, research ethics/governance and project management.

We have sustained investment in our technical infrastructure, which supports research and enables impact including our CRIS and impact tracker (Symplectic, c.£97K), BURO (ePrints, c.£39K) and BORDaR (ePrints, c.£36K). In 2019, we redeveloped our research webpages to encourage greater external engagement with our research (c.£65K).

We have strengthened institutional research management, establishing a Research Performance & Management Committee to oversee performance in line with BU2025 and allocate resources for research. Our Funding Panels, chaired by the Professoriate, ensure funding decisions are academically led, robust and transparent, with EDI embedded in all processes. We introduced a set of strategic principles linked to BU2025 to guide research investment decisions.

In 2017/18, we revised our approach to IP exploitation and worked with an external consultancy to simplify commercialisation processes. The new approach led to an increase in disclosures and patents (Table 12). In 2020, we invested in a Research Commercialisation Manager and launched a revised IP Policy to make it easier for staff to protect/exploit IP.

Table 12: Research IP exploitation

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
IP disclosures	0	0	0	2	66	24	6
Patents filed	0	2	1	0	10	2	3

# 4.2.2 Research Facilities which Support Research and Enable Impact

Our researchers have access to world-class research facilities. Throughout the review period we invested £250M to support growth across all our UOAs. This includes using innovative regional partnerships and two new buildings, which opened in 2020:

- <u>Bournemouth Gateway Building</u> c.£48M, 10,200m<sup>2,</sup> healthcare, medical science, social care and social sciences.
- <u>Poole Gateway Building</u> c.£32M, 5,000m<sup>2</sup>, high specification facilities for teaching/research in animation, visualisation and simulation.

## Institutional level environment template (REF5a)



We have partnered with DLEP to transform our provision across Medical Science including a new gait laboratory in our Orthopaedic Research Institute (£1M) and a state-of-the-art MRI scanning suite (£1.4M DLEP, £1M BU). These investments have further enhanced research in UOAs 3, 4 and 24 including two REF2021 impact case studies. An innovative partnership with the Maritime Archaeology Sea Trust (£1.3M LIBOR) enabled us to create the largest maritime archaeology research facility in England, thus ensuring our continued global leadership in maritime heritage at risk (UOA15).

To enhance our applied science research, we have invested £5.75M in our analytical laboratories to build capability for research in DNA, cytometry, microscopy, and biomedical applications (UOAs 4, 14, 15). In 2016, we invested £3.4M in an Innovation Centre, including a Materials Science Laboratory; facilities include state-of-the-art 3D printing facilities, virtual reality, and sports laboratories (UOAs 3, 11, 12).

Innovative partnerships with local landowners provide access to >76,500m² of land on private estates, enabling cutting-edge research in bioarchaeology, forensic archaeology and anthropology (UOA15). Our external relationships afford us free access to venues for our professorial lectures, e.g. National Trust, JP Morgan and AFC Bournemouth.

We have an annual investment round for research capital equipment, including Research England capital grant allocation (c.£195K pa), which supports research growth. Examples include: portable vascular ultrasound equipment, which helped secure over US\$1M funding, in collaboration with Weill Cornell Medical School, from the Qatar National Research Fund (UOA3); a Kayak Power Metre, heart rate variability monitors and 3D cameras, which led to a high volume of journal papers (UOA24); and a Finometer NOVA blood pressure monitor, which resulted in the filing of a patent and the development of a novel mobile device app for treating hypertension (UOA3).

We provide excellent technical support and our interdisciplinary focus enables researchers to access highly-trained demonstrators and technicians across all Departments. We have invested in online equipment/room booking systems and staff to maintain equipment to a high standard and ensure we can take full advantage of our world-class facilities. We are committed to the development of the careers of our technical staff, in line with the UKRI Technician Commitment.