

Institution: Bournemouth University

Unit of Assessment: 24 – Sport and Exercise Sciences, Leisure and Tourism

1. Unit context and structure, research and impact strategy

1.1 Unit Context and Structure

Bournemouth University (BU) leads the development of knowledge and practices in tourism economics (Blake), tourism management and marketing (Buhalis), sustainable mobility (Dickinson), economic impacts (Fletcher), hospitality and food service management (Hartwell), tourism employment (Ladkin), and elite sport development and exercise participation (Rees), which have generated influence nationally and internationally. Excellence in these areas was recognised in the previous REF submission (scores of 62.5% 4* and 37.5% 3* for environment).

During the REF2021 this unit has maintained the substantial growth of research in related subject areas, supported diversifications of research activities, catalysed exchange among individual specialisms and radiated the impact to a wide spectrum of industry. Key achievements include:

- A strong portfolio of impactful research resulting from successful collaborations with industry partners.
- A three-fold increase of participants in this REF, from 14 (14 FTE) staff REF2014 to 48 (46.6 FTE) staff in REF2021 – with a well-aligned staff profile of cross-disciplinary research, represented by 7 professors, 2 associate professors, 12 principal academics, 23 senior lecturers and 4 lecturers.
- A nearly a two-fold increase of postgraduate research (PGR) student completions from 28.5 (REF2014) to 40.5 (REF2021).

The majority of members (41) of this unit of assessment are based in the Bournemouth University Business School (BUBS), which is a faculty with the normal structure of a faculty (Dean, Deputy Deans, Department Heads and Deputy Heads). The Business School includes UoA24 members from the Departments of Accounting, Finance, and Economics; Sport and Events Management; Marketing, Strategy, and Innovation; and People and Organisations. A smaller number (6) of UoA24 academics are based in the Faculty of Health and Social Sciences, within the Department of Rehabilitation and Sport Sciences; and one UoA24 member is in the Faculty of Science and Technology's Department of Design and Engineering. The research context for the unit therefore includes elements of strategy, processes, staffing and infrastructure that are led at Institution, Faculty and Department levels, as well as within the unit of assessment.

The UoA houses 48 staff (46.6 FTE) plus research students and research assistants. To create a coherent research and impact strategy the UoA has also moved from smaller organisational research clusters to two key research centres: the Sport and Physical Activity Research Centre (SPARC) and the International Centre for Tourism and Hospitality Research (ICTHR). Each centre has a Head and Deputy Head at Professorial level and reports to the university on its income generation and research outputs on an annual basis, with centre status being reviewed every three years. Each centre acts as a focus point within its subject area for internal and external research seminars and collaboration and provides a discipline-specific point for support in bidding for, and managing, funded research projects.

SPARC has had significant support and investment in staff during this REF period—a strategic university decision, because only two sport/exercise-focused academics were submitted in REF2014 from the former Department of Sport and Physical Activity—with the recruitment of 12 new posts during this REF cycle (from lecturer to professor level). SPARC is led by two professors new to BU in this REF cycle (Rees and Silk [submitted to UoA20]), with, in addition to significant support and investment in staff posts, new (c. £0.6m) state-of-the-art laboratory space and equipment (adaptations to the building and laboratories to accommodate additional areas of activity and add capacity for future collaborations) for the sport and exercise sciences. This

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investment was targeted to develop this aspect of UoA24 to complement and build on the existing known strengths in tourism and hospitality. Fostering an interdisciplinary agenda and innovative and creative methodologies that address both sporting and social concerns, there are two overlapping strands to the research in SPARC: sport, health, and sustainability and sport, health, and exercise sciences. SPARC provides a regular seminar forum for internal and external speakers focusing on sport, physical activity, the body, well-being and (ill-)health. Funding for projects within SPARC (more detail is in Section 3: Income, infrastructure and facilities) has come from (among others): the Economic and Social Research Council, the Arts and Humanities Research Council, the National Institute of Health Research, the International Olympic Committee, UEFA, England Rugby, AFC Bournemouth, and Active Dorset. These funded projects have helped to produce two of this UoA's submitted Impact Case Studies (see below): *Shaping future broadcast coverage of para-sport* and *The development of athletic talent: Driving policy change in national sporting organisations*. The aim of SPARC is to further build capacity, high-quality research outputs, future funding streams, and impact, by providing a forum to develop staff and for collaboration.

ICTHR is a well-established research centre, having been created in 1996, and is highly regarded around the world. Its research is included along with relevant teaching metrics, in evaluations of universities globally, and is currently ranked in 10th position worldwide in both of the main global university rankings that include research metrics: the QS World University Rankings (in Hospitality and Leisure), and the Academic Ranking of World Universities (Shanghai Rankings, in the subject area Hospitality and Tourism). ICTHR is led by two professors (Blake, Ladkin) and is an interdisciplinary research centre with a record of research internationally, as well as nationally. ICTHR has conducted research in this REF period for (among others): the Economic and Social Research Council, the British Council, the European Union Commission, the Airports Commission, HM Revenue and Customs, the Northern Ireland Government, the Events Industry Forum, Bournemouth Borough Council, and Fáilte Ireland (the official corporate tourism trade website in Ireland). ICTHR research underpins the impact detailed in two of the UoA's submitted impact case studies: *Economic modelling of tourism*; and *Digitisation of tourism hospitality: Towards smart ecosystems*.

Across sport and exercise sciences, leisure and tourism, there has been continued development of a culture of a research-led environment, which has led to the recruitment of world-class academic staff and an increase in postgraduate enrolment. This dynamic academic culture empowers staff and enables the training of postgraduate research students in a world-class environment. Excellent multi- and inter-disciplinary research networks exist within the UoA and extend to world-leading national and international collaborations.

1.2 Research and Impact Strategy

Reflection on strategy (2014-2020)

In REF2014, we identified three strategic aims to be taken forward:

R1. Research excellence and steady and sustainable growth.

To continue the policy of strengthening clusters by investing in senior and ECR staff and the PGR community.

R2. Develop International Collaboration.

To enhance collaboration and host workshops for international research development.

R3. Develop Industry Collaboration.

To develop and strengthen existing ties with industry and policymakers through impact champions.

Alongside these, institutionally we transitioned from the BU2018 Strategic Plan to the current BU2025 Strategic Plan (see REF5a). The vision of BU2025 is to be recognised worldwide as a leading university for inspiring learning, advancing knowledge and enriching society through the fusion of education, research and practice. Our achievement against our strategic aims are outlined here.

R1. Research excellence and steady and sustainable growth.

We have consolidated clusters into two over-arching centres: SPARC and ICTHR. SPARC has seen significant investment in both senior and ECR staff, as well as investment in resources to support new staff research specialisms. There have been post-doctoral researchers (e.g., Pullen, De Lisio) recruited to major SPARC (Arts and Humanities Research Council; Economic and Social Research Council) projects and PhD students supported by internally-funded (e.g., Stevens) and externally-funded (e.g., Dean, Majumdar: AFC Bournemouth; Shahid, Hannah-Russell: Stormbreak/Osteotec) studentships aligned to SPARC. ICTHR had investment in senior staff prior to 2014 and currently has four Professors (Blake, Ladkin, Buhalis, Hartwell) and one Associate Professor (Brown). For much of this REF cycle ICTHR had two further professors (Wilkes, Vaughan) prior to their retirement. Recruitment in this cycle has included ECRs (Fan, Wassler) with a focus on their development.

R2. Develop International Collaboration.

Staff in UoA24 collaborate across the university (collaborations within and across the Business School and the Faculty of Health and Social Sciences, as well as across the Faculty of Media and Communication, and the Faculty of Science and Technology), with other UK universities, and internationally. The development of the University's Fusion Themes (esp. Health and Well-Being; Business and Economic Sustainability, and Environment, Culture and Heritage), and subsequent Strategic Investment Areas (SIAs), have led to focused development of research networks for this UoA across Medical Science; Assistive Technology; and Animation, Simulation, and Visualisation. The UoA is also well-positioned to drive forward the university's over-arching research focus in the areas of "Helping people live better, for longer"; "Conserving waters and coastlines for future generations"; "Challenging marginalisation, misinformation and under-representation" and "Supporting sustainable creative and cultural industries". Indeed, members of SPARC are involved in two new major studies noted in BU's institutional Environment Statement (REF 5a). The first is titled "Jumping in: Transgender and non-binary swimming", in which members of SPARC have been exploring LGBT+ experiences of recreational swimming; The second is the CLEAT (CycLing and EducATion) project—a randomised controlled trial of a cycling and education intervention for the treatment of Hip Osteoarthritis.

ICTHR has a track record of hosting large international academic conferences, and, in this REF period has not only managed conferences on its own (The Visitor Economy: strategies and innovations, September 2017) but has also been successful in attracting associations to hold their conferences in Bournemouth (The Council for Management Education (CHME) conference, April 2018; and the Travel and Tourism Research Association (TTRA) European Conference 2019: Tourism in the era of connectivity, April 2019). Each of these conferences attracted over 150 delegates from around the world, with invited speakers and panellists from industry as well as academia, and featured 'Meet the Editor' panel sessions, PhD workshops and industry panel sessions for the benefit of Bournemouth students and staff as well as international delegates.

R3. Develop Industry Collaboration.

Impact champions have been introduced across all units of assessment, supported by a university-wide Impact Sub-Committee which reports to the University's Research Committee. The University's BU2018 and BU2025 Strategic Plans both contained at their core a focus on Fusion, bridging research, education, and professional practice, with the explicit aim to become a university which engages widely with industry across research and education. BU has engaged extensively with the United Nations Sustainable Development Goals (in particular, for this UOA, via Goal 3 "Good health and well-being" and Goal 10 "Reduced Inequalities"). At the heart of the university's new BU2025 strategic plan is a mission to "enrich society by having a significant impact on challenges world-wide". Indeed, BU was ranked 55th of 450 universities from across the world (as well as 13th in the UK) in the first Times Higher Education Global University Impact Rankings. Bournemouth's commitment to impact is demonstrated by fully embedding impact within the University's Academic Career Framework, such that the development of "Research impact as defined by HEFCE/REF", alongside "wider international engagement with business/industry or government bodies" play a role in opportunities for progression. To support such endeavour, the university invested in over 40 industry matched-funded studentships in each year of the current REF cycle from 2014-2019. With this in mind, the UoA has continued to develop and strengthen existing ties with industry and policymakers, e.g., through funded projects with the International Olympic Committee, the National Piers Association, the Federation of University Sports of China,

the Events Industry Forum, New Forest National Park Authority, the Qatar Physical Activity Development programme, UEFA, Active Dorset, Fáilte Ireland, AFC Bournemouth, private sector businesses such as Stormbreak/Osteotec, and numerous local councils.

This strategy has led to a substantial improvement in our research outputs, in both quantity and quality of journal articles in leading peer-reviewed international journals in their fields, in income generation through grants and research projects and in terms of the impact that this research has on wider society. Research is seen as always having a place in which it is expected to have external impact, and the development of ECRs always includes enhancing their potential to have greater impact throughout their careers. This has led to impact that is partly evidenced in the impact case studies submitted to the REF but is much broader than these case studies alone can convey, with all independent researchers expected to, and being supported to, have impacts on wider society. Indeed, this UoA has generated more fully-developed, high-quality, impact case studies than are necessary for its REF2021 submission (see below).

Some examples of research can be seen via a SciVal analysis below which demonstrates 806 outputs, a field-weighted citation impact of 1.79 (meaning 79% more than the average—i.e., that these publications have been cited more than would be expected based on the global average for similar publications), 23% of publications in the top 10% most cited outlets worldwide and 39% of publications in the top 10% of journals. The UoA also has over 50% of its publications co-authored with researchers in other countries/regions (i.e., international collaborations).



Figure 1. Overview of the UoAs Scholarly Outputs. (SciVal® database, Elsevier B.V., <http://www.scival.com>, downloaded on 20.4.21)

For this REF2021 submission, the following four impact case studies have been submitted:

ICS1. *Shaping future broadcast coverage of para-sport (Pullen, Silk, Jackson, Scullion).* Funded by the Arts and Humanities Research Council, this research has led Channel 4, Paralympics GB, UK Sport and the Commonwealth Games Federation to give greater emphasis to more representative and broader broadcasting coverage of disabled people, types of disability and types of para-sport in the build-up to and during the Tokyo 2021 Games.

ICS2. *Economic modelling of tourism (Blake, Seetaram).* Here, our expertise in modelling has been used to inform crucial national government policy decisions relating to taxation and tourism in the UK and Ireland, including plans for tourism post-Brexit and the 2016 decision by the Airports Commission to recommend the expansion of Heathrow.

ICS3. *The development of athletic talent: Driving policy change in national sporting organisations (Rees).* Funded by UK Sport, the England and Wales Cricket Board, England Rugby and the Economic and Social Research Council, Rees' research into the development of sporting talent is now central to elite sport, highlighting key factors involved in producing elite athletes and changing the working practices of thousands of coaches and athletes across more than 20 sports.

ICS4. *Digitisation of tourism hospitality: Towards smart ecosystems (Buhalis).* Here, Buhalis' research into smart digital marketing has informed the digital strategies of industry and governments in the UK and in at least 10 different countries internationally including Greece, China, Egypt, Spain, Turkey, Lithuania and Portugal, enabling them to increase overall revenue from tourism.

In addition to these four impact case studies, additional excellent impactful research is being progressed by the unit, of particular note are:

- ***Revitalising British coastal resorts (Chapman and Light).*** Chapman and Light's research has produced frameworks and strategies to revitalise coastal tourism in the UK, with a specific focus on heritage-led regeneration at the seaside, benefitting National Government Organisations and Small to Medium Enterprises and directly informing government policy.
- ***Understanding sex work in the context of sporting mega events (Silk, De Lisio).*** Funded by the Economic and Social Research Council, this research has transformed public understanding of sex work and directly informed policy in the Federative Republic of Brazil, providing increased protection for sex workers within Brazil and globally, and changing the way in which future host cities of sporting mega events institute policies related to informal sexual economies.

Members of this UoA have been committed to developing impact from their projects, demonstrating the vibrancy of this UoA. For example, **Hartwell's** "Shaping Smarter Consumer Behaviour and Food Choice" project has been developed from a European Union-funded Horizon 2020 Marie Skłodowska-Curie Actions project, FoodSMART. This project is an innovative technical menu solution that enables informed consumer choice when eating out that takes into account individual characteristics (such as culture, dietary requirements and age group) as well as product (specification), leading to personalised food recommendations. **Dickinson's** project on "Sustainable Living" has focused on a series of related studies exploring climate change mitigation strategies in a variety of contexts. **Sadd** has developed a "Framework for evaluating Major Events" (FAME), as a result of projects with local councils that have appraised the different dimensions of event impacts to derive a framework for evaluation, and work on this has continued to expand the impact of the framework to different local councils.

Strategic Aims (2021-2028)

Building on successful growth between 2014 and 2020, the focus for 2021-2028 will be to empower our two research centres, through financial and infrastructural resourcing, to deliver a world-class research agenda of the highest quality and currency. A more strategic and focused approach to research funding (aligned to the principles of transparency, equity, and inclusivity), will see the further development of our centres, to which staff (and students) will be closely aligned and

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recruited.

Our strategic aims for 2021-2028 are therefore:

S1. Sustainable Growth of Research Excellence and Impact.

To further enhance the significance, quality and impact of our research outputs by investigating real-world issues, resulting in excellent research outcomes in terms of world-leading research outputs and having significant impacts on society.

S2. Improving Research Outcomes by Extending the Strength of Research Centres.

To further increase the translational impact of our work by building the activity and profile of our centres regionally, nationally and internationally, by building on current collaborations and developing new partnerships with key external stake holders.

S3. Enable Growth in Research Outcomes by Focusing on BU Research Areas.

To continue to develop and extend an increasingly-focused excellent research environment through alignment with the current BU2025 Strategy, the University's Research Focus areas and Strategic Investment Areas (as outlined in REF5a) and the UN Sustainability Goals.

To achieve these aims, UoA24 will set the following activity targets:

T1. People.

Promote, retain and recruit high-quality staff from postdoctoral fellows to ECRs and professors, supporting their growth as researchers and their ability to conduct research that has substantial impact and also recognise that staff wellbeing contributes to our aims.

T2. Funding.

Increase UK, European and International grant funding with a specific strategic target of UN Sustainability Goals and Strategic Investment Area priorities and initiatives.

T3. Postgraduate Students.

Extend the recruitment of high-quality postgraduate students, by developing matched-funded Home/EU and International PhD awards with high profile partners.

T4. Staff Development.

Provide all staff and students with high quality support, training, development and communication opportunities in collaboration with key national and international partners. This includes the hosting of international conferences and training programmes.

Delivering Our Research Strategy 2021-2028

Our strategic aims for 2021-2028 will be governed through the two research centres. The Centres will meet on a quarterly basis to review progress against strategic aims and KPIs in addition to more regular activities. The Centres will manage the overall direction and research resource (people, infrastructure) and allocate pump-prime funding that is generated from research and enterprise overheads. From a governance perspective, the Centres will report directly into the Faculty Research and Professional Practice Committees, the University Research Committee, and the Research Performance Management Committee.

2. People

2.1 Staffing Strategy and Staff Development

It is recognised that our key assets are the intellectual skills of our academic staff and that the solution to achieving our strategic aims is to capitalise on these via a robust staffing strategy which aims to:

- increase the number of research-active staff;
- recruit and develop senior members of staff to provide research leadership;
- increase opportunities and participation in staff development and research activity with a view to increasing the quality and quantity of research output and grant applications and awards;
- to recognize staff who are working towards activity that is impactful as per our research strategy.

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The strategy looks to fulfil these aims by:

- Increasing opportunities and participation in staff development and research activity. Since 2014 staff in the unit have engaged with a number of central initiatives to support the development of research staff such as: the Grants Academy, EU Academic Development Scheme, seed corn funding for pilot projects, and the Research and Knowledge Exchange Development Framework (RKEDF), based on Vitae's Researcher Development Framework (see REF 5a).
- Increasing the availability of internal peer review. A university-wide internal peer review scheme has been in operation since 2011 that supports the improvement of bid quality and develops staff expertise in bid writing.
- Internal dissemination. BU's Research Blog has been excellent in providing a conduit by which information can be transferred and research outcomes disseminated, and a platform for internal and external networking which members of the unit fully engage with.
- Workload planning. The Workload Planning Model provides a framework to account for individual staff members' research, teaching and professional practice. This works through an ongoing conversation between each academic and their line manager, usually their head of department, regarding their teaching and research commitments. It assesses individual staff aspirations alongside the School's overall priorities and KPIs and supports staff development and requests for study leave. This ensures that all staff have an allocation of time for research and protects new staff and early career researchers by ensuring that they are able to launch their research careers.
- Fusion. BU recognises that teaching and research are inextricably linked and that the vitality of both undergraduate and postgraduate curricula requires a teaching contribution from active researchers. To achieve this, researcher active staff teach at all levels and teaching activities are directly linked to areas of research expertise.
- Leadership planning. Citizenship duties are reviewed regularly and a process has been implemented to cycle inexperienced staff into programme management roles, relieving more experienced staff for other senior roles or to refresh their research activity.
- Embedding equality and diversity. Here, our belief is that diversity affords us a better outlook on the world, whilst at the same time, a diverse group of staff is also better able to respond to societal needs for research.

Investment in people

During 2014-2021 this unit supported more than a three-fold increase of participants in this REF, from 14 (14 FTE) staff in REF2014 to 48 (46.6 FTE) staff in REF2021 – with a well-aligned staff profile of cross-disciplinary research; represented by 7 professors, 2 associate professors, 12 principal academics, 23 senior lecturers 4 lecturers, and nearly a two-fold increase of postgraduate research (PGR) student completions from 28.5 (REF2014) to 40.5 (REF2021) illustrated in Figure 2:

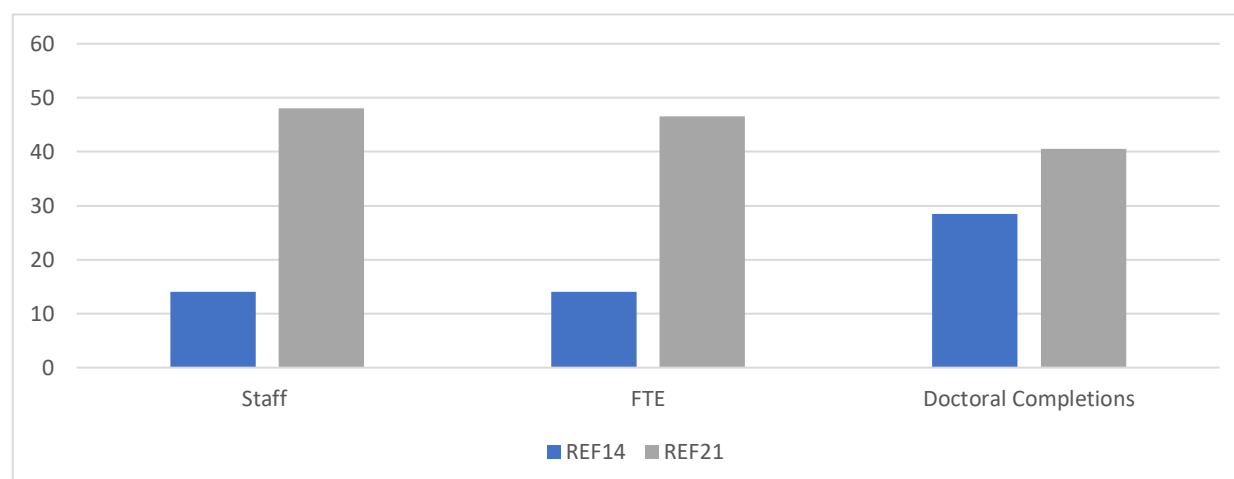


Figure 2. Growth in the UoA between REF periods.

Recruitment, appraisal and promotion policies in this unit reflect the above staffing strategy to support and reward research excellence. Since 2014 there has been investment in new appointments to promote research excellence and build an inclusive research community. This included the recruitment of internationally renowned academics and associated ECRs to support the UoA's strategic direction and promote effective team building and research activity. Critical mass has been created in targeted areas of research, most notably in qualitative sociology, sport psychology and physiology, by attracting staff with complementary skills in sociology, psychology and talent development, plus heat exposure, related to sport and exercise science. This group provides a focus in high priority research areas with potential for external income generation and collaboration. This has included the recruitment of the following staff in the current submission for REF2021:

- Professor Rees, who was recruited from the University of Exeter. Professor Rees has an international reputation, with interdisciplinary research focusing on the development of athletic talent and on social psychological influences on performance and physical activity. Since arriving at Bournemouth, Professor Rees has generated external grant income from the National Institute of Health Research, the International Olympic Committee, AFC Bournemouth, England Rugby, Stormbreak and Active Dorset. Professor Rees is Deputy Director of SPARC.
- Dr Lock was recruited as a senior lecturer (but has since progressed to Principal Academic) from Griffith University. Dr Lock's research interests focus on social perception and identity dynamics as they apply to sport consumption and participation. Since arriving at BU, Dr Lock has generated external grant income from the World Anti-Doping Agency, Energise Me, Active Dorset, Stormbreak/Osteotec and the Qatar National Research Foundation.
- Dr Dewhurst was recruited as a Senior Lecturer in Exercise Physiology (but has since progressed to Principal Academic). Dr Dewhurst's primary research interests focus on helping older individuals maintain independence and quality of life, through research which can be readily used and translated into practical applications.
- Dr Rendell is an Early Career Researcher who completed a PhD at University of Portsmouth under Professor Mike Tipton. Dr Rendell's research focuses on extreme environments, examining heat acclimation on endurance performance. Dr Rendell was recruited as a lecturer (but has since progressed to Senior Lecturer).
- Dr Obiegbu is an Early Career Researcher in Experiential Marketing, after completing a PhD in Marketing from the University of Durham. Dr Obiegbu's research lies at the intersection of consumption, markets and the arts, with a focus on how digital technology is shaping and transforming these relationships.
- Dr Nicholson's career at BU began as a fixed-term post-doctoral researcher and impact champion, but has since progressed to a full-time Senior Lecturer. Dr Nicholson's research sits at the boundary between contemporary history and sociology, and focuses on gender and sport.

Research leadership in this UoA is primarily driven by BUBS's Deputy Dean for Research, who is supported in this task by Heads and Deputy Heads of Departments, Heads of the SPARC and ICTHR Research Centres and Post-Graduate Research leads; alongside the UoA24 leads (Rees and Blake), and output and impact champions (Shipway, Ladkin). Together, they form the team responsible for the setting of research direction and the development and implementation of strategy. Within each Department and Research Centre in the UoA are focused, Professorial-led, research themes that bring together disciplinary-based teams in a collaborative, inclusive and focused environment.

Staff development is core to our staffing policies. Significant investment in staff time has provided a carefully managed environment for research development, where each staff member has an allocation of time for research and professional practice (typically about 35% contract hours). This encourages staff members to develop and accelerate their research careers and develop influential research outcomes. Our unit has contributed significantly to the increase in the number of staff with a doctorate in BUB's (63% in 2014 to 79% in 2020), which has created a more mature research environment in the unit and the faculty as a whole. Flexible arrangements are in place to conduct

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annual reviews (and changes) of the workload plan which is agreed between staff and their line managers.

These policies increase collaboration, establish a track record for informed and impactful research and provide less experienced staff with mentoring and guidance. Focusing on excellence, quality *and* development, this infrastructure provides an important balance between short-term achievements (e.g. increasing the number of staff that are publishing and the quality of publications from those already published), medium-term goals (higher quality bidding and stronger external networks), and longer-term strategising (that seeks to enhance the interdisciplinary research culture, investing significantly in ECRs and evolving established research networks).

The importance of ECRs' personal and career development and lifelong learning is clearly recognised and promoted at all stages. Our unit recognises and offers different routes available to enable ECRs' transition to independence. The ECRs enjoy rich opportunities and training workshops to build up their knowledge, expertise and skills. They collaborate and participate with other members of staff in various research projects based on mutual interests. A flexible structure with wide networking is an incubator to grow their capacity in multiple disciplines and create cross-sectoral influence where they can collaborate with experienced researchers. Rich collaboration opportunities and well-aligned comprehensive training programmes enable them to achieve personal career development goals - conducting multi-disciplinary research and art practices that strengthen their competencies and open new research themes (see aforementioned success of Rendall, Obiegbu).

The future staffing strategy in UoA24 will continue to focus on recruiting and developing world-class academics with a proven track record of high-quality outputs, grant successes and postgraduate supervision, as well as exceptional young scientists with significant potential.

2.2 Research Students

The number of doctoral completions for this REF period have been steady with 40.5 completions in total, which is a slight increase (2%) in the average annual completion rate in comparison to REF 2014. However, it should be noted that a number of SPARC doctoral completions have been returned to UoA 20.

Our students have had remarkable successes in this REF period. To give just three examples: Dr Pyke (supervised by Prof Hartwell and Prof Blake) was awarded 'best PhD student' in the United Kingdom in 2016 by the Institute for Travel and Tourism. Dr Price (supervised by Prof Hartwell) won the 2015 PhD student of the year award at EUROCHRIE (the European Federation of educators from hospitality, tourism & event management schools and universities). Dr Stevens (supervised by Prof Rees) graduated in 2019, having first-authored five articles (gaining BU's 2019 Vice Chancellor's Postgraduate Research Prize), presenting work at major conferences in Belgium, Spain, and Hong Kong, and winning BU's 10th Annual Postgraduate Research Conference Best Oral Presentation Award in 2018. Dr Stevens secured a three-year post-doctoral position in the psychology department at Australian National University (Australia's no.1 ranked institution), to further develop his research career.

The Graduate School is responsible for research student experience and oversees the development, implementation and quality assurance of studentship provision across the university. BU employs state-of-the-art postgraduate research monitoring software ("ResearchPAD", provided by Converis), and this is employed in a supportive way to facilitate a student's development, in addition to examining the process.

All postgraduate research students complete the Graduate School's Researcher Development Programme, which mirrors the Vitae Researcher Development Framework, building research skills in a professional and individually-tailored way. The Researcher Development Programme offers over 150 workshops per year focusing on academic, personal and professional development. On-campus workshops are supplemented by online modules and resource options, which improve

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access to materials for those PGRs who are based off-campus. The Graduate School also manages student research facilities and administrative support and has a postgraduate research Development Fund, which provides support to postgraduate research students wishing to present papers at domestic and international conferences.

The unit has benefited from BU-funded studentships (the university invested in over 40 industry matched-funded studentships in each year of the current REF cycle from 2014-2019), with five students in this UoA being funded through match-funded studentships (two with AFC Bournemouth, two with Strombreak/Osteotec and one with the Dorset Local Enterprise Partnership), as well as students being funded through fee-waiver scholarships.

Research students have at least two supervisors to guide them through their research degree, with the normal expectation being a face-to-face or virtual supervision meeting every two weeks. One supervisor is designated as lead supervisor, and in the rare instances where a supervisor is external to BU, the lead supervisor must be an internal member of staff. Over the course of a student's PhD journey they are supported by their supervisors, encouraged to attend workshops and conferences, and to prepare articles for publication, with many students co-authoring journal articles prior to their *viva voce* examination. Throughout the process of supervision, they are given every opportunity and support tailored to their needs, to develop into the future research leaders in their field.

Quality supervision is monitored annually through PRES (the *Advance HE* Postgraduate Research Experience Survey), and scores relating to satisfaction of supervision have risen since 2015 (overall satisfaction is 87.1%, higher than the sector average of 86.1%). All supervisors are expected to engage in continued professional development by undertaking supervisory development activities every three years, and engagement in these activities by active supervisors has increased (e.g., engagement increased from 38% to 73% over the year 2018-19).

The current postgraduate research community is drawn from diverse national and cultural backgrounds including: the UK and other EU countries, Africa, Asia and Latin America. The Research Discussion Forum facilitates cross-cultural exchanges between students and academics and helps to broaden understanding and interpretation of research findings.

2.3 Approach to supporting equality and diversity

BU's staffing strategy is underpinned by Human Resource policies and practices which reflect the seven principles of The Concordat to Support the Career Development of Researchers. BU has been awarded the European Commission Human Resource Excellence in Research award in recognition of on-going work to improve the working conditions and career development of its staff. This is overseen by the University's Research Concordat Steering Group, membership of which includes two academics from the School (see REF 5a)

This unit promotes equal opportunities and outcomes by adopting flexible working practices and supporting family and work-life balance, which has helped many staff (including staff with young children, staff with disabilities and staff returning from sick leave), to continue to engage actively in research. Fast adoption to "working from home" mode since April 2020 has enabled the unit to further embrace flexible working practices to benefit all staff. This ensured continuity of research activities to mitigate the impact of Covid-19, where remote supervision via virtual meetings and online collaboration platform supports all staff and PGRs.

The unit is committed to ensuring the proper use of fixed-term contracts and clear guidelines are available on their deployment. These contracts are only used in exceptional circumstances and the unit is committed to the transfer of fixed-term staff on to established contracts after four years. Three members of staff in the unit have been converted to established contracts; all submitted staff are on permanent contracts. In addition, the unit is committed to achieving equality of opportunity for academic staff to develop as researchers and to recognising the requirement to take account of gender and diversity.

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This unit submission is composed of 23.8 male (51%) and 22.8 female (49%) FTEs (compared to 36% females in the sector nationally based on HESA data), with a 4:3 ratio of males to females at Professorial level. BU received an institutional Athena SWAN bronze award in 2015 and in the summer of that year signed the new Athena SWAN charter, which committed the university to meeting ten key principles within their policies, practices, action plans and culture. As a result, we have created an Athena SWAN institutional self-assessment team, which oversees the gender equality work at BU and is a sub-group of the Equality and Diversity Steering Group. In 2013 BU also launched the Women's Academic Network (WAN). BU also provides a research ethics e-module to enable all academic staff and PGRs to undertake training in research ethics.

The proportion of female and male staff being offered a role has changed over time. In 2013, 41% of all offers were to female applicants which changed to 50% by 2020. There was a higher proportion of White staff being offered a role in the departments in 2013 and 2020. Between 2015 and 2019 the proportion of male staff has remained consistent at over 60%. In 2020 this changed with 54% of staff being female. The proportion of Black, Asian, Minority, Ethnic (BAME) staff working in the departments has increased from 5% in 2015 to 23% in 2020. The proportion of staff with a disclosed disability has remained low and reached 3% by 2020. The majority of staff working in the department are from the age grouping 41-60. This has increased from 51% in 2013 to 59% by 2020.

3. Income, infrastructure and facilities**3.1 Income**

External income generation against all Research Councils UK (Economic and Social Research Council, Engineering and Physical Sciences Research Council, Arts and Humanities Research Council, National Institute of Health Research, British Council), charity, European Union, industry, and government-funded research, (which is credited to this UoA for REF2021 submission), stands at £1.27m. This headline figure gives only a small indication of the full picture of the numerous externally-funded projects to which members of this UoA and its two research centres have been engaged/aligned to as PIs, CoIs, and ECRs, including the impact of this funding on the development of impact case studies.

SPARC's Director (submitted to UoA20) and UoA24 de Lisio and Pullen have been involved as PI, CoI, and ECRs on the following externally-funded projects:

- Economic and Social Research Council: Sex work in the context of sports mega events: Examining the impacts of Rio 2016.
- Arts and Humanities Research Council:
 - Re-presenting para-sport bodies: Disability & the cultural legacy of the Paralympics.
 - Gendered re-presentations of disability: Equality, empowerment and marginalisation in Paralympic media.
 - Producing/Consuming 'Romantic Scotland': Exhibitions, Heritage, Nation & the Chinese Market.

SPARC's Deputy Director (Rees) has been involved (with other UoA24 members) as PI and CoI on a number of externally-funded projects:

- England Rugby: "Improving talent identification and development in the Rugby Football Union".
- AFC Bournemouth: Three projects examining: (a) "The diffusion and adoption of sport psychology in elite academy football: Integration and application" (with Wilding); (b) "Injury risk and performance: Towards a better understanding of the complexities and intricacies of load monitoring within an elite football club" and (c) "Performance Analysis in Football: Academy Development" (with Callaway).
- Stormbreak/Osteotec: "Mentally Healthy Movement with Primary Age School-Children" (with Lock).
- The National Institute of Health Research: "CLEAT (CycLing and EducATion) project"—a randomised controlled trial of a cycling and education intervention for the treatment of Hip

Unit-level environment template (REF5b)

Osteoarthritis.

- The Canadian Institute of Health Research: “GrOup-based physical Activity for oLder adults Trial 2.0 (GOAL 2.0)”.
- Active Dorset: “The Active Ageing project” (with Lock, Adams, Evans, and Blake).
- International Olympic Committee: “Coaches’ attitudes and behaviours towards doping and their impact on development athletes’ attitudes, intentions, and willingness to dope”.
- The Federation of University Sports of China.

ICTHR’s Director (Blake) has been either PI or CoI on the following externally funded projects:

- The Airports Commission: “Wider Economic Impact Assessment, assessment of the impact of airport expansion options”.
- Department of Digital, Culture, Media and Sport (DCMS): “Impact of Brexit on DCMS sectors”.
- Isle of Wight Council: “Isle of Wight Road Closure: impact on tourism”.
- Active Dorset: “Active Ageing Research and Evaluation”.
- Blackpool Council: “Pier Review: Informing the economic sustainability of Blackpool’s piers”.
- Department for the Economy, Northern Ireland Government: “Research on future tourism investment requirements in Northern Ireland”.
- Dorset Local Enterprise Partnership:
 - “Dorset Local Enterprise Partnership Strategic Economic Plan”.
 - “Local Growth - Local Enterprise Partnership data collection and project assessment process management”.
 - “Dorset Local Enterprise Partnership Growth Deals 2018 Update”.
 - “Dorset Local Enterprise Partnership Growth Deals 2019 Update”.
- Government of Gibraltar: “Analysis of the Likely Effects of Adopting the EU Common External Tariff and VAT”.
- Fáilte Ireland: “Assessment of the Impact of Tourism on the Irish Economy”.
- Events Industry Forum: “The economic and social value of outdoor events in the UK”.
- Lichfield District Council: “Lichfield event and festival evaluation”.

Other ICTHR staff have conducted or been a team member for the following projects for research councils and the European Commission:

- European Commission:
 - Framework Programme 7 Marie Skłodowska-Curie Actions: “Veggie Eat” (Hartwell).
 - Horizon 2020 Marie Skłodowska-Curie Actions: “FoodSMART” (Hartwell).
 - European Regional Development Fund, Interreg Europe: “DestiSMART” (Robbins).
 - Education, Audiovisual and Culture Executive Agency, Lifelong Learning: “InRuTou: Marketing for rural tourism areas development and promotion” (Inversini, began prior to 2014, finished in 2015).
 - Education, Audiovisual and Culture Executive Agency, Lifelong Learning: “EU Bike - European Cyclo Tourism Educational Program” (Inversini).
 - Framework Programme 7 Marie Skłodowska-Curie Actions: “Real-time Adaptive networked control of rescue roBOTS” (Cang, began prior to 2014, finished in 2016).
- British Council: “Building capacity for food rescue research and practice in Turkey (BIGSEED)” (Filimonau).
- British Academy: “Towards a Better Quality of Life: Value Co-Creation in Leisure with the Active Elderly” (Fan).
- British Council (Newton Fund): “Veg+” (Hartwell).
- Arts and Humanities Research Council: “Communities within spaces of flows” (Dickinson).

Key areas of income growth in the REF21 period have been income from the EU and UKRI Research Councils, Income from EU-funded projects increased by 133% compared to the previous REF period, and income from UKRI Research Councils, The Royal Society and British Academy increased by 21% (Figure 3).

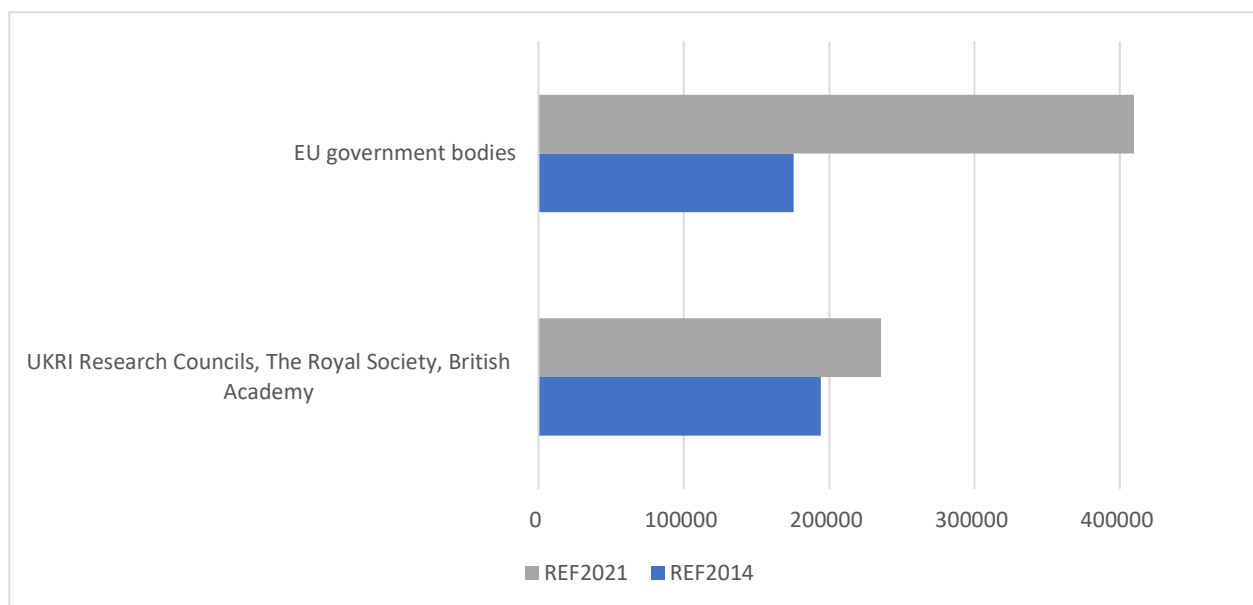


Figure 3. Key Funding Streams by REF periods

3.2 Infrastructure and Facilities

SPARC has had significant support and investment in staff during this REF period (as outlined in Section 1)—both in terms of posts and infrastructure. SPARC is led by two professors new to BU in this REF cycle (Silk and Rees). Silk has generated funding in excess of £1m from the Economic and Social Research Council and the Arts and Humanities Research Council. Rees has generated funding in excess of £700K from: the National Institute of Health Research, the Federation of University Sports of China, the Canadian Institute of Health Research, the International Olympic Committee, England Rugby, AFC Bournemouth and Active Dorset. Lock has generated funding from Qatar. Silk, Rees, and Lock have generated funding from Stormbreak/Osteotec. Lock and Rees have generated funding from Active Dorset. Callaway, Rees, and Wilding have generated funding from AFC Bournemouth. Wilding has generated funding from AFC Southampton. BU sees SPARC as a key area, which has been integral to its Fusion theme of Health and Well-Being, as well as the Strategic Investment Area of Medical Science. The university expects SPARC to drive its institutional research theme of “Helping people live better, for longer”. To support this area, in this REF cycle, BU invested in SPARC posts, as well as in new state-of-the-art laboratory space and equipment (adaptations to the building and laboratories to accommodate additional areas of activity and add capacity for future collaborations) for the sport and exercise sciences. This latter investment (in excess of c. £600K) included both a major one-off spend by Estates, refurbishing laboratories of c. £320K and equipment purchasing of c. £280K (but not including ongoing consumables, software, and maintenance costs). The latter investment has directly supported REF2 submitted outputs (e.g., Callaway et al., 2020; Dewhurst et al., 2019; Rendell et al., 2020) within this UoA, as well as numerous other eligible but non-submitted outputs (e.g., Green et al., 2018), data collection for funded research projects (Callaway, Dewhurst, Rees) and submitted impact case studies (“The development of athletic talent: Driving policy change in national sporting organisations”).

More generally, the university invests significantly in its estate each year to provide modern and well-equipped facilities. BU’s campus development programme includes work being undertaken at both the Talbot and Lansdowne campuses which is aimed to enhance interdisciplinary research and house our Research Centres.

BU’s Research Design and Support (RDS) office provides support for staff submitting proposals, including information about funding opportunities, advice on presenting and costing proposals. It manages finances of projects post-award and provides specialist advice on matters such as public engagement, impact and ethics and hiring in expert external speakers. In particular it supports:

- Horizon scanning and bid identification, with faculty-specific Research Design and Support officers working with academics, each of whom have a Research Professional account.
- Sand pits and workshops relating to particular funding streams and challenges.
- Bid Development – with Research Design and Support officers providing costing and other support services.
- Individual support from bid writing experts.
- Off-site writing retreats.
- A formal peer review system for large (>£50k) bids with a panel of academic reviewers providing feedback on bids prior to submission.
- Post award management with a full-time Research Design and Support, grant support officer.

Quality Research Funding has been allocated in a variety of different streams during this REF period, some centrally and some at faculty level. In 2017-18, for example, the faculty element of Quality Research funding included £32k in this UoA on activities with different goals for Early Career Researchers (£8k), Research Centre bid writing workshops (£5k), active research environment (£1k), Mid-career researcher development (£5k) and research capacity building (£13k). In 2018-19 this supported ten different activities underpinning research principles (£11k) and research impact (£3k) within the UoA.

The UoA has benefited from BU's Fusion Investment Fund (£126k spent in this UoA in this REF period). For example, King was allocated £6k in 2014 to fund collaborative activities with the University of South Australia, which has led to four journal publications and three conference presentations, all with co-authorship between BU and University of South Australia. Filimonau was allocated £3k in 2016 to enhance research collaboration with the University of Rio De Janeiro; this led to one British Council research funding application and three journal articles co-authored with academics from the University of Rio De Janeiro.

£85k of Higher Education Innovation Fund (HEIF) money was allocated in this UoA during the current REF period. Hartwell led a £15k HEIF 5 funded project "Destination FeelGood" and a £53k HEIF 5+1 funding project "FoodSMART" that led to ongoing research under the theme of wellness and tourism, as well as five outputs in international journals (including two in *Tourism Management*).

An additional funding stream demonstrates the development of the UoA's research environment in the last two years. In both 2017/18 and 2019/20, the Business School received 'surplus' funding for surpassing research targets. Surplus funding (17/18: £132k; 18/19: £223k) has been used in UoA 24 to further align to the Business School strategy, the Strategic Investment areas and the university's research principles. This financial support for UoA 24 is additional to support provided centrally by Research Design and Support in the form of dedicated staff (e.g. in support of grant funding), the Researcher Development Framework and central support delivered through the University's Research Performance and Management committee.

4. Collaboration and contribution to the research base, economy and society

The UoA continues to have a strong international profile, with research collaborations world-wide, examples include partner organisations in: Australia, Brazil, Canada., China, Hong Kong, India, Macau, New Zealand, Taiwan, the USA and numerous collaborations in the UK and Europe. Our staff hold visiting appointments at the Technological and Higher Education Institute of Hong Kong (Ladkin) and the University of Zagreb (Ladkin).

4.1 Supporting collaboration with organisations beyond higher education

The vision of the university's strategic plan BU2025 is to be recognised worldwide as a leading university for inspiring learning, advancing knowledge and enriching society through the fusion of education, research and practice. The inclusion of practice in this fusion approach in the BU2025

vision exemplifies the importance attached to activities beyond education and research, with explicit support being given to supporting professional practice activities. To this end, the university provided match-funded studentships yearly from 2014 to 2019, running competitively in each year, to provide university funding for PhD studentships, with an industry partner providing half of the studentship stipend, plus an enhanced fund for the student's development. This has not only benefitted the PhD students, but has explicitly encouraged collaboration with industry.

As examples of the latter process: AFC Bournemouth provided £54k of funding to support two matched-funded studentships; one examining its provision of sport psychology within its Academy, the other examining the player-load and injury relationship using machine learning. The Stormbreak project (£25.5k provided by Stormbreak/Osteotec) is examining the development of an intervention to embed the concept of daily "mentally healthy movement" in primary age schoolchildren.

We collaborate with partners at local, national and international levels. We work closely with the Dorset Local Enterprise Partnership, working with staff on other UoAs to produce their Strategic Economic Plan in 2014, which included prioritisation of potential Growth Deal funding projects, and repeated the prioritisation of potentially funded projects in 2018 and 2019. This helped the Local Enterprise Partnership narrow down a large set of proposed projects from around the county to a smaller list of projects to be put forward to central government when applying for funding. We have a longstanding collaborative relationship with the local council (since 2019, Bournemouth, Christchurch and Poole) and its predecessors. UoA member Sadd has worked closely with Bournemouth's events strategy, producing a Framework for Assessing the Management of Events which has been used to make decisions on which events take place, as well as the management of them.

4.2 Expert Advice

One key indication that research conducted at BU in this UoA is impactful beyond academia (in addition to the vibrancy of its research impact, noted in Section 1) is the number of times our staff have been asked to provide expert advice, for both national governments and international bodies. These include:

- The United Nations World Tourism Organisation (Buhalis).
- The Inter-American Development Bank (Blake).
- The European Union (The Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Committee of the Regions and Executive Agency for SMEs) (Buhalis).
- The House of Commons Select Committee on Digital, Culture, Media and Sport (January 2015) (Blake).
- The House of Commons Select Committee on Northern Ireland (November 2015) (Blake).
- The House of Lords Select Committee on Regenerating Seaside Towns (April 2019) (Chapman).
- "Posters in Parliament": in March 2019, Gouthro was a shortlisting judge for the British Conference of Undergraduate Research "Posters in Parliament" event.
- Kavanagh and Rees: Submitted evidence to the Duty of Care in Sport Review, Grey-Thompson, T. (2017). Duty of Care in Sport Independent Report to Government. London: HMSO.

Chairing industry forums: Public Policy Exchange Symposia on Tackling Discrimination in Sport (Jones) and The Future of Tourism in Post-Brexit Britain (Blake).

Staff within this UoA have provided expert advice to local councils in the UK, including: Bangor (Chapman), Blackpool (Chapman), Bournemouth Borough Council (Dickinson), Bournemouth, Christchurch and Poole Council (Sadd), Dorset County Council (Dickinson), Salisbury (Sadd), Somerset County Council (Dickinson), Southampton (Sadd), as well as other UK organisations, including: Airports Commission (Blake), Blackpool Museum (Chapman), British Amusement Catering Trade Association (Chapman), Colwyn Victoria Pier Trust (Chapman), Cranbourne Chase

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Area of Outstanding Natural Beauty (Beer), Dorset Race Equality Council (Dickinson), Hunstanton Heritage Pier Community Trust (Chapman), Yarlinton Housing Group (Dickinson), plus overseas organisations, including Australian Sports Commission (Lock), Japan Local Government Centre (Chapman), Mastercard Europe (Blake).

4.3 Contributions to profession

Staff in this UoA have been members of the peer review colleges for the Economic and Social Research Council (Chapman, Dickinson, Ladkin); Engineering and Physical Sciences Research Council (Dickinson); the British Academy (Ladkin). Overseas, they have reviewed for: the Swedish Research Council Formas (Dickinson), Swiss National Science Foundation (Dickinson), the Fundação para a Ciência e a Tecnologia, I. P. (FCT), Portugal (Buhalis, Dickinson, Ladkin), Cyprus Research Promotion Foundation (Ladkin), Social Sciences and Humanities Council of Canada (Light), Canada Research Chair Program (Rees), National Science Center, Poland (Light), Humanities in the European Research Area (Light), IOC Advanced Olympic Research Grant Programme (Lock), A3ES (Portuguese Agency of Evaluation and Accreditation) (Buhalis); Research Foundation Flanders (Rees).

Our staff are current executive board members for numerous organisations, or have been during this REF period, including: Active Dorset (Lock), Association for Events Management Education executor board (Gouthro), British Association of Sport and Exercise Sciences athlete protection task group (Kavanagh), British Conference of Undergraduate Research (Gouthro), Coastal Tourism Leadership Forum (Chapman), International Academy for Study of Tourism (Buhalis, 1st Vice President), International Association for Tourism Economics (Blake, President), International Federation for IT and Travel and Tourism (Buhalis, President), National Piers Society (Chapman), Netball Players Association (Kavanagh) and Seaside Heritage Network (Chapman).

The UoA includes the editor of *Tourism Review* (Buhalis). Many staff in the UoA are (or have been during this REF period) members of various journal editorial boards: *ACTA Turistica* (Ladkin), *Advances in Hospitality and Tourism Research* (Buhalis), *Annals of Tourism Research* (Blake, Ladkin), *BMC Sports Science, Medicine and Rehabilitation* (Williams), *Current Issues in Tourism* (Buhalis), *European Sport Management Quarterly* (Lock), *Event Management* (D. Sadd), *Frontiers in Sport Management and Marketing* (Lock), *Frontiers in Physiology* (Dewhurst), *Frontiers in Sports and Active Living* (Dewhurst), *International Journal of Contemporary Hospitality Management* (Buhalis, Ladkin), *International Journal of Event Management Research* (Ladkin), *International Journal of Tourism Research* (Buhalis), *Journal of Ethnic Foods* (Buhalis), *Journal of Hospitality and Tourism Management* (Buhalis), *Journal of Hospitality and Tourism Technology* (Buhalis), *Journal of Information Technology for Tourism* (Buhalis), *Journal of Quality Assurance in Hospitality & Tourism* (Fan), *Journal of Sport Management* (Lock), *Journal of Sustainable Tourism* (Dickinson), *Journal of Teaching in Travel & Tourism* (Ladkin), *Journal of Tourism & Development* (Ladkin), *Journal of Tourism, Heritage & Services Marketing* (Buhalis), *Journal of Transport Geography* (Dickinson), *Psychology of Sport and Exercise* (Rees), *Review of Tourism Sciences* (Buhalis), *Sport & Exercise Psychology Review* (Rees), *Sport Management Review* (Lock), *Tourism and Hospitality Management* (Buhalis), *Tourism Economics* (Blake, Ladkin), *Tourism Review* (Fan, assistant editor).