

Institution: University of Surrey
Unit of Assessment: 24 Sport and Exercise Sciences, Leisure and Tourism
<p>1. Unit context and structure, research and impact strategy</p> <p><u>Unit context</u></p> <p>This submitted unit is based on the School of Hospitality and Tourism Management (SHTM), which has a world-class reputation for its research in tourism, hospitality and events, dating back to 1966 as the first university to offer degree courses in the subject area and being the first to receive the Tourism Society Award in recognition of its commitment to excellence. Our vibrant research culture and excellent facilities attract researchers and postgraduate students (PGRs) from around the world, creating a diverse and stimulating research community. We are consistently in the top 10 in global subject rankings (Shanghai, QS) and have the largest (54) PGR cohort in our subject area globally. Our vision is to strengthen our position as a global leader in tourism, hospitality and events research, recognised for our leadership, research outputs and influence on a range of stakeholders.</p> <p>Following a strong REF2014 outcome, the University of Surrey heavily invested in the expansion and reorganisation of SHTM's research environment, ensuring its sustainability and vitality. The headcount of research-active staff nearly doubled from 15 in 2008, to 24 by REF2014, to 28 in 2020. This includes significant investment in leadership, with the number of Professors increasing from five in 2010 to nine in 2020, plus another two part-time internationally renowned 'VC Fellows' – Profs Becken and Scott - appointed in 2019/20 to strengthen our future international research leadership.</p> <p>The School's research environment is led by its Director of Research (DoR, Cohen), who reports to the Head of School (HoS, Morgan) and the Faculty Research and Innovation Committee. SHTM's research organisation is further supported by the School's Impact Lead (Humbracht) and PGR Director (Kimbun). In 2015 SHTM reorganised its research focus around three research groups to stimulate and manage research: Competitiveness in the Visitor Economy (COVE), Digital Transformation in the Visitor Economy (DIGMY) and Sustainability and Wellbeing in the Visitor Economy (SWELL). This enabled investment and critical mass to be focused on SHTM's areas of strength as identified through REF2014 and facilitated the strategic decision to develop new expertise in the digital economy. In 2019 the University recognised the success of these groups and formalised them into Research Centres - providing additional funding to raise their internal and external profiles. Each centre is led by a senior Professor.</p> <p>COVE</p> <p>COVE addresses competitiveness issues in the visitor economy across firm, sector and destination levels, while maintaining the School's world-leading position in demand-forecasting research. The Centre is led by Prof G. Li, working with the other senior academics including Profs Eves and Williams, and Drs Chen, Y. Kim, Y. Li, A. Liu, O'Connell, Wang and Xu.</p> <p>DIGMY</p> <p>As the School's newest research area, DIGMY focuses on the power of information technology and digital media in the visitor economy. The creation of the SHTM Digital Lab in 2015 facilitates world-class biometric research and experimentation with the latest technology applications such as virtual reality and eye-tracking. Led by Prof Scarles, other senior academics working in this Centre include Prof Tussyadiah and Drs Gkritzali, D. Liu, Shin and Stangl.</p> <p>SWELL</p> <p>SWELL seeks to drive inspiration for an environmentally, economically and socially sustainable society, with a focus on the tourism, transport, hospitality and events industries. Prof Font leads</p>

the Centre, working with other senior academics: Profs Cohen, Miller and Morgan and Drs Duignan, Humbracht, Kimbu, Ribeiro and Thomopoulos. From 2019/2020, Profs Becken and Scott joined the Centre, to cement its position as a global leader.

COVE, DIGMY and SWELL map to the University's four strategic research themes of Sustainability, Urban Living, Lifelong Health and Technology & Society, and they provide regular fora for staff and PGRs to integrate and develop individual and collaborative research, while maximising the academic and non-academic impact of SHTM's research. As further evidence of vitality, each Centre has received substantial investment in the form of a full-time Research Fellow, funded by the School, since 2015. Staff recruitment has aimed to ensure leadership, sustainability and resilience in the three Centres: each currently has two to six Professors, several mid-career and early career researchers (ECRs) and 12-22 PGRs.

The Centre leaders, DoR, Impact Lead, PGR Director and HoS form the School's Research Committee, which meets twice per semester to review, monitor and take strategic decisions on research management. All School staff attend School Research Meetings twice per semester, which combine reporting by the Centres with research updates and guest speakers, addressing cutting-edge funding, dissemination and impact issues.

Research and Impact Strategy – review and the next five years

Each Centre produced a research plan in 2015, revised in 2018. The plans mutually inform the School Research Strategy (2015-2020) which was also revised in 2018. The School conducted an internal review following REF2014 and, while our overall mission has remained the same, we took the opportunity to review our objectives, taking account of new opportunities and staff changes.

As set out in the School Research Strategy in 2015, we set an overall goal to strengthen our position as a global leader (consistently top ten in the main global rankings) in tourism, hospitality and events research, being recognised for our leadership, outputs and influence on a range of stakeholders. The five specific objectives were:

OBJECTIVES	REF PERIOD HIGHLIGHTS
To be recognised as international research leaders in the School's three main research areas.	<ul style="list-style-type: none"> • Creation of three SHTM Research Centres: COVE, DIGMY and SWELL • Editorship during REF of two of the top six journals in our field: <i>Annals of Tourism Research</i> and <i>Journal of Sustainable Tourism</i> • Five academics elected members of the leading global tourism academy, International Academy for the Study of Tourism • Two academics elected members of the Academy of Social Science • Implementation of tripartite research agreement with other global leaders in field - Queensland and Sun Yat-sen universities - generating collaborative international projects • Appointment of two 'VC Fellows' to shape future research directions: global research leaders Profs Becken and Scott. Becken awarded UNWTO Ulysses Prize ('Nobel Prize' in tourism)
To strengthen our position as an international centre of	<ul style="list-style-type: none"> • 40% of outputs in top 5% of journals globally (78% in top quartile) • 60% of outputs with an international co-author

research excellence, based on the production and dissemination of high-quality research outputs in leading international journals.	<ul style="list-style-type: none"> • 31% of outputs in top 10% cited globally, with overall field-weighted citation impact of 2.39, compared against global average of 1.0 (SciVal) • Introduction of sabbatical leave to enable quality research time • Commenced staff training workshops on writing and publication • Mentoring of ECR publication
To further expand a substantial and vibrant PGR community	<ul style="list-style-type: none"> • PGR numbers increased from 32 in 2014 to 54 in 2020 • New 60-hour training module for all new PGRs • Awarded 30 studentships, and won five ESRC and three European Interreg funded studentships
To maximise research impact on non-academic stakeholders.	<ul style="list-style-type: none"> • Appointment of Professor of Practice (Watson) • ESRC Impact Accelerator Grant of £1 million to Faculty led by Prof Miller (SHTM) • Reorganised School (Industry) Advisory Board • Partner in €23.5 million EU Interreg project • Awarded two ESRC Covid-19 grants
To provide a strong resource base as an essential platform for the fulfilment of our other objectives.	<ul style="list-style-type: none"> • Average p/a external research income nearly tripled from £98k in REF2014 to £290k in this REF. • Research grants awarded: UK research councils (five), H2020, Interreg, Marie Curie, Leverhulme Visiting Professorship, EU Directorates, Newton Mobility, British Academy • Research active staff increased from 15 in 2008 to 28 in 2020 • Seven new professorial appointments • Transfer to larger, refurbished building in 2016 • Creation of SHTM Digital Lab (£150k investment)

Each Centre has significant achievements in the REF period:

COVE: Key achievements include the work captured in two of SHTM's impact case studies - demand forecasting and productivity - the latter facilitated by an ESRC grant on labour migration, flexibility and productivity. The Centre also successfully partnered in a €2.5 million H2020 grant that studied the transition from youth to adulthood, and an ESRC Covid-19 grant on tourism intentions.

DIGMY: Notable achievements include the creation of the SHTM Digital Lab (recently benefitted from additional £70k CapEX funding), two prestigious EPSRC awards, one to develop the world's first AI-powered travel guide, and the other a privacy-aware personal data management platform for leisure travellers; and an ESRC Covid-19 grant to study leisure in natural settings.

SWELL: The Centre is an editorial home (Font as editor-in-chief) of the *Journal of Sustainable Tourism*, a leading tourism journal. Important achievements in this REF include the work captured in the hypermobility impact case study, development of the EU-funded European Tourism Indicators System that has been adopted by more than 200 organisations, and partnership in a €23.5 million EU Interreg funded project on destination marketing and sustainability.

Beyond 2020: future research

While Covid-19 has had a major impact on the tourism, hospitality and events sectors, it also created important opportunities for regenerating their competitiveness, sustainability and technological horizons. Building on the proven successes of our 2014 Research Strategy, we will initially consolidate and strengthen COVE, DIGMY and SWELL through further increasing user engagement, peer-reviewed grant capture, high quality publications and completing more than 20 current research projects. These include major externally-funded projects: three research council grants (each circa £200k) – EPSRC Next Generation Paper, Additional Covid funding, two ESRC Covid-19 grants on tourism intentions and on connecting with nature – as well as being partners in the €23.5 million EU Interreg EXPERIENCE on seasonality and sustainability, and the €2.5 million H2020 project on automation and the transport labour force.

Over the next five years, our revised School strategy, the sustainability of which will be supported by future staff appointments and PhD scholarships, will focus on:

- a) organisational changes, with new sub-centres incubated to formalise links across the three existing Centres, such as HaRM, the Observatory for Human Rights and Major Events led by new appointment Duignan;
- b) advancing our internationalised research collaboration by shifting from our formal research partnerships (tripartite with Queensland and Sun Yat-Sen, dual PhD with HKPU) to create truly Global Research Centres, in partnership with other world-leading research centres and international non-academic organisations;
- c) developing new interdisciplinary research agendas that address shifting major societal challenges, such as the digital transformation driven by artificial intelligence, automation, and other cyber-physical systems (Industry 4.0), as well as the drive towards a more responsible economy (e.g. circular economy, sustainability transitions), with implications for productivity, future forms of mobility and a more socially inclusive visitor economy;
- d) embracing innovative methodologies such as longitudinal analyses, including experimental research with new biometric equipment in our digital laboratory, supplemented with field experiments that build on our EPSRC grants, recent ESRC studentship and CapEx funding successes, and increasing use of big data; we aim to become a world leading hub for multi-scale secondary data analysis in our field;
- e) increasing our societal impact through creating more formal research co-creation partnerships such as those we have with Nature England, Visit Britain, ABTA, UK Hospitality, Institute of Hospitality and the UK Department for Transport.

Supporting impact

SHTM aims to drive positive technological, economic, social and environmental change by actively contributing to industry, commerce, government and civil society. Impact is enabled in SHTM partly through the initiatives of its Impact Lead, who chairs the School Impact Committee, which meets twice per semester and reports to the School Research Committee. The Impact Committee works to embed a wider culture of impact within the School, its three Centres and among all levels of staff and PGRs. This has been achieved through providing school-level impact training to all staff and PGRs and through events such as stakeholder engagement workshops and guest speakers. The latter for example has included a workshop on impact maximisation provided by Rand Europe, an educational policy consultancy firm. The University provides drop-in and formal impact training sessions, which are supported by the School. Impact is considered within staff recruitment and staff are recognised for impact achievements in annual appraisals. Impact pump-priming awards are open to staff throughout the Faculty, with four School staff successful (Scarles,

Cohen, Y. Li, Font)) during this REF. The Faculty has won an ESRC Impact Accelerator Grant of £1 million (2019-23), led by SHTM's Miller, used to facilitate future impact across its schools during this REF and beyond. The School's investment in impact has facilitated its success in being awarded two ESRC Covid-19 research grants in summer 2020 (PIs Scarles, Williams).

Impactful partnerships

The School aims for its research to be impactful at industry, policy and wider societal levels, achieving this in part through long-term partnerships with leading international organisations. Such example partnerships include the World Travel and Tourism Council (WTTC), the United Nations World Tourism Organization (UNWTO), the Pacific Asia Travel Association (PATA) and the Institute of Hospitality. The School also has strong ties with national and regional bodies such as Visit Britain, Visit England, Visit Wales, Visit Surrey and the UK Department for Transport. These links with industry and national organisations have been cultivated through several strategies: a) the appointment of Visiting Professors to the School (e.g. Rodrigues, Chairman of Visit Britain; Cows, Founder of Eproductive; Telfer, Product Director of Explore Worldwide); b) meeting each semester with the SHTM Advisory Board, which is constituted of key industry representatives; and c) presentations by end users to the SHTM weekly research seminar series.

SHTM has also had ESRC CASE Studentships to work with Barcelona City Council and Explore Worldwide, two EU Marie Curie fellowships to work with Segittur, the Spanish national tourism innovation and enterprise body and ESRC grants involving formal contractual collaboration with Eproductive, Visit Britain, ABTA and Natural England. Furthermore, SHTM works with non-academic partners on industry-commissioned research, such as with World Animal Protection, and by having been commissioned to write Visit Britain's 'UK Tourism Productivity Report'. Longstanding research strands within SHTM, such as demand forecasting and productivity studies, feed into the selected impact case studies. PATA and Eproductive are long-established industrial partners of the School and each is a collaborator in one of the case studies, while the third case study, on hypermobility, has benefitted from impact pump-priming funding to accelerate its relationship with new industrial partners such as International SOS. Illustrating our ethos of collaborating with our partners at the earliest stages of research, the case study on productivity stems from an industry partnership that was integral to the first of SHTM's research council grants during this REF.

Supporting interdisciplinary research

The study of tourism, hospitality and events is inherently multi-disciplinary, and in this REF the School has added to its disciplinary diversity by recruiting staff with doctoral or MSc experience in computer science, ecology, earth science, human resources, sociology, transport and geography. These staff are spread across the three Centres, which are themselves highly interdisciplinary. SHTM views the bridging of knowledge boundaries as essential to innovative research and therefore strongly supports interdisciplinary research above and beyond its own internal cross-disciplinary expertise. The University's ethos and size encourages interdisciplinary research within its research community. This is supported through internal funding such as faculty small grants and centrally awarded medium grants (Global Challenges Research Fund [GCRF], Industrial Strategy Challenge Funding [ISCF]) that encourage, and sometimes require, interdisciplinarity.

SHTM's success in securing prestigious funding as part of interdisciplinary teams shows these support mechanisms are working. Cohen and Thomopoulos had successive awards from ISCF on projects with Surrey's Centre for Automotive Engineering to develop interdisciplinary capacities on future mobility and human-centred, autonomous electric vehicles. Working with Surrey's School of Veterinary Medicine and Centre for Environment and Sustainability, Font obtained GCRF funding to examine conflict resolution between humans and monkeys. Both Tussyadiah and

Scarles have obtained large EPSRC grants, the former working with external collaborators from Computer Science to improve data privacy for travellers, the latter with internal and external colleagues from the Centre for Vision, Speech and Signal Processing, Digital Design and Geography to explore, through the domain of tourism, the future of augmented paper. These interdisciplinary projects were encouraged and facilitated through the University's strategic research themes, reflecting SHTM's strong interdisciplinary links throughout the University, wherein grant applications have been submitted or awarded also with The Sleep Centre, Mathematics, 5G Innovation Centre, Law and Clinical Psychology. SHTM (Eves) co-founded the cross-faculty Food, Consumer Behaviour and Health Research Centre, now led by Health and Medical Sciences.

An open research environment with integrity

SHTM is committed to transparency, open communication and making research findings widely available to other researchers and the public. Its researchers aim for the highest standards of research ethics and openness. Within the framework of the University's Open Research policy, an open research culture has been fostered in SHTM through sessions delivered by the University's Open Research Team to the School on Research Data Management (2018) and Research Visibility (2020). Data from all the School's research council grants in this REF have been deposited in the UK Data Archive. At Away Days and Research Meetings the School encourages all research outputs to be made available via open access. This is supported by a university fund for making selected publications (received by Kimbu, Cohen, Thomopoulos and Williams) available as gold open access. SHTM's report on UK Tourism Productivity for Visit Britain (PI Y. Kim) was made open access on both the University's and Visit Britain's websites.

Open Research objectives are embedded into the School's research strategy, including an objective to adopt ORCID profiles. Research integrity is promoted and discussed at School Research Meetings and is supported by the University's Research Integrity and Governance Office (RIGO), who ensure their rigorous ethical procedure is applied to all SHTM staff and PGR research. RIGO offers regular drop-in sessions for ethics-related questions and gave a bespoke training session to the School on ethics procedures (2019). Further ethics training was delivered to the entire School by the Observatory for Responsible Research and Innovation, funded through the EPSRC-funded PriVELT project. The University's legal department ensures all legal aspects of confidentiality are followed in relation to SHTM's research, including sub-contracts to research partners, and when acting as contractors or consultants.

2. People

Staffing strategy and staff development

The School's staffing strategy, successfully implemented, is that all SHTM staff eligible for this REF are on permanent contracts. New staff recruitment is led by the School's Senior Management Group which includes the DoR. Its appointments strategy is to balance teaching, research and leadership requirements, as well as equality and diversity goals. The DoR and HoS consult the leaders of the three Centres, aiming to: a) further strengthen the Centres; b) promote synergies between them; and c) achieve a balanced mixture of ECRs, mid-career and senior staff, to ensure vitality, sustainability and resilience. This successfully led to the expansion of research-active staff from 24 to 28 during the REF period, to each Centre having at least 20 members (including at least two Professors, ECRs, and PGRs) and several major projects involving collaboration across Centres.

Several senior SHTM staff (Profs Jago, Lockwood, Tribe) retired during this REF period, but sustainability has been ensured via planned leadership succession that saw the number of chairs

increase from six to nine since REF2014: both through the School's recruitment strategy (Profs Font from Leeds Beckett University, Morgan from Swansea University) and internal promotions (Profs Cohen, Eves, G. Li, Scarles, Tussyadiah). Recruitment also ensured a relatively young (68% aged under 45) and gender-balanced (48% women) overall staff profile, reinforcing vitality and sustainability. Further staff were recruited at Senior Lecturer and Reader levels (Duignan – Coventry, Howarth – Surrey's Sociology Department, Lundberg – Leeds Beckett, O'Connell – Cranfield, Thomopoulos – LSE, Tussyadiah – Washington State, Wang – UWL). This operates alongside strong ECR recruitment (de Jong – Wollongong, Humbracht – Lund, B. Kim and Xu – Pennsylvania State, Y. Kim – LSE, Y. Li – Oxford Brookes, A. Liu – Hong Kong Polytechnic University, H. Liu – Temple, Ribeiro – Middlesex, Shin – Virginia Tech, Stienmetz – Florida). There is also a good record of rapid promotion to Senior Lecturer (seven of eight applications successful: Chen, Gkritzali, Hanna, Kimbu, A. Liu, Stangl, Xu).

SHTM has additionally benefitted from university investment in two 'VC Fellows', Becken and Scott, both world-renowned Professors in sustainable tourism, who will build further capacities in SWELL. Through a large and vibrant visiting scholar programme, SHTM hosts 10-15 international visitors annually, who work with staff on a project proposal or research output and present their research at our weekly seminar series. The School's research environment is further enhanced by the active involvement of its eight Emeritus Professors (Airey, Archer, Jago, Jones, Lockwood, Riley, Tribe, Witt) and five appointed Visiting Professors (Cows, Pike, Pride, Rodriguez, Telfer).

COVE, DIGMY and SWELL are vital to the integration of new staff: each staff member is a member of at least one Centre. This mechanism helps ensure all new staff/ECRs are included in grant applications and all are joint PhD supervisors within six months of being in post. All staff members, including the Centres' Research Fellows, receive an annual personal development allowance of £1,250.

The Research Fellow posts, School-funded since 2015, bring strength and support to each Centre, and are indicative of PDRFs' importance to SHTM's wider research environment. Additionally, SHTM has attracted five Marie Skłodowska Curie fellows (two years each) and PDRFs (1-3 years) on all five of the School's research council and H2020 grants, as well as shorter-term research fellows/assistants, working on other projects. They are all essential to the School's vitality, and reinforce the work of its Centres, including research applications.

SHTM runs a mentoring programme, with a mentor appointed for all staff recruited since 2016 and available to all other staff. ECRs are on probation for up to three years, and all have mentors, during which time their progress is reviewed annually by their line manager and a further appointed 'senior colleague'. Newly appointed ECRs are given a reduced teaching load and scaled-down research targets that allow them to develop incrementally, before transitioning off probation when probation reviews are supplanted by annual appraisals.

Support is provided for the career development of non-probationary staff in several ways. Appraisals are based on a substantial dialogue between individuals and line managers, including identifying and remedying barriers to effective research. They also recognise and reward staff through performance-related pay for achievements (including research performance on publications in highly ranked journals, peer-reviewed funding, impact and leadership). Furthermore, the Faculty conducts an annual research profile review, which provides staff with feedback not only on achievements but also on plans related to publications, research funding and leadership. Time for carrying out research and achieving impact is provided to staff through a centrally-monitored workload model, which also gives administrative time for significant research management roles, wherein all staff with research in their contract have a minimum of 40% of their time allocated to research. Staff with substantial time allocated to funded projects, supervising PGRs and/or journal editorship are given as much as 50% of their time for research. Research

time is capped at 50% to ensure the fair distribution of teaching, thereby protecting ECRs who have not yet had time to accumulate PhD students or win a large grant.

The University's Doctoral College provides training and development opportunities for PGRs, ECRs and doctoral supervisors, through a comprehensive Research Development programme of 300 training and professional development opportunities annually: face-to face and virtual workshops, online resources, mentoring and one-to-one-coaching. ECRs are strongly encouraged to attend. This is supplemented by research training provided by SHTM (e.g. bite-size workshops, originality in research publications, experimental methods, systematic literature reviews, learning from theatre and performance research), with a minimum of one event per semester.

The University uses a broad definition of ECRs to include academic staff and those on fixed-term contracts. The School aims to ensure that ECRs are: a) represented on key research-related committees, with representation (Humbracht) presently on both the Impact and Research Committees; b) given opportunities to present their research in bite-size summaries at School coffee meetings (including special sessions for the University's 'celebrate ECRs day'), or in a more expanded format at the School's weekly research seminar series; and c) able to benefit from policies in place since 2018 to provide them with PGR supervision and examination opportunities (five of nine at the start of 2020 have been internal PhD examiners).

SHTM follows the University's sabbatical leave policy: any staff member with at least three years' continuous service who has successfully completed probation can apply for sabbatical leave. One period of leave is allowed in a five-year cycle, and the typical length of leave is one semester plus the summer. Seven SHTM staff members have been awarded sabbatical leave in this REF: Lecturers Chambers, Eichhorn; SL Chen; Profs Tribe, Lockwood, G. Li, Scarles.

Research students

With 54 PGRs enrolled in the School at the end of 2020, SHTM has the largest cohort of PGRs in its subject area globally. Our PGRs come from across the world, with 90% from outside the UK, drawn from six continents. SHTM's recruitment of PGRs is balanced across its Centres to ensure their respective vitality. The School's entry requirements for PGRs were raised from holding a Masters with merit to a distinction during this REF, in line with its rising quality standards for PGRs. Overall PGR numbers and the proportion of those on studentships (as opposed to self-funded) has increased since 2014, with 32 (59%) of 54 registered PGRs in 2020 being in receipt of grants.

PGR recruitment is communicated via open advertisements, academic networks, the School's international partner institutions and its new joint PhD programme with Hong Kong Polytechnic University (HKPU), number one globally in our subject area. Recruitment is supported by Doctoral College, Faculty and School-level studentships, and by SHTM's inclusion in this REF initially in the ESRC Southeast Doctoral Training Centre's Management pathway, and subsequently in the ESRC South East Network for Social Sciences Doctoral Training Partnership's (DTP's) Management and Development pathways. Since 2014 SHTM has awarded 23 fully-funded and seven tuition-fee only studentships and won five ESRC and three European Interreg funded studentships. Furthermore, one ESRC and three internally-funded scholarship students started in 2012, which equates to 36 funded (or six p/a) PGRs during this REF period. In addition to the six ESRC and three Interreg studentships, SHTM secured one Commonwealth scholarship. One PGR was selected for an ESRC Productivity Insights workshop for ECRs and won a small ESRC grant to pilot their research, while three ESRC Industry Engagement awards of approximately £2-5k were awarded to SHTM PGRs in 2018.

Completions have risen from 6 p/a in REF2014 to 8 p/a in REF2021, reflecting our focus on both increasing quality and creating a critical mass in our PGR community; recent increases in recruitment imply a sharp rise in completions in the medium-term.

Year	PhDs completed	Research-based professional doctorates completed
2013-14	10	0
2014-15	6	2
2015-16	4	0
2016-17	6	0
2017-18	11	0
2018-19	8	0
2019-20	9	0

Overall co-ordination of the School's PhD programme is provided by the PGR Director (Kimbu), who reports into the School Research Committee and the Doctoral College. Each PGR has at least two supervisors, who receive mandatory PhD supervision training. PGRs meet at least monthly with their supervisors, including formal monthly reporting on progress. All PGRs submit a confirmation report at 12-18 months from starting and have two internal examiners. All internal examiners have received Doctoral College training on PhD examination.

The integration of PGRs with staff within SHTM is a priority. The transfer of the School to a new site in 2016 enabled all staff and PGRs to be accommodated in a single building. Spaces were created within the School for formal and informal interaction between PGRs and staff, e.g. weekly staff/PGR coffee meetings. PGRs fully participate in the meetings and activities of COVE, DIGMY or SWELL. Research training is provided by the School through a compulsory 60-hour module across two semesters; PGRs also have access to all other available Faculty training courses, are invited to the School's research training events for staff and to over 300 Doctoral College professional development and training courses. They are encouraged to attend the annual University postgraduate conference, ESRC advanced training workshops, the ESRC DTP annual conference and a residential Faculty PGR summer school. PGRs also organise their own half- and one-day School events, in addition to the SHTM weekly research seminar series introduced in 2013. This seminar series is attended by both PGRs and staff, and includes guest speakers from industry and academia, including many SHTM visiting scholars. PGRs are required to present their work at least once at this series.

All PGRs receive a £750 allowance annually for three years for research/mobility. Additional small grants can be awarded through the Doctoral College (e.g. one awarded £3k through Building Research Communities fund) and the ESRC DTP. PGRs have been fully funded to participate in the School's annual tripartite workshop with Queensland and Sun Yat-sen Universities, as well as bilateral research workshops with the Surrey International Institute at Dongbei University of Finance and Economics (DUFE) in China.

Equality and diversity

The School's staff encompass 18 nationalities, spanning Africa, Asia, Europe, Oceania and North America, recognising the global reach of research in our field and a belief that diversity fosters

creativity. SHTM's Equality, Diversity and Inclusion (EDI) Committee (Y. Kim, Ramakrishnan and led by the HoS) oversees the School's commitment to equality of opportunity for all staff and PGRs, with this committee reporting into and feeding back good practice from the Faculty's EDI Committee. EDI is considered for all research activities, i.e. support for submission of funding applications, access to internal funds, promotion and reward, recruitment for leadership roles, conference attendance, sabbatical and training. Online Unconscious Bias and face-to-face training is mandatory for all staff involved in recruitment, REF, disciplinary and promotion procedures. In line with encouraging diversity, eight students were part-time in 2019-20 and are supported by our formal PGR training being video-recorded and made available online live and on-demand. 62% are female students.

SHTM is submitting its application in November 2021 for an Athena SWAN bronze award, with self-assessment meetings taking place regularly. This award will recognise the School's work in promoting gender equality, as part of its broader commitment to EDI. Female members of staff have participated in training programmes offered by Springboard and Aurora designed to enhance female leadership and career progression. Within the framework of the University's sabbatical leave policy that provides equal access after a minimum qualifying period, the seven sabbatical leaves awarded in this REF period were equally distributed between female and male academics, with two awarded to ECRs, one to a mid-career academic and four to senior academics. SHTM is supportive of flexible working (and follows the University's policy for flexible working), and emphasises this in all job adverts, as well as being supportive of staff remote and/or part-time working. Part-time learning among PGRs (e.g. Winchenbach, Ellerby, Smit) is also supported. Part-time and fixed-term staff are not disadvantaged in career pathways (e.g. Stangl – 0.5FTE – promoted to SL in 2018; Rodriguez appointed Research Fellow A in 2019 and promoted to Research Fellow B in 2020, following a Marie Curie fellowship). School meetings are scheduled between 10am and 4pm to facilitate flexible work hours.

With reduced teaching load and scaled-down research targets, ECRs are supported in their development; they are given preference in School and Faculty small grant competitions, with some small grants open only to ECRs. ECRs and others with limited experience are actively supported in contesting external funding through inclusion in investigator teams in grant applications (e.g. A. Liu, Chen, Gkritzali, de Jong, Ribeiro, Rodriguez). Otherwise SHTM follows principles of equality in the distribution of research resources: all staff have 40-50% of their time for research and receive a £1,250 p/a personal development allowance. Appointment into research leadership roles is based on experience and proven leadership, with four early- to mid-career staff occupying School research leadership roles during this REF (Howarth, Humbracht – Impact Lead; Hanna, Kimbu – PGR Director; Tussyadiah – Digital Visitor Economy Research Group Leader).

Staff returning from long periods of absence are given reduced research targets and phased returns, while PGRs are allowed temporary withdrawals that do not count towards their time enrolled. On return from parental leave, staff are given a reduced teaching load during the first full semester back to enable their return to productive research. They also have access to the University's VC Inclusion and Career Investment awards, which provide additional research support as well as travel awards for staff with care responsibilities.

The wellbeing of staff and PGRs is of high concern within SHTM and is aided by the allocation of mentors to staff where there is no line management relationship involved. All staff and PGRs are encouraged to: a) be active members of and identify with at least one of the Centres; b) attend the weekly research seminar series; and c) attend the weekly School coffee meetings, to help ensure a collegial and supportive environment. These events continued remotely during the Covid-19 pandemic. Wellbeing is regularly emphasised at School meetings, including dedicated wellbeing sessions. Further support is available to staff and PGRs through the University's Centre for Wellbeing, which provides bespoke biennial presentations to the School; Doctoral College Disability and Neurodiversity service which supports those with learning needs and other

disabilities; Mental Health First Aid training to support PGRs and staff. Watson is wellbeing champion, and Reardon is a trained mental health advisor, within the School.

Adhering to the University's REF Code of Practice, the UoA Lead (Williams) and the output review panel attended equality and diversity training. Prof Scarles sits on the University's REF EDI Committee, and feeds back institutional good practice to the School. All publications submitted by staff for potential inclusion in this REF submission were reviewed by both internal and external assessors. A panel comprised of the Centre leaders, DoR, HoS and the UoA Lead, with a representative of the University's REF team present, then evaluated these considering that all staff had the opportunity to nominate their top five publications. Equality Impact Assessments have been carried out throughout the REF submission process.

3. Income, infrastructure and facilities

Research income

An element of the School's Research Strategy is to maximise research income as it is essential for leveraging additional resources, producing high quality publications, increasing the impact of its research (key to two of our three impact case studies), internal and external collaboration and enhancing team research. Average p/a external research income to the School has nearly tripled from £98k in REF 2014 to £290k in this REF period, rising to a maximum of £363k in 2019-20. SHTM places particular value on peer-reviewed, competitive grants from research councils, and from the H2020 programme, especially those contributing to theories and methods. This includes large grants from research councils (five), H2020 (two) and Interreg (one); medium grants from the EU (one), Marie Curie (five), Leverhulme Visiting Professorship (one) and Newton Mobility (one); and one British Academy small grant. Examples including large consortia are YMOBILITY (H2020, nine European partners, €350k to Surrey as part of €2.5 million grant) and the Interreg programme on destination marketing and sustainability (11 European partners, €533k to Surrey as part of €23.5 million grant). Other major and prestigious grants awarded include PriVELT (EPSRC, five partners across four UK universities, £330k to Surrey as part of £1.4 million grant), an ESRC Labour migration, flexibility and productivity grant (£250k), and Next Generation Paper (EPSRC, four partners across two UK universities, £150K to Surrey as part of £1.2 million grant), and two ESRC Covid-19 grants (£175k, £235k). Also notable are five EU Marie Curie Fellowships (approximately €180-200k each) and €135k awarded by the EU Clean Sky Joint Undertaking.

The growth of research income has been enabled by the School's Research Strategy. The School provides annual training courses on preparing grant applications, mentorship on bids involving ECRs and the inclusion of ECRs in larger grant applications. Furthermore, the DoR has an annual budget of £13k to support research activities, including annual research think-tanks led by each of the Centres, which use these events to stimulate large collaborative grant applications. These think-tanks were supplanted by online webinars during the pandemic. SHTM's annual tripartite workshop with Queensland and Sun Yat-sen Universities also provides links with strategic international partners with the aim of generating collective bidding.

The Faculty's Research Fellowships, as part of a policy to support mid-career researchers, provide teaching relief for one semester to write a grant application, with three School staff being recipients of this support in this REF (Howarth, Lundberg, Gkritzali): more than any other school in the Faculty. The Faculty also runs all bids through a peer review process so they can be strengthened prior to submission. The University holds events for staff annually in which the UK research councils brief staff on funding pathways and give feedback on project ideas, while dedicated support for European funding is provided through the University's EU Research Bid Development Manager. The University also allocates strategic funding for medium-sized grants through ISCF and GCRF. It awarded two grants to SHTM through GCRF (£100k, £68k in 2019) and three

through ISCF (£128k, £114k, £144k in 2019/20). Other University support includes five SME Innovation Vouchers awarded, of £4-£12k, to SHTM ECRs.

Further SHTM grant activity takes place with non-EU international partners, with the tripartite consortium with Queensland and Sun Yat-sen universities securing a £250k grant from the China National Science Foundation on collaborative sustainable tourism development. Our collaboration with HKPU has also been fruitful, with funding of £30-50k each being secured from the Hong Kong Research Grant Council for projects on labour productivity, innovation, and in-destination decision-making. SHTM also received international grants from the China National Tourism Office (£25k on British tourists' satisfaction indexes in China), HKPU (£42k on demand forecasting), MetroDataTech and Yunnan province (£82k on demand forecasting and impact), Shanghai Disney (£90k on visitor forecasting) and the National Natural Science Foundation of China (£50k on demand modelling). Partly illustrative of the School's openness to industry-funded grants and commitment to impact, during this REF, it has had industry-funded grants across the Centres, to work on for instance: animal welfare (SWELL), retailing and popular culture (DIGMY), and an art gallery's economic impact (COVE).

Grants awarded during this REF period have formed a basis for high-quality publications and substantial non-academic impact. For instance, YMOBILITY produced five articles in leading migration journals, while each of the four completed two-year Marie Curie Fellowships produced between three and eight articles. The ESRC productivity grant is the basis of one impact case study, and the HKPU funding contributes to the demand forecasting impact case study.

Infrastructure and facilities

Research and impact within the School has been catalysed in this REF period by the creation of COVE, DIGMY and SWELL, each receiving substantial investment in the form of a dedicated full-time Research Fellow since 2015. The Centres are supported organisationally through the School Research Committee, School Impact Committee and School Research Meetings.

Further investment of £150k in the School's research environment during this REF has included the creation of the **SHTM Digital Lab**, primarily to support the activities of DIGMY. This is overseen by a part-time lab co-ordinator (PGR Pereira) and is outfitted with two robots and both stationary and mobile/wearable systems of biometric sensor and eye-tracking equipment, allowing for measurements for instance of facial expressions, arousal and heart rate variability. The School also commissioned large-scale panel data (£50k) through survey companies across areas of focus for each of the Centres: tourism satisfaction and wellbeing, labour markets, sustainable practices and decision-making in digital spaces under conditions of uncertainty.

Besides these investments, SHTM's research has benefited from: a) university capital investment of £300k in the School's transfer to a newly refurbished site in July 2016 with spaces created for formal and informal interaction between staff and PGRs; b) an initial investment of £50k in its digital lab in 2016, followed by further major CAP-Ex investment of £78k in 2020; c) the provision of a laptop to every staff member; d) £1,250k p/a personal development allowance per staff member; and e) annual subscriptions to research databases such as STR SHARE Centre for hotel data, OAG Aviation, Sabre and FlightGlobal. All these resources, including support from the Research Fellows, are equally accessible to all staff.

The above infrastructure investments have provided a basis for a wider culture of impact, and the platform for future SHTM impact case studies. This will stem for instance from projects such as PriVELT, Next Generation Paper (EPSRC) and the work of the five Marie Curie Fellows (e.g. Rodriguez and Figueroa Domecq) on innovation and women entrepreneurs. The School's research infrastructure investments are also providing a foundation for collaboration with other HEIs overseas. Through the School's annual tripartite workshop with Queensland and Sun Yat-

sen universities it has been agreed to share Digital Lab facilities for collaborative research. The Surrey International Institute at DUFE (China) has also purchased digital equipment to share with SHTM and conduct comparative studies across the two digital labs, following bilateral research workshops. The School's research has additionally been enhanced by benefits-in-kind, such as through its ESRC CASE award and ESRC studentships (direct funding, co-operation in policy field experiment, and office spaces) and access to databases: as for example that provided by Eproductive on hotel labour allocation and outputs, which was essential to the successful ESRC productivity grant, and the related impact case study.

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

SHTM is a highly internationalised research environment, supported by domestic and international collaborations at School, University and individual project levels. Key School-level formal collaborations include its annual tripartite workshop with Queensland and Sun Yat-sen universities, who are also consistently in the top 10 in global subject rankings. This partnership has taken the form of annual meetings since 2017, attended by at least 9-10 members from each partner. Several joint grant applications and publications have developed from this partnership, including funding of approximately £250K from the China National Science Foundation. Other key School partnerships are its: a) joint PhD launched with HKPU, number one globally in our subject areas; b) bilateral partnership with the Surrey International Institute at DUFE (China), with meetings from 2017 to develop joint research projects; and c) partnerships with Nankai, Zhejiang and Shandong Universities (China). SHTM also has a formalised visiting scholar programme, with 10-15 research visitors (staff and PGR) hosted by the School p/a to engage in joint research activities with School staff.

The University also has broader international partnerships that are leveraged by the School, the main one being The University Global Partnership Network that enables academics from Surrey to work with academics from North Carolina State, São Paulo and Wollongong Universities on issues of global importance. Individual funded projects within SHTM featuring high levels of international partnership include the H2020 YMOBILITY and EU Interreg projects with nine and 11 European partners respectively, and the Newton British Academy Mobility Grant in partnership with South Africa's Human Science Research Council. SHTM is also home to a H2020-funded European Cooperation in Science and Technology research network (chaired by Thomopoulos), on the wider impacts of autonomous and connected transport, comprised of 150 experts from 41 countries. Furthermore, DIGMY benefitted from a three-month Leverhulme Visiting Professorship (2019) for Dan Fesenmaier from Florida International University. Large nationally-based funded EPSRC projects with multiple partners in this REF period are PriVELT with Kent, Warwick and Durham as partners, and Next Generation Paper, with the Open University.

Indicators of SHTM's success in research collaboration are the quality and longevity of its partners in the tripartite partnership and joint PhD, and joint conference papers, journal articles and grant applications. Key indicators are: (1) according to the 2020 Shanghai global subject rankings, the School is ranked first amongst the top fifty in terms of percentage of internationally collaborated publications in its subject area; and (2) 60% of SHTM's outputs during this REF are with an international co-author (SciVal).

Wider contributions to economy and society

In this REF period SHTM has emphasised building critical mass that will allow each of its Centres to have substantial and sustained academic and non-academic impact. Beyond the impact of the research captured in the impact case studies, notable contributions are:

- a) research to develop the European Tourism Indicator System, which the European Commission contracted Surrey to undertake, was piloted by over 200 regional tourist destinations across Europe (SWELL);
- b) research on Chinese visitor patterns to the UK, in partnership with China National Tourism Office (CNTO)-London, received the prestigious 'outstanding contribution to the China tourism industry' from CNTO (COVE);
- c) the EPSRC-funded Next Generation Paper project produced the world's first AI-powered travel guide to work alongside the Cornwall and the Isles of Scilly travel book (DIGMY).

Impact is also increasingly being incorporated into SHTM's PGR research, with for example collaborators from the World Bank and tourism NGOs to address gender inequalities in entrepreneurship in Africa. This is also illustrated by three SHTM PGRs in 2018 winning ESRC Industry Engagement awards.

Wider contributions by the School to economy and society during this REF also include:

- a) Lead judge for the WTTC's Tourism for Tomorrow awards and Chair of Considerate Hoteliers (Miller);
- b) Membership of the Welsh Government Visit Wales Tourism Advisory Board and Chair of the Research & Insights Task & Finish Group (Morgan);
- c) Non-executive Director for Visit Surrey (Scarles);
- d) Trustee for the charity Tourism Concern (Kimbu);
- e) Membership of the Advisory Group for Travalyt, a global sustainable travel partnership, founded by the Duke of Sussex with leading brands e.g. TripAdvisor, and Visa (Font).
- f) Advisory Board member (Travel and Tourism Competitiveness) for World Economic Forum, and member of Industry Quorum of Expedia Group (Tussadyiah).

SHTM's recent VC Fellow appointments have further widened our international contribution: Becken is a member of both the UNWTO Global Panel of Tourism Experts and the UNEP Expert Advisory Committee on transforming value chains in Small Island Developing States; and Scott is a member of the Canadian Institute for Climate Choices Expert Committee, and of the World Travel & Tourism Awards Environment and Climate Action Panel. Alumni links are also valued by SHTM, with several alumni sitting on the SHTM Advisory Board, and the School organises two alumni events each year in central London.

SHTM uses recruitment, its Advisory Board and placements to facilitate wider exchanges with industry, public and third-sector bodies. The School appointed the University's first Professor of Practice (Watson), who leads the SHTM Advisory Board which, during the REF period, included, for example:

- a) Michael Flaxman (formerly Chief Operations Officer, Accor Hotels);
- b) Fiona Jeffery (Chair, World Travel Market);
- c) Nick Longman (MD, TUI UK);
- d) Helen Marano (formerly, WTTC);

e) Jacky Simmonds (Group Director, Easyjet);

f) Mark Tanzer (CE, ABTA);

The School holds regular industry engagement events such as Hack Hospitality, which aims to co-create research priorities with non-academic stakeholders. White papers from these events have been published online as open access. SHTM's recent Marie Curie fellows both had placements of two months or more in policy (Seggittur) or industry bodies (WTTC, Institute of Hospitality), while several of its ESRC-funded studentships involve either CASE awards or strong formal associations with non-academic bodies (e.g. Cornwall Tourism, People First, Work Foundation).

SHTM engages with diverse communities and public in other ways through its research, including consultancy reports for the public sector and industry: e.g. on terrorism impacts on tourism for EU DG for Internal Market, and on benchmarking sustainability performance in destinations, a productivity report for Visit Britain, and an impact study for Watts Gallery. Annual agenda-setting think-tanks are organised by the Centres with academics, industry, government and third sector participants. Think-tanks in this REF period took place for instance on the collaborative economy, connected and autonomous vehicles, productivity and visiting friends and relatives mobilities. Staff also provide responsive evidence to government enquiries (e.g. Prof Morgan on Impact of Brexit on Tourism to European Parliament, and on Covid-19 to the Welsh Parliament, Prof Becken on carbon offsetting to Department of Transport). School staff and PGRs moreover actively use social media and press releases to communicate the key findings of their research to the public and have successfully attracted global media attention. For instance, Prof Cohen's research on autonomous vehicles and hypermobility featured in outlets such as The Economist, The Washington Post and The Financial Times, leading to TV appearances on CNN Business Traveller and Channel 4's Flights and Holidays from Hell. Similarly, Prof Font's research contract to develop a white paper on sustainability marketing for the city of Barcelona led to over 10 media appearances, including twice in the Guardian, the Conversation, Swiss Television RTS, and BBC Radio 4's the Moral Maze.

The School contributes actively to the sustainability of its discipline, most notably through capacity building by the high numbers of PGRs and PDRFs that go on to academic positions (most recently to Aston, Aberystwyth, Portsmouth and Greenwich), as well as staff leaving to take up more senior positions at other universities (e.g. Lundberg and Makkonen to chairs at the Universities of Stavanger and East Finland; Park to Associate Professor at HKPU). SHTM's support for interdisciplinary research is threaded through much of its research activities, from large projects such as PriVELT and Next Generation Paper to think-tanks such as its 2019 capacity building event on 'Advancing multi-disciplinary research approaches to connected and autonomous vehicles'. SHTM's responsiveness to national and international research priorities and initiatives is evident in its success in obtaining grants through ISCF (future mobility and human centred, autonomous electric vehicles) and GCRF (conflict resolution between humans and monkeys; research on women entrepreneurs in Africa), as well as through its Centres' close alignment with the ESRC strategic priority areas of productivity (COVE), climate change and mental health (SWELL) and new ways of being in a digital age (DIGMY).

Wider influence and contributions to the research base

SHTM staff have contributed as editors of leading and developing academic journals in the School's fields. The School has a global reputation for developing theoretically informed critical perspectives, and this has been catalysed by Prof Tribe's work as Editor-in-chief of *Annals of Tourism Research* until 2018, the leading journal in our field for developing theoretical constructs.

The wider influence of SWELL has been amplified by Profs Miller and Font's roles as Editors-in-chief of the *Journal of Sustainable Tourism*, the leading specialist journal for sustainability in our field. Furthermore, Prof Scarles' work as Editor-in-chief of *Tourist Studies*, Prof William's role as Editor of *Tourism Geographies* until 2016 and Dr Ribeiro's contribution as Editor of the methodology section of the *Service Industries Journal* highlight the multidisciplinary contributions of SHTM to the wider research base. These editorships span sociology, environmental science, geography, cultural studies and service management, as do our numerous editorial board memberships.

Staff have also participated on grant committees, including review panels for the UKRI peer review college, Innovate UK, Marie Curie Research Fellowships, the Swiss National Science Foundation, the Israel Science Foundation, the Cyprus Research Council, the Qatar National Research Fund and the Commonwealth Scholarships Committee. Staff have received prestigious prizes and awards during this REF, such as Prof Becken being awarded the 2019 UNWTO Ulysses Prize, the highest-level annual award in tourism research. Additional awards for example include Best Emerging Scholar in Tourism by the International Tourism Studies Association (Tussyadiah, 2018), Shaw-Mannell Leisure Studies Prize (Morgan, 2016) and the Charles R. Goeldner Article of Excellence Award (Cohen, 2015). Our PhD candidates also regularly win best paper awards (e.g. Eckardt, TTRA Europe 2019; Pereira, BEST-EN 2018).

SHTM places high value on hosting and contributing to international conferences. It hosted two major conferences in this REF period: its own quinquennial conference in 2016, 'Making an Impact: Creating Constructive Conversations'; and the leading eTourism conference, ENTER, in 2020, 'Responsible eTourism'. Besides regularly contributing invited keynotes and lectures at domestic and international events, chairing conferences, guest editing journal special issues and refereeing widely for academic publications, staff won fellowships in this REF period, such as Profs Tribe, G. Li and Morgan's receipt of the Jim Whyte Fellowship from the University of Queensland in 2017-19.

SHTM staff have furthermore had the following examples of recognition:

- a) Global tourism leadership: 5 of the 77 fellows of the International Academy for the Study of Tourism (Becken, G. Li, Morgan, Tribe, Williams); Tribe's membership of the scientific committee of the EAJG Journal Quality Guide with a responsibility for ranking tourism and hospitality journals;
- b) International association leadership: G. Li has been a Founding Fellow of the International Association of China Tourism Studies and is Executive Committee Member of the International Association for Tourism Economics. Morgan was co-founder of the Critical Tourism Studies Network in 2005 which he co-chaired until 2015; Tussyadiah has been Vice President and President of the International Federation for IT and Travel & Tourism;
- c) International REF panel membership: Morgan and Scarles were members on the 2020 Hong Kong RAE Business, Management & Economics Panel;
- d) National social science: Williams and Tribe have continued as Fellows of the Academy of Social Science;
- e) Government advisory bodies: Eves is a member of the Food Standards Agency's list of experts – Social Science Committee.